

ORDINANCE NO. 430

AN ORDINANCE RELATING TO CROSS CONNECTION CONTROL TO PROTECT THE PUBLIC POTABLE WATER SUPPLY OF THE CITY OF WATHENA FROM POLLUTION OR CONTAMINATION DUE TO CROSS CONNECTIONS; PROHIBITING ALL CROSS CONNECTIONS WITHIN THE PUBLIC POTABLE WATER SUPPLY SYSTEM OF SAID CITY; PROVIDING FOR THE MAINTENANCE OF A CONTINUING EFFECTIVE CROSS CONNECTION CONTROL PROGRAM; PROVIDING THE CITY THE RIGHT TO INSPECT IN ORDER TO INVESTIGATE POSSIBLE VIOLATIONS; PROVIDING FOR TERMINATION OF WATER SERVICES FOR NONCOMPLIANCE; AND REPEALING ALL ORDINANCES AND PARTS OF ORDINANCES OF THE CITY OF WATHENA IN CONFLICT HEREWITH.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF WATHENA, KANSAS.

SECTION 1. DEFINITIONS. The following words and phrases when used in this Ordinance shall, for the purposes of this Ordinance, have the meanings respectively ascribed to them in this section:

(a) The term "City" shall mean and include the Governing Body of the City of Wathena and its designated officers, agents and employees.

(b) The term "Agency" shall mean the department of the municipal government or water purveyor invested with the responsibility for enforcement of this Ordinance.

(c) The term "Air Gap" shall mean the unobstructed vertical distance at least twice the diameter of the supply line and no less than one inch, 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.

(d) The term "Approved Device" shall mean devices tested and accepted by a recognized testing laboratory approved by the Kansas Department of Health and Environment and the City.

(e) The term "Backflow" shall mean the flow of water or other substances into the distribution system of a potable supply of water from any source other than its intended source. Backsiphonage is one type of backflow.

(f) The term "Backflow Preventer" means a device or means to prevent backflow.

(g) The term "Backsiphonage" means the flowing back of

contaminated or polluted substances from a plumbing fixture or any vessel or source into the potable water supply system due to negative pressure in said system.

(h) The term "Contaminant" means any substance that upon entering the potable water supply would render it a danger to the health or life of the consumer.

(i) The term "Cross Connection" shall mean any physical connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other which contains water or any substance of unknown or questionable quality whereby there may be flow from one system to the other.

(j) The term "Double Check Valve Assembly" shall mean a device consisting of two internally loaded soft seated check valves with positive shut-off valves on both upstream and downstream ends, and properly located test ports.

(k) The term "Dual Check Valve" shall mean a device consisting of two internally loaded soft seated check valves. This device does not contain test ports and is acceptable for use only at the meter of residential customers.

(l) The term "Free Water Surface" shall mean a water surface at atmospheric pressure.

(m) The term "Flood Level Rim" shall mean the edge of the receptacle from which water overflows.

(n) The term "Frost Proof Closet" shall mean a hopper with no water in the bowl and with the trap and water supply control valve located below frost line.

(o) The term "KDHE" shall mean the Kansas Department of Health and Environment.

(p) The term "Plumbing" shall mean the practice, materials and fixtures used in the installation, maintenance, extension and alteration of all piping fixtures, appliances and appurtenances.

(q) The term "Pollution" shall mean the presence of any foreign substance (organic, inorganic or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely affect the water.

(r) The term "Reduced Pressure Zone Backflow Preventer" shall mean an assembly of two independently acting soft seated approved check valves together with a hydraulically operating mechanically independent differential pressure relief valve located between the check valves and at the same time below the first check valve. The unit shall contain properly located test cocks and resilient seated shut-off valves at each end of the assembly. To be approved these assemblies must be accessible for inspection and testing and be installed in an above ground location where no part of the assembly will be submerged.

(s) The term "Tester" shall mean a trained technician certified in the testing and repair of backflow preventers.

(t) The term "Vacuum" shall mean any absolute pressure less than that exerted by the atmosphere.

(u) The term "Vacuum Breaker" shall mean a device that permits entrance of air into the water supply distribution line to prevent backsiphonage.

(v) The term "Potable Water" shall mean water free from impurities in amounts sufficient to cause disease or harmful physiological effects. Its quality shall conform to KOHE requirements for public water supplies.

(w) The term "Non potable Water" shall mean water that is not safe for human consumption or that is of questionable potability.

SECTION 2. CROSS CONNECTIONS PROHIBITED. Cross connections are prohibited except when and where as approved by the City, suitable backflow preventers are properly installed, tested and maintained to insure proper operation on a continuing basis.

SECTION 3. INTERCONNECTIONS. Interconnection between two or more public water supplies shall be permitted only with the approval of the KDHE.

SECTION 4. INDIVIDUAL WATER SUPPLIES. Connections between a private water supply and the public potable water are prohibited.

SECTION 5. CONNECTIONS TO BOILERS. Potable water connections to boiler feed water systems in which boiler water conditioning chemicals are or can be introduced shall be made through an air gap or through a reduced pressure zone principle

backflow preventer located in the potable water line before the point where such chemicals may be introduced.

SECTION 6. PROHIBITED CONNECTIONS. Connection to the public potable water supply system for the following is prohibited unless properly protected by the appropriate backflow prevention device:

- (a) Bidets;
- (b) Operating, dissecting, embalming, and mortuary tables or similar equipment (in such installations the hose used for water supply shall terminate at least 12 inches away from every point of the table or attachments);
- (c) Pumps or non potable substances. (Priming only through an air gap);
- (d) Building drains, sewers, or vent systems;
- (e) Commercial buildings, industrial plants, or manufacturing or otherwise using polluting or contaminating substances;
- (f) Any fixture of similar hazard without limitation through enumeration.

SECTION 7. REFRIGERATION UNIT CONDENSERS AND COOLING JACKETS. Except when potable water provided for a refrigeration condenser or cooling jacket is entirely outside the piping or tank containing a toxic refrigerant, the inlet connection shall be provided with an approved backflow preventer. Heat exchangers used to heat water for potable use shall be of the double wall type.

SECTION 8. PROTECTIVE DEVICES REQUIRED. (a) The type of protective device required under this Ordinance shall be determined by the degree of hazard which exists as follows:

- (i) Premises having auxiliary water supply shall protect the public system by either an approved air gap or an approved reduced pressure principle backflow prevention assembly.
- (ii) Premises having water or substances which would be non hazardous to the health and well being of the consumers shall protect the public system with no less than an approved double check valve assembly.
- (iii) Premises where material dangerous to health is handled in a manner which creates an actual or potential hazard shall protect the

public system by an approved air gap or an approved reduced pressure principle backflow prevention assembly.

(iv) Premises where cross connections are uncontrolled shall protect the public water supply by installing an approved air gap or an approved reduced pressure principle backflow prevention device at the service connection.

(v) Premises where because of security requirements or other prohibitions it is impossible to complete an in plant cross connection inspection, the public system shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly.

(b) Premises which may fall into one or more of the above mentioned categories as referenced in subparagraph (a) above may be, but are not limited to the following:

- (i) Beverage bottling plants;
- (ii) Buildings including Hotels, Apartments, Public or private buildings, or other structures having actual or potential cross connections;
- (iii) Car wash facilities;
- (iv) Chemical manufacturing, handling, or processing plants;
- (v) Chemically contaminated water;
- (vi) Dairies and cold storage facilities;
- (vii) Film or photography processing laboratories;
- (viii) Fire systems;
- (ix) Hospitals, medical centers, morgues, mortuaries, autopsy facilities, clinics, or nursing and convalescent homes;
- (x) Irrigation systems;
- (xi) Laundries;
- (xii) Metal cleaning, processing or fabricating plants;
- (xiii) Oil and gas production, storage, or transmission facilities;
- (xiv) Packing or food processing plants;
- (xv) Paper and paper products plants;
- (xvi) Power plants;
- (xvii) Radioactive materials plants or handling facilities;
- (xviii) Restricted or classified facilities;

- (xix) Rubber plants;
- (xx) Sand, gravel or asphalt plants;
- (xxi) Schools or colleges;
- (xxii) Sewage and storm drainage facilities and reclaimed water systems;
- (xxiii) Solar heating systems;
- (xxiv) Temporary service - fire hydrants, air valves, blow-offs and other outlets;
- (xxv) Water front marinas.

SECTION 9. INSTALLATION. (a) Approved devices shall be installed at all fixtures and equipment where backflow or backsiphonage may occur and where a minimum air gap between the potable water outlet and the fixture or equipment flood-level rim cannot be maintained. Installation of such devices shall be made by qualified technicians as such term is defined in Section 14 below. Backflow and backsiphonage devices of all types shall be in an accessible location. Installation in pits or any other location not properly drained shall be prohibited, except that dual check valves may be installed in the meter box.

(b) Where a water connection is not subject to back pressure, a vacuum breaker shall be installed on the discharge side of the last valve on the line serving the fixture or equipment. A list of some conditions requiring protective devices of this kind are given in the following table:

CROSS CONNECTIONS WHERE PROTECTIVE DEVICES ARE REQUIRED
 ARE CRITICAL LEVEL (C-L) SETTING FOR VACUUM BREAKERS

<u>Fixtures or Equipment</u>	<u>Method of Installation</u>
Aspirators & ejectors	C-L at least 6 inches above flood level of receptacle served.
Dental units	On models without built in vacuum breakers C-L at least 6 inches above flood level rim of bowl.
Commercial dish washing machine	C-L at least 6 inches above flood level of machine. Installed on both hot and cold water supply lines.

Garbage can cleaning machines	C-L at least 6 inches above flood level of machine. Installed on both hot and cold water supply lines.
Hose Outlets	C-L at least 6 inches above highest point on hose line.
Commercial laundry machines	C-L at least 6 inches above flood level of machine. Installed on both hot and cold water supply lines.
Lawn sprinklers	C-L at least 6 inches above highest sprinkler head or discharge outlet.
Steam tables	C-L at least 6 inches above flood level rim.
Tanks and vats	C-L at least 6 inches above flood level rim or line.
Through urinals	C-L at least 30 inches above perforated flush pipe.
Flush tanks	Equipment with approved ball cock, installed according to manufacturer's instructions.
Hose bibs	C-L at least 6 inches above flood level of receptacle served.

SECTION 10. CONNECTIONS SUBJECT TO BACKPRESSURE.

Where a potable water connection is made to a line, fixture, tank, vat, pump, or other equipment with a hazard of backflow or backsiphonage where the water connection is subject to backpressure, and an air gap cannot be installed, the City may require the use of an approved reduced pressure principle backflow preventer. A partial list of such connections is shown in the following table:

PARTIAL LIST OF CROSS CONNECTIONS SUBJECT TO BACK PRESSURE

Chemicals lines	Pumps
Dock water outlets	Steam lines
Individual water supplies	Swimming pools

Industrial process water lines
Tanks & vats - bottom inlets

Pressure tanks
Hose bibs

SECTION 11. BAROMETRIC LOOP. Water connections where an actual or potential backsiphonage hazard exists may in lieu of devices specified in Section 10 above be provided with a barometric loop. Barometric loop shall precede the point of connection.

SECTION 12. DUAL CHECK VALVE. Dual check valves may be installed at the meter. These valves shall be inspected and repaired not less frequent than every third year. These valves shall be installed only in situations where the City is assured that only non contaminating substances are subject to backflow into the potable system.

SECTION 13. VACUUM BREAKERS. Atmospheric vacuum breakers shall be installed with the critical level at least six inches above the flood rim of the fixture they serve and on the discharge side of the last control valve to the fixture. No shut off valve or faucet shall be installed beyond the atmospheric vacuum breaker. Pressure vacuum breakers shall be installed with the critical level at least twelve inches above the flood rim but may have control valves down stream from the vacuum breaker. For closed equipment or vessels such as pressure sterilizers the top of the vessel shall be considered the flood level rim and a check valve shall be installed on the discharge side of the pressure vacuum breaker.

SECTION 14. MAINTENANCE AND REPAIR. It shall be the responsibility of building and premise owners to maintain all backflow preventers and vacuum breakers within the building or on the premises in good working order and to make sure no piping or other arrangements have been installed for the purpose of bypassing the backflow devices. Testing and repair of these devices shall be made by qualified technicians. Qualified technicians are those technicians who have completed a KDHE approved training course and have passed a written examination such as the American Backflow Prevention Association device testers examination. The City shall certify the device testers after ascertaining the technician meets such qualifications. The City will also assure the proper installation of all backflow preventers and will set appropriate testing and overhaul schedules for such devices. Testing intervals shall not exceed one (1) year and overhaul intervals shall not exceed five (5) years.

SECTION 15. CERTIFIED TESTERS/REPAIR TECHNICIANS. All certified tester/repair technicians shall be re-certified at no less than three year (3) year intervals. Persons certified as tester/repair technicians at the time of the adoption of this Ordinance shall continue to be certified for a period of not more than three (3) years as determined by the City.

SECTION 16. DISCONTINUANCE OF WATER SERVICES DUE TO NONCOMPLIANCE. (a) The City may discontinue or refuse water services to any customer who fails to comply with the requirements of this Ordinance or who refuses to grant the City access to such customers property for the purpose of inspection to determine compliance with this Ordinance.

(b) The City shall notify the owner, or authorized agent of the owner, of a building or premises in which there is found a violation of this Ordinance of such violation or refusal to allow inspection. The authorized agent or owner shall have a reasonable time to have the violation corrected the same being not less than thirty (30) days. In the event the owner shall not come into compliance within such thirty (30) day period the City Clerk shall forward to such owner or authorized agent written notice that water services will be terminated ten (10) days from the date of such service unless such owner or agent shall request a hearing.

(c) In the event a hearing is requested as provided in subparagraph (b) above the hearing shall be conducted by the Governing Body of the City, or by the City Clerk, or such other hearing officer or officers as may be appointed by the Governing Body. At the hearing the customer and the City may present such evidence as is relevant to the issue, be represented by counsel, examine witness and cross-examination witnesses, PROVIDED, HOWEVER, that formal rules of evidence shall not be followed.

(d) In the event the Governing Body or the City Clerk or such other hearing officer or officers appointed by the Governing Body finds that the owner or agent is in compliance with this Ordinance and that water services should not be discontinued, he or she shall so order and advise the City thereof.

(e) In the event the Governing Body or the City Clerk or such other hearing officer or officers appointed by the Governing Body finds that the owner or authorized agent is not in compliance with this Ordinance and that water services should be discontinued, he or she shall so order and advise the City thereof. Water services shall be discontinued on the date that

the order of discontinuance is issued by the Governing Body or the hearing officer, PROVIDED, HOWEVER, that extension of the date of discontinuance may be granted to enable the owner or authorized agent to make arrangements for compliance with this Ordinance or for other good cause shown. The owner or authorized agent shall be given notice of the order of discontinuance in person, by mail or by posting said notice on the premises to which the water service was provided.

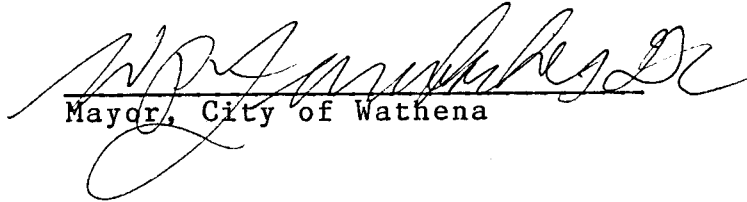
SECTION 17. REPORT OF INSTALLATION OR REPAIR. It shall be the responsibility of the building and premise owners to report to the City certain information concerning the installation or repair of all backflow preventers and vacuum breakers as required by this Ordinance. Such information shall be reported to the City, in writing or by telephone within 30 days of any such installation or repair, including but not limited to, the following information:

- (i) Date of initial installation of backflow preventer or vacuum breaker;
- (ii) Brand name and model number of such device;

- (iii) Name and certificate number of qualified technician providing for installation of backflow preventer or vacuum breaker;
- (iv) Date of last testing of the device;
- (v) Date of any repairs to such device including specific repairs made and the name and certificate number of qualified technician providing for such repairs.


SECTION 18. EFFECTIVE DATE. This Ordinance shall become final and take effect from and after its publication in the official City newspaper.

PASSED by the Council and APPROVED by the Mayor on the 3rd day of October, 1989.



Mayor, City of Wathena

ATTEST:



City Clerk