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ORDINANCE NO. 411

AN ORDINANCE REQUIRING BACKFLOW PREVENTERS TO PREVENT CONTAMINATION OF THE POTABLE WATER AND TO PROHIBIT IMPROPER CROSS CONNECTIONS BETWEEN THE PUBLIC WATER SUPPLY AND OTHER WATER SOURCES; AND REPEALING ORDINANCE NO. 302.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF HAVILAND, KANSAS:

SECTION 1. DEFINITIONS. The following definitions shall apply in the interpretation and enforcement of this ordinance:

- a. Air gap separation means 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 overflow level rim of the receptacle, and shall be at least double the diameter of the supply pipe measured vertically above the flood level rim of the vessel, but in no case less than one (1) inch.
- b. Approved tester means a person qualified to make inspections; to test and repair backflow prevention/cross connection control devices; and who is approved by the City.
- c. Authorized representative means the City's Public Works Director or any other person designated by the City to administer this ordinance.
- d. Auxiliary water supply means any water source or system, other than the City of Haviland's water source or system that may be available in the building or premises. This does not include other Kansas Department of Health and Environment permitted public water supply systems.
- e. Backflow means the flow other than the intended direction of flow, of any foreign liquids, gases, used water or substances into the distribution system of a public water supply system.
- f. Backflow prevention device means any device, method, or type of construction intended to prevent backflow into the public water supply system.
- g. Consumer means any individual, firm, partnership, corporation, or agency or their authorized agent receiving water from the City of Haviland.
- h. Contamination means an introduction of any sewage, process fluids, chemicals, wastes or any other substance that would be objectionable. Contamination may be a threat to life or health, or may cause an aesthetic deterioration, color, taste or odor.
- i. Cross connection means any physical connection or arrangement between two (2) otherwise separate piping systems; one of which contains potable water of the public water supply system, and the second, water of unknown or questionable safety, or steam, gases, chemicals, or substances whereby there may be the backflow from the second system to the public water supply system. No physical cross connection shall be permitted between a public water supply system and an auxiliary water supply system.
- j. Degree of hazard means an evaluation of the potential risk to public health and the adverse effect of the hazard upon anyone using the water.
- k. Health hazard means any condition, device, or practice in the public water supply system, which could create or may create a danger to the health and well-being of anyone using the water or allow contamination of the water.
- l. Public water system means the water supply source, distribution system and

appurtenances to the service meter operated as a public utility, which supplies potable water to the consumers' water systems.

- m. Public water supply system means the public water system and the consumers' water systems.
- n. Consumer's water system means all service pipes, all distribution piping and all appurtenances beyond the service meter of the public water system.
- o. Service connection means the terminal end of the service line from the public water system. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

SECTION 2. CROSS CONNECTION CONTROL GENERAL POLICY.

- a. Purpose. The purpose of this ordinance is:
 - 1) To protect the public water supply system from contamination.
 - 2) To promote the elimination, containment, isolation, or control of cross connection between the public water supply system and non-potable water systems, plumbing fixtures, and industrial process systems or other systems which introduce or may introduce contaminants into the public water system or the consumer's water system.
 - 3) To provide for the maintenance of a continuing program of cross connection control which will prevent the contamination of the public water supply system.

Application. This ordinance shall apply to all consumers' water systems. The City of Haviland may also require cross connection control devices at the service connections of other Kansas Department of Health and Environment permitted public water supply systems served by the City of Haviland. If, in the judgment of the City of Haviland or its authorized representative, cross connection protection is required through either piping modification or installation of an approved backflow prevention device, due notice shall be given to the consumer. The consumer shall immediately comply by providing the required protection at his own expense. Failure or refusal or inability on the part of the consumer to provide such protection shall constitute grounds for the discontinuation of water service to the premises until such protection has been provided.

- b. Intent. This ordinance will be reasonably interpreted by the City of Haviland. It is the intent of the City of Haviland to recognize the varying degrees of hazard and to apply the principle that the degree of protection shall be commensurate with the degree of hazard.

SECTION 3. CROSS CONNECTIONS PROHIBITED.

- a. No water service connection shall be installed or maintained to any premises where actual or potential cross connections to the public water supply system may exist unless such actual or potential cross connections are abated or controlled to the satisfaction of the City of Haviland or its authorized representative.
- b. No connection shall be installed or maintained whereby an auxiliary water supply may enter a public water supply system.

SECTION 4. SURVEY AND INVESTIGATIONS.

- a. The consumer's premises shall be open at all reasonable times to the City of Haviland or its the authorized representative, for the conduction of surveys and investigations of water use practices within the consumer's premises to determine whether there are

- actual or potential cross connections in the consumer's water system.
- b. On request by the City of Haviland or its authorized representative, the consumer shall furnish requested information on water use practices within his premises and in the consumer's water system.
 - c. On request by the City of Haviland or its authorized representative, the consumer shall conduct periodic surveys of water use practices on the premises of the consumer's water system to determine whether there are actual or potential cross connections. The consumer shall provide the survey results to the City of Haviland or its authorized representative.

SECTION 5. WHERE PROTECTION IS REQUIRED.

- a. 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 City of Haviland or its authorized representative or the Kansas Department of Health and Environment, actual or potential cross connections exist. The type and degree of protection required shall be commensurate with the degree of hazard and/or type of contamination that may enter the public water supply system.
- b. An approved air gap separation or other appropriate backflow prevention device approved by the City or its authorized representative shall be installed at the service connection or within any premises where, in the judgment of the City of Haviland or its authorized representative or the Kansas Department of Health and Environment, the nature and extent of activities on the premises, or the materials used in connection with the activities, or materials stored on the premises, would present a health hazard or contamination of the public water supply system from a cross connection. This includes, but is not limited to, the following situations:
 - 1) Premises having an auxiliary water supply, unless the quality of the auxiliary supply is acceptable to the City of Haviland or its authorized representative and the Kansas Department of Health and Environment.
 - 2) Premises having internal plumbing arrangements which make it impractical to ascertain whether or not cross connections exist.
 - 3) Premises where entry is restricted so that inspection for cross connections cannot be made with sufficient frequency or at sufficiently short notice to assure the cross connections do not exist.
 - 4) Premises having a repeated history of cross connections being established or re-established.
 - 5) Premises, which, due to the nature of the enterprise therein, are subject to recurring modification or expansion.
 - 6) Premises on which any substance is handled under pressure so as to permit entry into the public water supply system, or where a cross connection could reasonably be expected to occur. This shall include the handling of process waters and cooling waters.
 - 7) Premises where toxic or hazardous materials are handled.
- c. The following types of facilities fall into one or more of the categories or premises where an approved air gap separation or other appropriate backflow prevention device approved by the City or its authorized representative shall be required by the City of Haviland to protect the public water supply and must be installed at these facilities unless all hazardous or potentially hazardous conditions have been eliminated or corrected by other methods to the satisfaction of the City of Haviland or its authorized representative and the Kansas Department of Health and Environment:

- 1) Agricultural chemical facilities
- 2) Auxiliary water systems, wells
- 3) Boilers
- 4) Bulk water loading facilities
- 5) Car washing facilities
- 6) Chemical manufacturing, processing, compounding or treatment plants
- 7) Chill water systems
- 8) Cooling towers
- 9) Feedlots
- 10) Fire protection systems
- 11) Hazardous waste storage and disposal sites
- 12) Hospitals, mortuaries, clinics or others as discovered by sanitary surveys
- 13) Irrigation and sprinkler systems (including lawn sprinkler systems)
- 14) Laundries and dry cleaning
- 15) Meat processing facilities
- 16) Metal manufacturing, cleaning, processing and fabricating plants
- 17) Oil and gas production, refining, storage or transmission properties
- 18) Plating plants
- 19) Power plants
- 20) Research and analytical laboratories
- 21) Sewage and storm drainage facilities — pumping stations and treatment plants
- 22) Veterinary clinics

SECTION 6. BACKFLOW PREVENTION DEVICES.

- a) Any backflow prevention device required by this ordinance shall be of a model or construction approved by the City of Haviland or its authorized representative and the Kansas Department of Health and Environment.
 - 1) 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 (1) inch.
 - 2) Double check valve assemblies, reduced pressure principle backflow prevention devices, pressure vacuum breaker devices, and atmospheric vacuum breaker devices shall appear on the current list of approved backflow prevention devices established by the Kansas Department of Health and Environment, unless the device was installed at the time this ordinance was passed and complies with required inspection and maintenance.

SECTION 7. INSTALLATION.

- a) Backflow prevention devices required by this ordinance shall be installed at a location and in a manner approved by the City of Haviland or its authorized representative. All devices shall be installed at the expense of the water consumer, unless the City of Haviland or its authorized representative agrees otherwise.
- b) Backflow prevention devices installed at the service connection shall be located on the consumer's side of the water meter, as close to the meter as is reasonably practical, and shall be installed prior to any other connection.
- c) Backflow prevention devices shall be conveniently accessible for maintenance and testing, protected from freezing, and where no part of the device will be submerged or subject to flooding by any fluid. All devices shall be installed according to manufacturer's recommendations.

SECTION 8. INSPECTION AND MAINTENANCE.

- a. The consumer is required by this ordinance to inspect, test, and overhaul backflow prevention devices in accordance with the following schedule or more often as determined by the City of Haviland or its authorized representative.
 - 1) Air gap separations shall be inspected at the time of installation and at least monthly by the consumer thereafter.
 - 2) Double check valve assemblies shall be inspected and tested for tightness at the time of installation and at least every twelve (12) months thereafter. They shall be dismantled, inspected internally, cleaned, and repaired whenever needed and at least every thirty (30) months.
 - 3) Reduced pressure principle backflow prevention devices shall be inspected and tested for tightness at the time of installation and at least every twelve (12) months thereafter. They shall be dismantled, inspected internally, cleaned, and repaired whenever needed and at least every five (5) years.
- b. Inspections, tests, and overhauls of backflow prevention devices shall be made at the expense of the consumer and shall be performed by an approved tester. Notwithstanding the foregoing, monthly inspections of air gap separations may be performed by the consumer.
- c. Whenever backflow prevention devices required by this Ordinance are found to be defective, they shall be repaired or replaced without delay at the expense of the consumer.
- d. The consumer must 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 tests, inspections, and repairs. All records of inspections, tests, repairs, and overhauls shall be provided within thirty (30) days to the City of Haviland or its authorized representative.
- e. All backflow prevention devices shall have a tag showing the date of the last inspection, test, or overhaul or other maintenance.
- f. Backflow prevention devices shall not be bypassed, made inoperative, removed, or otherwise made ineffective without specific authorization by the City of Haviland or its authorized representative.
- g. Starting in 2026, all backflow prevention devices requiring inspection and testing every twelve (12) months are required to be inspected and tested prior to May 31st of each year and records of such testing and inspection must be provided to the City no later than June 15th of such year.

SECTION 9. DEVICES. The following devices are recognized for cross connection control and backflow prevention by the Kansas Department of Health and Environment.

- a. Air Gap: must be two pipe diameters and the air gap separation 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 (1) inch. Must be inspected monthly by the consumer to ensure that the air gap separation is still in compliance and that no modifications have been made. Satisfactory for any material. Whenever practical this is the control method of choice.
- b. Reduced Pressure Principle Backflow Preventer: contains two specifically designed, soft seated, independently acting check valves with a reduced pressure zone (with relief valve) between the two checks. Shut off valves before and after the device. This device is satisfactory for most toxic materials. This device causes significant pressure

- loss (10 psi or more). Must be inspected and tested annually. Repaired as necessary.
- c. Double Check Valve Assembly: contains two soft-seated independently acting check valves in series. Shut off valves before and after device. This device is adequate for non-toxic applications only such as lawn sprinkler systems. This device causes minor pressure loss. Must be inspected and tested annually. Repaired as necessary.
 - d. Pressure Vacuum Breaker: must be installed a minimum of 12 inches above highest point of usage. No back pressure, only back siphonage. Can operate under constant pressure. Shut off valve can be located beyond the vacuum breaker. Must be inspected and tested annually. Repaired as necessary.
 - e. Atmospheric Vacuum Breaker: must be installed a minimum of 6 inches above the highest point of usage. No backpressure, only back siphonage. Not for use under constant pressure. Shut off valves must be located ahead of vacuum breaker. Must be inspected annually and repaired as necessary.

SECTION 10. VIOLATION AND PENALTIES.

- a. The City of Haviland or its authorized representative shall deny or discontinue the water service to any premises or any consumer wherein any backflow prevention device required by this ordinance is not installed, inspected, tested, and maintained in a manner acceptable to the City of Haviland or its authorized representative, or if it is found that the backflow prevention device has been removed or bypassed, or if an unprotected cross connection exists.
- b. Water service to such premises shall not be restored until the consumer is in compliance with this Cross Connection Ordinance to the satisfaction of the City of Haviland or its authorized representative.

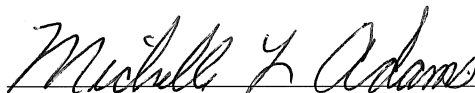
SECTION 7. EFFECTIVE DATE. This ordinance shall take effect and be in full force and effect from and after its passage, approval and publication once in the official City newspaper.

SECTION 8. SAVINGS CLAUSE. If any section, sentence, clause or phrase of this ordinance is invalid or unconstitutional, the remaining portions of this ordinance shall remain valid and forcible existence.

SECTION 9. REPEAL OF CONFLICTING ORDINANCES. Ordinance No. 302 is hereby repealed, and all ordinances or parts of ordinances enacted prior to this ordinance in conflict with this ordinance are hereby repealed.

Passed and adopted by the Governing Body of the City of Haviland, Kansas, this 9th day of July, 2025.


Brad Lingafelter, Mayor


Attest: Michelle Adams, City Clerk

