

ORDINANCE NO. 18

AN ORDINANCE ESTABLISHING RULES AND REGULATIONS ON CROSS-CONNECTION CONTROL WITHIN LAKESIDE WATER DISTRICT, JACKSON AND WILLIAMSON COUNTIES, ILLINOIS.

BE IT ORDAINED by the Board of Trustees of the Lakeside Water District, Jackson and Williamson Counties, Illinois, as follows:

SECTION 1: Cross-Connection Control - General Policy

A. Purpose.

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 non-potable water systems, plumbing fixtures and sources or systems containing substances of unknown or questionable quality.
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 Lakeside Water District.

C. Policy. The owner or official custodian of the premises served 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. If, in the judgment of the District Engineer, an approved backflow prevention device is necessary for the safety of the public water supply system, the District will give notice to the water customer to install such an approved device immediately. The water customer shall, at his own expense, install such an approved device at a location and in a manner in accordance with the Illinois Plumbing Code, Illinois Environmental Protection Agency and all applicable local regulations, and shall have inspections and tests made of such approved devices upon installation and as required by the Illinois Plumbing Code, Illinois Environmental Protection Agency and local regulations. The failure, refusal or inability on the

part of the customer 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 Section 5D(4) below for a period of at least five years. The District may require the customer or consumer to submit a cross-connection inspection report to the District, 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.

SECTION 2: Definitions

A. The following definitions shall apply in the interpretation and enforcement of these regulations:

1. "Fixed proper air gap" means the unobstructed vertical distance through the free atmosphere between the water discharge point and the flood level rim of the receptacle.
2. "Agency" means Illinois Environmental Protection Agency.
3. "Approved backflow prevention device" means such devices or methods approved by the Research Foundation for Cross-Connection Control of the University of Southern California, Association of State Sanitary Engineers, American Water Works Association, American National Standards Institute or certified by the National Sanitation Foundation.
4. "Consumer" or "Customer" means the owner, official custodian or person in control of any premises supplied by or in any manner connected to a public water system.
5. "Customer's water system" or "Consumer's water system" means any water system located on the premises served. A building plumbing system is considered to be a water system.
6. "Contamination" means an impairment of the quality of the water by entrance of any substance to a degree which could create a health hazard.
7. "Cross-connection" means any physical connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other a substance of unknown or questionable safety or quality, whereby there may be a flow from one system into the other.

Direct cross-connection means a cross-connection formed when a water system is physically joined to a source of unknown or unsafe substance.

Indirect cross-connection means a cross-connection through which an unknown substance can be forced, drawn by vacuum or otherwise introduced into a safe potable water system.

8. "Double check valve assembly" means an assembly composed of single, independently acting check valves approved under ASSE Standard 1015. A double check valve assembly must include tight shutoff valves located at each end of the assembly and suitable connections for testing the water-tightness of each check valve.
9. "Non-potable water" means water not safe for drinking, personal, or culinary use as determined by the requirements of 35 Ill. Adm. Code 604.
10. "Pollution" means the presence of any foreign substance (organic, inorganic, radiological, or biological) in water that tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water.
11. "Potable water" means water which meets the requirements of 35 Ill. Adm. Code 604 for drinking, culinary, and domestic purposes.
12. "Potential Cross-Connection" means a fixture or appurtenance with threaded hose connection, tapered spout, or other connection which would facilitate extension of the water supply line beyond its legal termination point.
13. "Survey" means the collection of information pertaining to a customer's piping system regarding the location of all connections to the public water supply system and must include the location, type and most recent inspection and testing date of all cross-connection control devices and methods located within that customer's piping system. The survey must be in written form, and should not be an actual plumbing inspection.

SECTION 3: Water System

A. The water system shall be considered as made up of two parts: the public water supply system and the consumer's water system.

B. The public water supply system shall consist of the source facilities and the distribution system, and shall include

all those facilities of the potable water system under the control of the District up to the point where the consumer's water system begins.

C. The source shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the public water supply distribution system.

D. The public water supply distribution system shall include the network of conduits used to deliver water from the source to the consumer's water system.

E. The consumer's water system shall include all parts of the facilities beyond the service connection used to convey water from the public water supply distribution system to points of use.

SECTION 4: Cross-Connection Prohibited

A. Connections between potable water systems and other systems or equipment containing water or other substances of unknown or questionable quality are prohibited except when and where approved cross-connection control devices or methods are installed, tested and maintained to insure proper operation on a continuing basis.

B. 1. No physical connection shall be permitted between the potable portion of a supply and any other water supply not of equal or better bacteriological and chemical quality as determined by inspection and analysis by the Agency.

2. There shall be no arrangement or connection by which an unsafe substance may enter a supply.

SECTION 5: Survey and Investigations

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 made by the District or its authorized representatives, 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 District and its authorized representatives for the verification of information submitted by the consumer to the District regarding cross-connection inspection results.

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 Ill. Rev. Stat. 1987, ch. 111, par. 1103 (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-siphonage.
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

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

2. Records submitted to the District shall be available for inspection by Agency personnel in accordance with Ill. Rev. Stat. 1987, ch. 111 1/2, par. 1004(e).

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

4. 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 dated completed.

SECTION 6: Where Protection is Required

A. An approved backflow device shall be installed on all connections to the public water supply as described in the Plumbing Code, 77 Ill. Adm. Code 890 and the Agency's regulations 35 Ill. Adm. Code 680. In addition, an approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises, where in the judgment of the District Engineer, actual or potential hazards to the public water supply system exist.

B. An approved backflow prevention device shall be installed on each service line to a customer's water system serving premises where the following conditions exist:

1. Premises having an auxiliary water supply, unless such auxiliary supply is accepted as an additional source by the District and the source is approved by the Illinois Environmental Protection Agency.
2. Premises on which any substance is handled which can create an actual or potential hazard to the public water supply system.
3. Premises having internal cross-connections that, in the judgment of the District Engineer and/or the Cross-Connection Control Device Inspector, are not correctable or intricate plumbing arrangements which make it impractical to determine whether or not cross-connections exist.
4. Premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete cross-connection survey.
5. Premises having a repeated history of cross-connections being established or re-established.

C. An approved backflow device shall be installed on all connections to the public water supply as described in the Plumbing Code, 77 Ill. Adm. Code 890 and the Agency's regulations 35 Ill. Adm. Code 653. In addition, an approved backflow prevention device shall be installed on each service line to a consumer's water system serving, but not necessarily limited to, the following types of facilities unless the District Engineer determines that no actual or potential hazard to the public water supply system exists: Hospitals, mortuaries, clinics, nursing homes; laboratories; piers, docks, waterfront facilities; sewage treatment plants, sewage pumping stations or storm water pumping stations; food and beverage processing plants; chemical plants; metal plating industries; petroleum processing or storage plants; radioactive material processing plants or nuclear reactors; car washes; pesticide, or herbicide or extermination plants and trucks; and farm service and fertilizer plants and trucks.

SECTION 7: Type of Protection Required

A. The type of protection required under Sections 6B.1, 6B.2 and 6B.3 of these regulations shall depend on the degree of hazard which exists as follows:

1. An approved fixed proper air gap separation shall be installed where the public water supply system may be contaminated with substances that could cause a severe health hazard.
2. An approved fixed proper air gap separation or an approved reduced pressure principle backflow prevention assembly shall be installed where the public water supply system may be contaminated with a substance that could cause a system or health hazard.
3. An approved fixed proper air gap separation or an approved reduced pressure principle backflow prevention assembly or a double check valve assembly shall be installed where the public water supply system may be polluted with substances that could cause a pollution hazard not dangerous to health.

B. The type of protection required under Section 6B.4 and 6B.5 of these regulations shall be an approved fixed proper air gap separation or an approved reduced pressure principle backflow prevention device.

C. Where a public water supply or an auxiliary water supply is used for a fire protection system, reduced pressure principle backflow preventers shall be installed on fire safety systems connected to the public water supply when:

1. The fire safety system contains antifreeze, fire retardant or other chemicals; or
2. water is pumped into the system from another source; or
3. water flows by gravity from a non-potable source; or water can be pumped into the fire safety system from any other source; or
4. there is a connection whereby another source can be introduced into the fire safety system.

D. All other fire safety systems connected to the potable water supply shall be protected by a double check valve assembly on metered service lines and a double detector check valve assembly on unmetered service lines.

SECTION 8: Backflow Prevention Devices

A. All backflow prevention devices or methods required by these rules and regulations shall be approved by the Research Foundation for Cross-Connection Control of the University of Southern California, American Water Works Association, American Society of Sanitary Engineering, or American National Standards Institute or certified by the National Sanitation Foundation to be in compliance with applicable industry specification.

B. Installation of approved devices shall be made in accordance with the manufacturer's instructions. Maintenance as recommended by the manufacturer of the device shall be performed. Manufacturer's maintenance manual shall be available on-site.

SECTION 9: 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 by passed air gaps shall be made within 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 five days.
3. Reduced pressure principle backflow prevention assemblies 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 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: date of each test or visual inspection; name and approval number of

person performing the test or visual inspection; test results; repairs or servicing required; repairs and date completed; and 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 Section 9A.

F. Backflow prevention devices shall not be bypassed, made inoperative, removed or otherwise made ineffective without specific authorization by the District.

SECTION 10: Booster Pumps

A. Where a booster pump has been installed on the service line to or within any premises, such pump shall be equipped with a low pressure cut-off device designed to shut-off the booster pump when the pressure in the service line on the suction side of the pump drops to 20 psi or less.

B. It shall be the duty of the water consumer to maintain the low pressure cut-off device in proper working order and to certify to the District Engineer, at least once a year, that the device is operable.

SECTION 11: Violations

A. The District shall deny or discontinue, after reasonable notice to the occupants thereof, the water service to any premises wherein any backflow prevention device required by these regulations is not installed, tested, maintained and repaired in a manner acceptable to the District Engineer, or if it is found that the backflow prevention device has been removed or bypassed, or if an unprotected cross-connection exists on the premises, or if a low pressure cut-off required by these regulations is not installed and maintained in working order.

B. Water service to such premises shall not be restored until the consumer has corrected or eliminated such conditions or defects in conformance with these regulations and to the satisfaction of the District Engineer, and the required reconnection fee is paid.

C. Neither the Lakeside Water District, the District Engineer or their agents or assigns shall be liable to any customers of the Lakeside Water District for any injury, damages or lost revenues which may result from termination of said customer's water supply in accordance with the terms of this ordinance, whether or not said termination of the water supply was with or without notice.

SECTION 12: Effective Date

Within 30 days after its adoption, this ordinance shall be published one time in the Southern Illinoisan, a newspaper published in Jackson County, Illinois, and having general circulation in the district, and shall become effective 10 days after its publication.

Passed, adopted and filed in the Office of the Secretary, this 13th day of MARCH, 1990.

George M. Twomey
Secretary, Board of Trustees