

ORDINANCE NO. 03-O-2023-2024

AN ORDINANCE AMENDING THE CITY CODE OF THE CITY OF STORM LAKE, IOWA, TITLE III, PUBLIC HEALTH AND SANITATION, BY ADDING ARTICLE 14, FOR THE PURPOSE OF PROTECTING THE PUBLIC WATER SUPPLY BY CONTROLLING BACKFLOW FROM CROSS-CONNECTIONS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF STORM LAKE, IOWA, that:

Section 1. Title III, Public Health and Sanitation, of the City Code of the City of Storm Lake, Iowa, is hereby amended by adding a new Article 14, “Cross-Connection Control” as follows:

3-14-1. Definitions. Where terms, phrases and words are not defined, they shall have their ordinary accepted meanings within the context with which they are used. The following definitions shall be applicable to this Article:

Approved Backflow Prevention Assembly for Containment: An assembly that has been approved by the University of Southern California Foundation for Cross Connection Control and Hydraulic Research (USC) and meets AWWA standard C511-89 for Reduced Pressure Assemblies and ANSI/AWWA Standard C510-17(R21) for Double Check Assemblies.

Backflow: The undesirable reverse flow of used water contaminants or pollutants into the public drinking water supply as a result of a cross-connection. Backflow can occur through backpressure or backsiphonage.

Backpressure: Backflow caused by water pressure in a facility that is higher than the pressure of the public drinking water supply. This may be caused by pumps, boilers, gravity or other sources of pressure.

Backsiphonage: The reverse flow of used, contaminated, or polluted water from a plumbing fixture or device into the public drinking water due to reduced pressure. This can be caused by nearby firefighting, water main breaks or repairs.

Backflow Prevention Assembly Technician: a person registered with the State of Iowa Department of Public Health to test or repair backflow prevention assemblies and to report on the conditions of these assemblies.

Cross Connection: Any actual or potential connection or arrangement, physical or otherwise, between a potable water supply system and any plumbing fixture or tank, receptacle, equipment, or device, through which may make it possible for non-potable, used, unclean, polluted, contaminated water, or other substance, to enter any part of such potable water system under any condition.

Containment: Installation of an approved testable backflow prevention assembly on the water service line immediately following the meter or at the service entrance to the building.

Customer: The owner, operator or occupant of a building or a property or of a private water system, which has a water service from a public water system.

Degree of hazard: the rating of a cross connection or water service determined by the city designee that indicates the potential to cause contamination or pollution. Facilities rated as high hazard will be required to install an approved assembly for containment.

Double Check Valve Assembly: A backflow prevention assembly consisting of two independently acting, internally loaded check valves, four properly located test ports and two isolation valves.

High hazard : A high hazard cross-connection is a cross-connection which may alter the quality of the potable water by creating an actual hazard to the public health, through poisoning or through the spread of disease by sewage, industrial fluids, or Wastewater Service Entrance

Isolation: Installation of a backflow prevention assembly at the cross Connection on each piece of water-using equipment, such as a boiler, mortuary aspirator, lawn irrigation, chemical mixer/dispenser, post mix carbonator, etc.

Low Hazard: A low hazard cross-connection is a cross-connection which may alter the quality of potable water to a degree which does not create a hazard to the public health, but which does adversely and unreasonably affect the aesthetic qualities of such potable waters for domestic use.

Reduced Pressure Principle Assembly: A backflow prevention assembly consisting of two independently acting, internally loaded check valves, a differential pressure relief valve, four properly located test ports, and two isolation valves.

Thermal Expansion: The volumetric increase of water pressure due to heating resulting in increased pressure in a closed system.

3-14-2. Cross Connection Prohibited.

Cross Connections from any well or other source of water to any piping system connected to the City of Storm Lake's water distribution system are prohibited. It is the Customer's obligation to ensure all new and existing service lines meet the requirements of state, federal, and local ordinance, including all applicable plumbing codes.

3-14-3. Applicability.

All new and existing service lines are subject to the requirements of local and State of Iowa plumbing codes respecting backflow prevention and in addition are also subject to the specific requirements set forth in this code of ordinances.

3-14-4. Customer Responsibilities.

- (a) The Customer shall be responsible for ensuring that no Cross Connections exist within their premises starting at the water service entrance without City-approved backflow-protection installed.
- (b) The Customer shall prevent actual or potential pollutants and/or contaminants from entering the City of Storm Lake water distribution system by all means necessary to prevent backflow.
- (c) Where a Customer is served by two or more inter-connected services and/or fire lines connected to different distribution mains or different sections of distribution mains, the Customer shall install and maintain, at Customer's expense, on each service and/or fire line, an approved check valve according to the latest edition of the AWWA Standard C508. This check valve shall be installed in an access manhole and shall be located on private property just inside the property line. Even though the check valve is located on private property, City shall at all times have the right of access to it and the installation of such check valve shall be deemed to grant a license to the City for such access.
- (d) All water-using devices shall be designed to prevent backflow to the City's water distribution system.

- (e) Where harmful contaminants or pollutants are used with any device or process connected to the water system, the customer must install and maintain a USC Approved testable reduced pressure principle backflow prevention assembly at the water service entrance in accordance with these ordinances and any applicable plumbing code requirements.
- (f) All permanently installed underground irrigation systems shall contain an approved testable Backflow Prevention Assembly at the water service entrance designed to prevent backflow to the City's water distribution system. If lawn irrigation is the only Cross Connection within a premises, a reduced pressure principle assembly may be installed on the irrigation connection in lieu of installation at the meter. This will be categorized as containment for the purposes of enforcement.
- (g) All commercial, multi-tenant properties served by one water meter are deemed to have a potential for Cross Connections to non-potable or hazardous substances because the City does not have control of tenants changing in this type of facility.

3-14-5. New Water Service.

- (a) An Approved Backflow Prevention Assembly for Containment as defined in this ordinance shall be installed at the domestic water service entrance as a condition of service to all newly constructed or remodeled commercial buildings.
- (b) For the purposes of this ordinance, any upgrade to an existing service line is deemed a new service.
- (c) An Approved Backflow Prevention Assembly for Containment shall be installed at the water service entrance in any existing service where an actual or potential Cross Connection to non potable or hazardous substances exists, is created, or is identified by the City of Storm Lake Water Department.
- (d) The City may withhold approval of new water service to a new service line until all backflow protection requirements are met.

3-14-6. Existing Service Connections.

- (a) All customers whose premises are not classified as single-family residential by the Building Official shall be inspected by the City to determine the type of water usage and degree of hazard to the water system. Upon completion of the inspection, the City will determine if containment backflow protection is required.
- (b) Inspections under this ordinance may be performed by the Water Superintendent, Plumbing Inspector, or other designee.
- (c) The City may evaluate existing service connections using a Water Usage Inventory completed by the customer and/or physical inspection by the City to determine the type of water usage in the facility.
- (d) If a customer fails to timely and accurately complete a Water Usage Inventory, or fails to provide access upon request, a high hazard condition shall be deemed to exist and an approved backflow prevention assembly for containment must be installed at the water service entrance within 30 days or service will be terminated until such time as the required installation is complete.
- (e) If a high hazard is determined to exist, backflow prevention for containment is required and the installation of an approved reduced pressure zone backflow prevention assembly at the service entrance must be completed within 30 days of discovery of the high hazard

to avoid termination. This shall be ordered by written notice through U.S. mail, email or hand delivery. (the "Installation Notice").

- (f) The installation of a backflow prevention assembly for containment will be considered complete when a passing backflow test form is submitted using the method specified by the City and a confirmation inspection is completed by the City.
- (g) Thermal expansion must be addressed whenever a Containment Backflow Prevention Assembly is installed.
- (h) If the Customer fails to complete installation pursuant to an Installation Notice then the water service at the affected service line shall be terminated until such time as the required installation is complete and a passing backflow test form is submitted to the City.
- (i) The responsibility to comply with all of the requirements of this ordinance are solely the Customer's and not conditioned upon whether the City has notified the Customer that they have a high hazard cross-connection and that they shall install backflow-prevention assemblies for containment.

3-14-7. Testing.

- (a) The Customer shall cause each backflow prevention assembly installed in their facility to be tested annually by a backflow prevention assembly technician registered with the Iowa Department of Public Health.
- (b) Such test shall be due on an annual testing date for such premises specified by the City. ("Annual Backflow Test Date"). A report of each such annual test shall be submitted by the tester to the Customer and the City using the method specified by the City.
- (c) The required test report shall be past due if the test is not performed, and the report of a passing test received by the City of Storm Lake by the Annual Backflow Test Date.
- (d) Any failure to have backflow assemblies that are categorized as containment to be tested upon installation and annually and a report thereof to be received by the city of Storm Lake by the Annual Backflow Test Due Date may result in the termination of water service until a state registered backflow technician notifies the Water Superintendent of the scheduled test date.
- (e) The City may require or cause testing in addition to the annual testing at any time.

3-14-8. Private Wells.

Private wells and any piping served by a private well shall be physically disconnected from any plumbing pipes and fixtures that will be connected to the City of Storm Lake distribution system. If a well will be left in service, no well equipment or piping shall be allowed to remain in the building even if it is physically separated or isolated with a valve unless an approved reduced pressure zone backflow prevention assembly is installed at water service entrance.

3-14-9. Administration.

The backflow protection requirements of this ordinance shall be administered by the City of Storm Lake Water Treatment Superintendent and the City Manager.

3-14-10. Municipal Infraction

In addition to the other penalties provided herein, a violation of any of the provisions of this Chapter shall constitute a Municipal Infraction subject to the penalties and alternative relief authorized by Title 1, Chapter 20 of this Code and by Section 364.22 of the Code of Iowa.

Section 2. REPEALER. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 3. SEVERABILITY CLAUSE. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

Section 4. WHEN EFFECTIVE. This ordinance shall be in full effect from and after its final passage, approval, and publication as provided by law.

Passed and approved by the City Council this ____ day of _____, 2024.

Matt Ricklefs, Mayor Pro Tem

ATTEST:

Mayra A. Martinez, City Clerk

1st Reading: January 15, 2024
2nd Reading: February 5, 2024
3rd Reading: February 19, 2024

Passed: _____
Signed: _____
Published: _____