

C I T Y C O U N C I L O F E R I E

INTRODUCED BY: Mr. Mario Bagnoni

COUNCIL FILE NO. 12,353

OFFICIAL ORDINANCE NO. 86-1974

AN ORDINANCE

Adding a new Article 936 of Title Five of Part One of the Codified Ordinances of the City of Erie to provide for the establishment of a Cross Connection Control Division.

WHEREAS, the Council of the City of Erie in the exercise of its discretion and as a matter of public policy for the protection of the health, welfare and safety of the people of the City of Erie deems enactment of the following ordinance to be in the public interest.

NOW, THEREFORE, BE IT ENACTED BY THE COUNCIL OF THE CITY OF ERIE:

Article 936.01: Title Five

This ordinance may be cited as the "Cross Connection Control Ordinance of 1974."

Article 936.02: Cross Connection Control Division

A. There is established, within the Bureau of Water, a Cross Connection Control Division to implement regulations, ordinances, and procedures as outlined herein, with full cooperation of all related departments; namely, Health, Water, Utilities, Plumbing, City Council, and also related agencies of County, State and Federal governments.

B. The Division shall protect the potable water supply of the City of Erie from the possibility of contaminants or pollutants entering the potable water supply by

- 1.) isolating within its customers private water systems such contaminants or pollutants which could under adverse conditions flow uncontrolled through cross connections into the public water supply;
- 2.) eliminating or controlling existing cross connections actual or potential in the potable water system;
- 3.) providing for the maintenance of a continuing cross connection program for systematically and effectively controlling all actual potential cross connections which may be installed in the future.

Article 936.03: Definitions

The following words and terms shall have the following meanings, unless the context clearly indicates otherwise:

- A. Air Gap - The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of the receptacle.
- B. Backflow - The flow of water or other liquids, mixtures or substances into the distributing pipes of a potable supply of water from any sources other than the approved source.
- C. Bypass - A piping arrangement whereby water may be diverted around any feature of the treatment process of a water supply.
- D. Cross-Connection - Any physical connection or arrangements between two otherwise separate piping systems, one of which contains potable water and other steam, gas, a chemical or water of unknown

or questionable safety, whereby there may be a flow from one system to the other, the direction depending on the pressure differential between the two systems.

E. Department - The Department of Environmental Resources of the Commonwealth.

F. Ground Water - The accumulation of water which exists in the ground and is used as a source of water supply through openings such as wells, springs and infiltration galleries.

G. Interconnection - The Connection of two or more water supplies, each approved by the Department.

H. Water supply - A source or sources of water, as well as any and all water treatment, storage, transmission and distribution facilities.

I. Hazard - An actual or potential threat or contamination or pollution of a toxic nature or physical nature to a public potable water system or consumer's potable water system as to be dangerous to health.

J. Contamination - The impairment of the quality of water to a degree that creates a hazard to public health through poisoning or spread of disease.

K. Pollution - The impairment of the quality of water to a degree not creating a hazard to public health, but does adversely affect such waters for domestic use.

Article 936.04: Unsafe Connections

A. Cross Connection

- 1.) Cross connections shall be prohibited
- 2.) A cross connection shall be considered broken if a minimum air gap of two pipe diameters of the supply pipe is provided between the public water and any unapproved supply.

B. Interconnections (approved by inspection)

Interconnections shall be permitted by the Department only after they have been approved by inspection.

C. Backflow Prevention

- 1.) Backflow shall be prohibited
- 2.) A water supply pipe shall be considered as protected against backflow from any plumbing fixture or other piece of equipment of appliance capable of affecting the quality of the water in the public water supply of an air gap of at least twice the diameter of the water supply pipe has been provided.
3. Where it is not practicable to provide this minimum air gap, the connection to the fixture, equipment or appliance shall be equipped with a backflow preventer assembly of a type and in a location approved by the Department.
- 4.) The department may require that a backflow preventer assembly of a type and location approved by the Department be installed at any fixed water outlet to which a hose may be connected and used in contact with liquids or other substances.

D. Air Gap Alternative

Where it is impracticable to provide the required minimum air gap, a "swing-joint" swivel device or a four-way, four port valve of a design such that the distribution piping may be fed by either water supply individually, but not simultaneously, may be considered by the Department for approval.

E. Emergency Intakes

No water supply shall have emergency connections or intakes where water from an unapproved source may be admitted to the water supply.

F. Bypasses

Bypasses around any treatment facility shall be approved by the Department.

Article 936.05: Responsibility

A. The obligation of adhering to the Cross Connection Control Ordinance is the responsibility of any person engaged in the installation of public potable water facilities.

B. The plumbing inspection department of the City of Erie shall insure proper installation of consumer's building plumbing including the connection line to the public potable water supply.

C. The water purveyor shall exercise reasonable vigilance to insure that the consumer has taken proper steps to protect the potable water supply system against pollution or contamination through cross connections in new installments as well as in existing facilities.

D. All plumbing, pipes and fixtures using water that is supplied by the City of Erie, Bureau of Water, shall conform to the rules and regulations set forth in this cross connection ordinance.

E. No plumbing, pipes or fixtures shall be installed which in any way shall be an actual or potential impairment of the quality of water supplied by the Bureau of Water.

F. Connections or extensions to the public potable water supply which are questionable must have the approval of the Cross connection division or the Bureau of Water before they are installed.

G. The consumer of Erie potable water supply has the primary responsibility for preventing pollutants and contaminants from entering the public potable water supply system.

H. The Cross Connection Control Division shall make inspections of the potable water supply system and insure proper installation of backflow prevention devices herein outlined.

I. The expense and maintenance of all backflow prevention will be the sole responsibility of the customer being supplied with water.

J. The Cross Connection Control Division will make periodic checks to test capability and operational effectiveness of the backflow prevention devices.

K. All testing and maintenance will be conducted by a certified backflow prevention device tester.

L. When employed by the consumer to test backflow prevention, a backflow prevention device tester will:

1.) Be responsible for making all tests and report of the results of such tests to the consumer on forms approved by the agency having jurisdiction.

2.) Be equipped with and be competent to use all the necessary tools, gauges, and testing equipment necessary to properly test backflow prevention devices.

3.) Perform the work and be responsible for the competency and accuracy of all tests and reports.

M. A certified backflow prevention device tester who is a licensed plumber is also certified to repair backflow prevention devices. In repairing backflow prevention devices he will:

1.) Insure that the parts replaced are equal to those of the manufacturer of the device being used, as to quality and specifications.

2.) Not change the design, material or operational characteristics of a device during repair or maintenance without prior approval of the responsible agency.

N. All work performed by an assistant shall be performed in the presence of the backflow prevention device tester and under his jurisdiction.

O. To be a certified backflow prevention device tester, a person must complete a school and pass an examination for this.

Article 936.06: Excerpts from ordinances

A. Waterworks Ordinance

Reserved rights to enter upon or into any premises where city water is taken, for the purpose of inspection of pipes and fixtures, setting and reading and repairing meters, turning water off and on and enforcing rules generally. Each and every denial of this right will render the offending party liable to penalties prescribed for violation of the rules. i.e., Water turn off or fine.

1.) The definition of a cross connection, as based upon the U.S. Department of Health Education and Public Welfare's Public Health Service Publication No. 525, is any physical connection or arrangement of pipes between two otherwise separate water supply systems, one of which contains potable water and the other water of unknown or questionable safety, whereby water may flow from one system to the other, the direction of flow depending on pressure differential between the two systems.

2.) No cross connection shall be permitted to be made between any system of piping supplied by water from the mains of the Waterworks Department and any other source of supply, either public or private; or any secondary supplies known to be unsafe for drinking water, such as shallow wells, reused industrial supplies, raw surface water or swimming pools.

3.) Where city water is used as an auxiliary supply to a roof or suction tank, which is also supplied by water from any other source, such tank shall not be of the pressure type but open. The delivery of city water shall be above the tank flow line and controlled by some type of automatic valve.

4.) It shall be unlawful, also, to maintain storage tanks supplied only with city water, unless the tanks are satisfactorily built, and covered so as to prevent the entrance of contamination. They shall also be subject to periodical inspection by the Waterworks Department and maintained in a manner wholly satisfactory to the standards and requirements of the State Department of Health. Pumps taking suction from the city supply, serving such building storage, shall be installed or operated only upon permit from the Water Department subject to their approval as to size, capacity and valving arrangements.

5.) It shall be unlawful for anyone to interconnect private supplies, including deep well systems, with the Waterworks Department system except as hereinafter provided:

a. Correction and Maintenance, in a manner satisfactory to the State Department of Health and the Waterworks Department of the City, of all existing sanitary defects in and around the private supply system.

b. Provisions to be made for complete bacteriological analysis by the Waterworks Department of the supply involved, in accordance with the standard methods of water analysis of the American Public Health Association. This requirements means not less than four years analyses each month on two standard samples or more often, if the analysis warrants.

c. Provision by the owner of the private system involved to pay an equitable pro rata part of the cost of all inspections and testing herein required. The rates and method of paying for the same shall be determined by the Waterworks Department subject to the approval of the City Council.

6. Should any system supplied by City water be operated in violation of any provisions of this Article, it shall be the duty of the Waterworks Department to completely disconnect all service line serving such system until this section is properly complied with. Any cost of such disconnection and the estimated cost of reconnection must be paid by the consumer before service shall be restored.

B. PLUMBING CODE
PROTECTION OF POTABLE WATER SUPPLY

1. Cross Connections. Potable and non-potable water supplies shall be distributed through systems entirely independent of each other, and any cross connection between such supplies is prohibited. Further, no connections shall be made between pipes containing city water and any other pipes, whether or not such other pipes contain water considered potable.

2. Back-Flow. Each fixture supply pipe shall be protected from back-flow by having all outlets from which potable water flows spaced a sufficient distance above the flood level rim of the receptacle into which the water flows to provide a "minimum Required Air Gap" except that where it is not possible to provide a minimum air gap, the fixture shall be equipped with an accessibly located back-flow preventer (see Cross Connection Information Hand Book) installed beyond the manual control valve. Vacuum breakers on aspirators shall be at least twelve (12) inches above waste materials; in funeral homes (18) inches above top of table. The distance for the vacuum breaker on a bed pan sterilizer shall be twenty-four (24) inches above overflow rim of the fixture. (A vacuum breaker shall be installed on all yard hydrants within fifty (50) feet of a swimming pool or any hydrants used for purposes of filling or cleaning pools).

On certain installations such as hospitals, clinics, plating shops, chemical plants, embalming establishments and multi-storied buildings or other buildings discharging hazardous materials, backflow preventors, of a type approved by the Cross connection Control Chief and the Water Department, shall be installed on the building side of the meter.

C. COLOR CODING:

In Building or industrial plants where multiple piping systems are used for water, extreme care should be taken not to interconnect the systems. Water from the potable system is used to service systems of lesser quality such as fire protection, plumbing, fixtures, vats, tanks, boilers, sewer ejectors, pumps and numerous other hazardous items. The potable water system must be separated or protected from these dangerous cross-connections by an air gap, vacuum breakers, reduced pressure back-flow preventors, or double check valves.

Where controlled cross-connections are permitted, pipes should be labeled to identify their contents. Each outlet on the non-potable water line, which may be inadvertently used for drinking water should be posted "Danger Unsafe Water". Other pipes should be painted or banded at appropriate intervals and stenciled to identify their contents and direction of flow. A system that could be used:

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|----------------------|--|
| 1. Potable Water | Green Color - Stenciled "Potable Water " |
| 2. Non Potable Water | Brown Color - Stenciled "Non Potable Water |
| 3. Fire Protection | Red Color - Stenciled "Fire |
| 4. Chemical | Orange Color- Stenciled "Chemical |
| 5. Gas | Black Color - Stenciled "Gas |

Colored plastic bands could be used instead of paint i.e., Dymo Tape with legends, so long as labels or bands are permanently fastened to pipes and checked periodically to see that they are not removed.

D. OSHA: Federal Safety and Health Act of 1970

There shall be no cross connections between a potable and non-potable source of water within the premises or plant which can be a potential hazard to employees.

E. ENFORCEMENT

Any customer not complying with the Authority's request to install and maintain back flow prevention devices will be subject to immediate termination of water service by the (Water) Authority. In addition to Erie's Water Authority regulations on cross-connection control, all customers are required to conform to all definitions hereinafter mentioned.

Article 936.99: Penalty

Persons making any connections to the public potable water supply system which do not comply with this ordinance are subject to a fine of five hundred dollars (\$500.00) and the cost of removing said violation.

Section 1. That all ordinances or parts thereof conflicting herewith, be and the same are hereby repealed.

Section 2. That this ordinance shall become effective twenty (20) days from final passage and approval by the Mayor.

We do hereby certify that the above ordinance was finally passed by the City Council on November 6, 1974.

SIGNED November 6, 1974

Attest: November 6, 1974

Bernard J. Harkins
President of Council

James Klemm
City Clerk

THIS ORDINANCE APPROVED THIS 8th DAY OF November, 1974

Louis J. Tullio
Mayor