THE CITY OF SHEFFIELD LAKE
WATER DEPARTMENT

SUPPLEMENTAL GUIDE TO CROSS CONNECTION CONTROL

- Where Backflow Protection is Required
- Types of Protection Required
- Backflow Prevention Devices
- Installation, Inspection and Maintenance
- Backflow Testing Falsification
- Water Powered Sump Pumps

Where Backflow is Required: (1) An approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises where, in the judgement of the City of Sheffield Lake Water Department (SLWD) or the OEPA, actual or potential hazards to the public water system exist.

(2) An approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises where the following conditions exist:

a. Premises having auxiliary water supply, unless such auxiliary supply is accepted as an additional source by the SLWD and the source is approved by the OEPA.

b. Premises on which any substance is handled in such a fashion as to create an actual or potential hazard to the public water system. This shall include premises having sources or systems containing process fluids or water originating from the public water system which are no longer under the sanitary control of the public water system.

c. Premises having internal cross-connection that, in the judgement of the SLWD are not correctable or intricate plumbing arrangements which make it impractical to determine whether or not cross-connections exist.

d. Premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete cross-connection survey.

e. Premises having a repeated history of cross-connections being established or re-established

f. Others as may be specified by the SLWD or the OEPA

3. An approved backflow prevention device shall be installed on each service line to a consumer's water system, but not necessarily limited to, the following types of facilities; unless the SLWD or the OEPA determines that no actual or potential hazard to the Public Water System exists:

a. Hospitals, mortuaries, clinics, nursing homes;
b. Laboratories;
c. Piers, docks, waterfront facilities;
d. Sewage treatment plants, sewage pumping stations, or storm water pumping stations
e. Food or beverage processing plants;
f. Chemical plants;
g. Metal plating industries;

h. Petroleum processing or storage plants;
i. Radioactive material processing plants or nuclear reactors;
j. Car wash facilities;
k. Other specified by the SLWD or the OEPA

(4) An approved backflow prevention device shall be installed at any point of connection between the SLWD and an auxiliary water supply unless such auxiliary supply is accepted as an additional source the SLWD and the OEPA

Type of Protection Required: (1) The type of protection required, as outlined in this guide shall depend on the degree of hazard which exists as follows:

a. An approved air gap separation shall be installed where the public water system may be contaminated with substances that could cause a sever health hazard
b. An approved air gap separation or reduced pressure principle backflow prevention device shall be installed where the public water system may be contaminated with a substance that could cause a system or health hazard
c. An approved air gap separation, reduced pressure principle device, or double check valve assembly shall be installed where the public water system may be polluted with substances that could cause pollution hazard not dangerous to health.

(2) The type of protection required under section (4) *Where Backflow is required,* and as determined by the OEPA/SLWD shall be an approved air gap separation or interchangeable connection.

(3) Where an auxiliary water supply is used as a secondary source of water for a fire protection system , the provisions of this section may not be required providing:

a. At premises where the auxiliary water supply may be contaminated with substances that could cause a system or health hazard, the public water system shall be protected against backflow by the installation of an approved reduced pressure principle backflow pre ventilation device.
b. At all other premises, the public water system shall be protected against backflow by installation of either an approved reduced pressure principle device or double check valve assembly.
c. The Sheffield Lake water system shall be the primary source of water for the fire protection system.
d. The fire protection system shall be normally filled with water from the public water system.
e. The water in the fire protection shall be used for fire protection only with no regular use of the water from the system downstream from the approved backflow prevention device.
f. The water in the fire protection system shall contain no additives.

Backflow Prevention Devices: (1) Any backflow prevention device required by this guide shall be of a model or construction approved by the SLWD and the OEPA and shall comply with following:

a. An air gap separation to be approved shall be at least twice the diameter of the supply pipe, measured vertically above the top rim of the vessel, but in no case less than one inch.
b. A double check valve assembly or reduced pressure principle backflow prevention device shall be approved by the SLWD and shall appear on the current "List of Approved Backflow Prevention Devices" of the OEPA.
c. To be approved, an interchangeable connection shall be either a swing type connector or a four-way valve of the lubricated plug type that operates through a mechanism which unseals the plug, turns in ninety degrees and reseats the plug. Four-way valves shall not be used as stop valves, but must have no piping valves on each pipe connected to the valve. The telltale port on the four-way valve shall have no piping connected and the treads or flange on this port shall be destroyed so that a connection cannot be made.

(2) Existing backflow prevention devices approved by the SLWD or the OEPA at the time of installation and properly maintained shall, except for inspection and maintenance requirements, be excluded from the previous section above provided the SLWD is assured that they will satisfactorily protect the public water system. Whenever the existing device is moved from its present location or requires more than minimum maintenance, or with the

SLWD finds that the maintenance of the device constitutes a hazard to health, the device shall be replaced by a backflow prevention device meeting the requirements of these regulations.

Installation, Inspection and Maintenance

Installation

(1) Backflow prevention devices required by this guide shall be installed at a location and in a manner approved the SLWD and shall be installed by and at the expense of the water consumer. In addition, any backflow prevention device required by this guide shall be installed at a location and in a manner approved the OEPA as required by Chapter 6109 of the Ohio Revised Code or as required by the SLWD.

(2) Backflow prevention devices installed on the service line to a consumer's water system shall be located on the consumer's side of the water meter, as close to the meter as is reasonably practical, and prior to any other connection

(3) Pits or vaults shall be of water tight construction, be so located and constructed as to prevent flooding and shall be maintained free from standing water by means of only a no water powered sump pump or a suitable drain. Such sump pump or drain shall not connect to a sanitary sewer nor permit flooding of the pit or vault by reverse flow from its point of discharge. An access ladder and adequate natural or artificial lighting shall be provided to permit maintenance, inspection and testing of the backflow prevention device.

Inspection and Maintenance

(1) 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, test, and overhaul made in accordance with the following schedule or, more often, where inspections indicate a need:
    a. Air separation shall be inspected at the time of installation and at least every twelve months thereafter.
    b. Double check valve assemblies shall be inspected and tested for tightness at the time of installation and at least every twelve months thereafter. They shall be dismantled, inspected internally, cleaned and repaired whenever needed and at least every thirty months.
    c. Reduced pressure principle backflow prevention devices shall be inspected and tested for tightness at the time of installation and at least every twelve months thereafter. They shall be dismantled, inspected internally, cleaned, and repaired whenever needed and at least every five years.
    d. Interchangeable connections shall be inspected at time of installation and at least every twelve months thereafter
(2) Inspections, test, and overhaul of backflow prevention devices shall be made at the expense of the water consumer and shall be performed by a person as approved by the SLWD as qualified to inspect, test and overhaul the said device.
(3) Whenever backflow prevention devices required by these regulations are found to be defective, they shall be repaired or preplace at the expense of the consumer without delay.
(4) The water consumer shall maintain a complete record of each backflow prevention device from purchase to retirement. This shall include a comprehensive listing that includes a record of all test, inspections, and repairs. Records of the same shall be made available to SLWD upon request.
(5) Backflow prevention devices shall not be bypassed, made inoperative, removed, or otherwise made ineffective without specific authorization by the SLWD.

Backflow Testing Falsification If an Ohio Department of Commerce or Operator Training Committee of Ohio (OEPA) backflow certificate holder is found to have falsified test report documents, penalties will be enforced as outlined below:

1. Falsification of records includes but in not limited to:
    a. Claiming to have tested devices that were not tested
    b. Signing off on tests that an uncertified person has conducted
    c. Fixing devices without testing them
2. Penalties for any form of falsification include: