

CITY OF SAGINAW, TEXAS
ORDINANCE NO. 2023-29

AN ORDINANCE OF THE CITY OF SAGINAW, TEXAS, AMENDING CHAPTER 98, "UTILITIES," ARTICLE V, "CROSS CONNECTION CONTROL," OF THE SAGINAW CITY CODE; AMENDING REGULATIONS GOVERNING THE CROSS-CONNECTION CONTROL PROGRAM; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY FOR VIOLATIONS THEREOF; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER AND PROVIDING AN EFFECTIVE DATE.

WHEREAS; the City of Saginaw, Texas, is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Texas Local Government Code; and

WHEREAS, pursuant to Title 30 of the Texas Administrative Code, Section 290.44, it is the responsibility of the City to protect its drinking water supply by instituting and enforcing a cross-connection control program; and

WHEREAS; the City Council of the City of Saginaw finds that it is in the interest of health, safety and welfare of the citizens of the city to require regulations for the City's potable water system for the protection of the City's water supply from contamination or pollution due to any cross-connections and wishes to amend Article V, of Chapter 98, of the Saginaw City Code accordingly.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAGINAW, TEXAS:

SECTION 1

That the Saginaw City Code is hereby amended by amending Article V, of Chapter 98, to read as written in Exhibit A, attached hereto.

SECTION 2

This Ordinance shall be and is hereby declared to be cumulative of all other ordinances of the City of Saginaw, and this Ordinance shall not operate to repeal or affect the Code of Ordinances of the City of Saginaw or any other ordinances except insofar as the provisions thereof might be inconsistent or in conflict with the provisions of this Ordinance, in which event such conflicting provisions, if any, in such Code of Ordinances or any other ordinances are hereby repealed.

SECTION 3

Any person, firm, association of persons, corporation, or other organization violating the provisions of this ordinance shall be deemed to be guilty of a misdemeanor and, upon conviction, shall be fined an amount not to exceed \$2000.00. Each day that a violation continues shall be deemed a separate offense.

SECTION 4

The sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance shall be declared unconstitutional, such unconstitutionality or invalidity shall not affect any of the remaining phrases, clauses, sentences, paragraphs, or sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this Ordinance of any such unconstitutional or invalid phrase, clause, sentence, paragraph, or section.

SECTION 5

All rights and remedies of the City of Saginaw are expressly saved as to any and all violations of the provisions of any ordinances affecting cross contamination program regulations, which have accrued at the time of the effective date of this Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances, same shall not be affected by this Ordinance but may be prosecuted until final disposition by the courts.

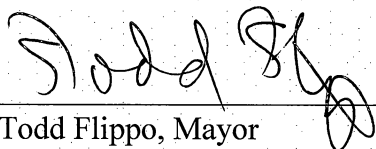
SECTION 6

The City Secretary of the City of Saginaw is hereby directed to publish at least twice in the official newspaper of the City of Saginaw, the caption and the penalty clause of this ordinance in accordance with Section 52.013(b) of the Local Government Code.

SECTION 7

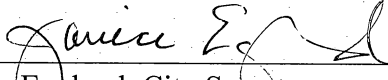
This Ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the laws of the State of Texas.

PASSED AND APPROVED on this 17th day of October, 2023 at a regular meeting of the City Council of the City of Saginaw, Texas.

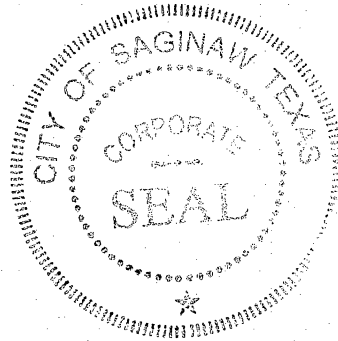


Todd Flippo, Mayor

ATTEST:



Janice England, City Secretary



APPROVED AS TO FORM:



Bryn Meredith, City Attorney

ARTICLE V. – CROSS-CONNECTION CONTROL PROGRAM

DIVISION 1. - GENERALLY

Sec. 98-321. - Purpose.

Pursuant to Title 30, Texas Administrative Code, Section 290.44, it is the responsibility of the City to protect its drinking water supply by instituting and enforcing a Cross-Connection Control Program. The purpose of this article, therefore, is to comply with the above-cited regulatory requirements and to protect the water supply of the City from contamination or pollution due to any cross-connections.

(Ord. No. 97-14, § 1, 6-17-97)

Sec. 98-322. - Definitions.

Unless a provision explicitly states otherwise, the following terms and phrases, as used in this article, shall have the meanings hereinafter designated. If a word or term used in this article is not contained in the following list, it shall have the definition provided for such word or term in the most recent edition of the Manual of Cross-Connection Control published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

Approved backflow prevention assembly (or backflow assembly or assembly) means an assembly to counteract backpressure or prevent backsiphonage. This assembly must appear on the USC List of Approved Backflow Prevention Assemblies.

Auxiliary supply means any water source or system other than the public water system, that may be available in a building or on a property.

AVB means atmospheric vacuum breaker.

Backflow means:

- (1) The flow in the direction opposite to the normal flow; or
- (2) The introduction of any foreign liquids, gases, or substances into the public water system.

Commission (or TCEQ) means the Texas Commission on Environmental Quality and its successor agencies.

Contamination means the presence in or entry into a public water supply system of any substance which may be deleterious to the public health and/or the quality of the water.

Cross-connection means any physical arrangement where a potable water supply is actually or potentially connected with any nonpotable water system, used water system or auxiliary water supply, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp cooler, air conditioning unit, fire protection system, or any other assembly which contains, or may contain, contaminated water, sewage, or other liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water system as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel or change over assemblies, or other temporary or permanent assemblies through which, or because of which, backflow may occur are considered to be cross-connections.

Degree of hazard means the low or high hazard classification that shall be attached to all actual or potential cross-connections.

Department means the Water Department of the City of Saginaw.

Director means the City's Director of Public Works and the directors authorized representatives.

Double check valve backflow prevention assembly (or double check assembly or double check), commonly referred to as DC or DCVA, means an assembly which consists of two independently operating check valves which are spring loaded or weighted. The assembly comes complete with a gate valve on each side of the checks, as well as test cocks to test the checks for tightness.

Drinking water means water distributed for human consumption, for use in preparing food or beverages, or for use in cleaning a utensil or article used in preparing food or beverages for, or consuming food or beverages by, human beings.

Health hazard means an actual or potential threat or contamination of a physical or toxic nature dangerous to health to the public potable water system or a consumer's potable water system.

High hazard means the classification assigned to a cross-connection that could potentially allow a substance that may cause illness or death to a person to backflow into the potable water supply.

Human consumption means uses by humans in which water can be ingested into or absorbed by the human body. Examples of these include, but are not limited to, drinking, cooking, brushing teeth, bathing, washing hands, preparing foods, and washing dishes, utensils, and other articles used in the preparation or consumption of food.

Inspector means a person that is a certified cross-connection inspector employed by or under contract with the city.

Low hazard means the classification assigned to a cross-connection that could potentially allow a substance that may be objectionable but not hazardous to a person's health to backflow into the potable water supply.

Nonresidential use shall include all uses not specifically included in "residential use."

Plumbing code means the city's current adopted issue of the Uniform Plumbing Code.

Potable water supply means any water supply intended or used for human consumption or other domestic use.

Premise isolation means the appropriate backflow prevention at the service connection between the public water system and the water user.

Premises means any piece of property to which water is provided, including all improvements, mobile structures, and structures located on it.

Public water system means any public or privately-owned water system which supplies water for human consumption. The system includes all services, reservoirs, facilities, and equipment used in the process of producing, treating, storing, or conveying water for public consumption.

PVB means pressure vacuum breaker.

Reduced pressure principle backflow prevention assembly (or reduced pressure assembly or RPBA or RP) means an assembly containing two independently acting approved check valves together with a hydraulically operated, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The assembly shall include properly located test cocks and tightly closing shut-off valves at the end of the assembly.

Residential use means single family dwellings, duplexes, multiplex housing and apartments where the individual units are each on a separate meter, or, in cases where two or more units are served by one meter, the units are full-time dwellings.

Service connection means the point of delivery at which the water purveyor loses control of the water.

Tester means a person who is a certified backflow prevention assembly technician approved and registered with the Director.

Thermal expansion means heated water that does not have the space to expand.

Used water means water supplied by a public water system to a water user's system after it has passed through the service connection.

(Ord. No. 97-14, § 2, 6-17-97)

Secs. 323—350. - Reserved.

DIVISION 2. — CROSS-CONNECTION CONTROL REGULATIONS

Sec. 98-351. - Cost of compliance.

The cost of complying with these regulations shall be the responsibility of the property owners and their lessees. These costs include but are not limited to purchasing, installation, testing and repair of the assembly. These costs shall also include point of use and premise isolation assemblies. Any cost incurred by the city to enforce this article is the responsibility of the property owners and their lessees.

(Ord. No. 97-14, § 3, 6-17-97)

Sec. 98-352. - Responsibilities of owners and renters.

- (a) It is the responsibility of all property owners and lessees to abide by the conditions of this article. If changes are made to a premises' plumbing system, the property owner shall notify the Director.
- (b) The owner of leased premises is responsible for the installation, testing and repair of all backflow assemblies on the premises. When the lessee changes, the owner shall immediately notify the city.

(Ord. No. 97-14, § 4, 6-17-97)

Sec. 98-353. - Backflow prevention assembly requirements.

- (a) A certified cross-connection inspector employed by or under contract with the city shall determine the type and location of backflow assembly to be installed within the city's water service area.
- (b) At a minimum, a backflow prevention assembly will be required in each of the following circumstances:
 - (1) When the nature and extent of any activity at a premises, or the materials used in connection with any activity at a premises, or materials stored at a premises, could contaminate or pollute the potable water supply.

- (2) When a premises has one or more cross-connections.
 - (3) When internal cross-connections are present that are not correctable.
 - (4) When intricate plumbing arrangements are present that make it impractical to ascertain whether cross-connections exist.
 - (5) When a premises has a repeated history of cross-connections being established or reestablished.
 - (6) When entry to a premises is unduly restricted so that inspections for cross-connections cannot be made with sufficient frequency to assure that cross-connections do not exist.
 - (7) When materials are being used such that, if backflow should occur, a health hazard could result.
 - (8) When installation of an approved backflow prevention assembly is deemed by an inspector to be necessary to accomplish the purpose of these regulations.
 - (9) When an appropriate cross-connection survey report form has not been filed with the Director.
 - (10) When a fire sprinkler system using nonpotable piping material is connected to the city's water system.
 - (11) In all new nonresidential construction, or remodel of an existing building, there shall be installed an approved backflow assembly at the service connection. The type of the assembly will be commensurate with the degree of hazard as determined by an inspector. A backflow assembly that is already in place during the remodel of an existing building may remain if it meets the requirements of this Ordinance. If the backflow assembly does not meet the requirements in this Ordinance, it must be replaced.
 - (12) When a building is constructed on commercial premises, and the end use of such building is not determined or could change, a reduced pressure principle backflow prevention assembly shall be installed at the service connection to provide protection of the public water supply in the event of the most hazardous use of the building.
 - (13) If a premises is required to have backflow prevention assemblies, but water cannot be turned off during the testing of such assemblies, the premises shall be equipped with dual backflow prevention assemblies of the same type so that testing, repair and maintenance can be performed.
 - (14) Any used water return system that has received approval from the Director.
 - (15) If a point of use assembly has not been tested or repaired as required by this article, a premise isolation assembly shall be required.
 - (16) If an inspector determines that additions or rearrangements have been made to the plumbing system without the proper permits as required by the plumbing code, premise isolation shall be required.
 - (17) All multistory buildings, except single family dwellings, or any building with a booster pump or elevated storage tank.
 - (18) Retrofitting shall be required on all high hazard connections and wherever else the Director deems retrofitting necessary.
- (c) Any premises requiring multiple service connections for adequacy of supply and/or fire protection shall have a backflow assembly on each service connection. The assembly shall be commensurate

with the degree of potential hazard that could occur in the event of an interconnect between any of the buildings on the premises.

- (d) A person commits an offense if the person owns or is in control of any premises and knowingly fails to install and maintain backflow prevention assemblies on said premises as required by this section.
- (e) A person commits an offense if the person owns, operates or manages any premises and backflow from the premises enters the public water supply system.

(Ord. No. 97-14, § 5, 6-17-97)

Sec. 98-354. - Residential service connections.

If the Director determines that residential premises have a cross-connection, said premises shall be equipped with an approved backflow, prevention assembly installed in accordance with this article.

(Ord. No. 97-14, § 6, 6-17-97)

Sec. 98-355. - Plumbing code.

As a condition of water service, customers shall install, maintain, and operate their piping and plumbing systems in accordance with the plumbing code. If there is a conflict between this article and the plumbing code, the more restrictive provision shall apply.

(Ord. No. 97-14, § 7, 6-17-97)

Sec. 98-356. - Installation requirements.

- (a) Backflow prevention assemblies shall be installed in accordance with the following requirements to ensure their proper operation and accessibility:
 - (1) Backflow prevention assemblies shall be installed in accordance with the plumbing code and this article. The assembly installer shall obtain the required plumbing permits prior to installation and shall have the assembly inspected by a certified cross-connection inspector and as required by the plumbing code.
 - (2) All backflow prevention assemblies shall be lead free, as defined by the Safe Drinking Water Act (SDWA) Section 1417.
 - (3) No part of a reduced pressure principle backflow prevention assembly shall be submerged in water or installed in a location subject to flooding. If a double check valve assembly is installed in a vault, brass plugs shall be maintained in the test ports at all times and adequate drainage shall be provided.
 - (4) Assemblies shall be installed at the point of delivery of the water supply, before any branch in the line, and on private property located just inside the boundary of the city's right-of-way. An inspector may specify other areas for installation of the assembly.
 - (5) The assembly shall be protected from freezing and other severe weather conditions.
 - (6) All backflow prevention assemblies shall be of a type and model approved by the Director.
 - (7) All vertical installations shall be approved in writing by the Director prior to installation.

- (8) The assembly shall be readily accessible with adequate room for maintenance and testing. Assemblies two inches and smaller shall have at least a six-inch clearance on all sides of the assembly. All assemblies larger than two inches shall have a minimum clearance of 12 inches on the back side, 24 inches on the test cock side, 12 inches below the assembly and 36 inches above the assembly. "Y" pattern double check valve assemblies shall be installed so that the checks are horizontal and the test cocks face upward.
 - (9) If the Director grants written permission to install the backflow assembly inside of a building, the assembly shall be readily accessible between 8:00 a.m. and 5:00 p.m., Monday through Friday.
 - (10) If an assembly is installed pursuant to subsection (a)(9), and is four inches or larger and is installed five feet or higher above the floor, it shall be equipped with a rigidly and permanently installed scaffolding acceptable to the Director. This installation shall also meet all applicable requirements set out by the U. S. Occupational Safety and Health Administration and the State of Texas occupational safety and health laws.
 - (11) An approved air gap shall be located at the relief valve orifice of RP assemblies. This air gap shall be at least twice the inside diameter of the incoming supply line as measured vertically above the top rim of the drain and in no case less than one inch.
 - (12) Upon completion of installation, the property owner or their designated representative shall notify the Director to inspect the assemblies. The property owner, or their designated representative, shall register all backflow assemblies with the Director. Registration shall consist of date of installation, manufacturer, model, serial number of the backflow prevention assembly, and initial test report.
- (b) A person commits an offense if the person installs a backflow prevention assembly in violation of this section.
 - (c) A person commits an offense if the person fails to notify the Director to inspect a backflow prevention assembly after its installation as required by this section.
 - (d) A person commits an offense if the person fails to register a backflow prevention assembly as required by this section.

(Ord. No. 97-14, § 8, 6-17-97)

Sec. 98-357. - Testing of assemblies.

- (a) The property owner will cause the inspection and testing of all assemblies in each of the following circumstances:
 - (1) Immediately after installation.
 - (2) Whenever the assembly is moved.
 - (3) A minimum of once a year for all backflow prevention assemblies
 - (4) Immediately after repair.
- (b) Assemblies may be required to be tested more frequently if the Director deems necessary.
- (c) All assembly testing shall be performed by a certified and registered backflow prevention assembly tester, in accordance with city approved test procedures.

- (d) It is the responsibility of the property owner and the person in control of the premises to have all assemblies tested in accordance with this article.
- (e) A person commits an offense if the person owns or is in control of any premises and knowingly fails or refuses to have the backflow prevention assemblies installed on said premises inspected or tested as required by this section.
- (f) The city shall not be liable for damage to an assembly that occurs during testing, when such damage results from metal fatigue or deteriorated metal, or when such damage occurs under standard testing procedures.

(Ord. No. 97-14, § 9, 6-17-97)

Sec. 98-358. - Maintenance of assemblies.

- (a) A person who owns, operates, or manages premises in which required backflow prevention assemblies are installed shall maintain such assemblies in proper working order at all times, including repair as required. All maintenance and repair of assemblies shall be done in accordance with all applicable regulations of the Commission and this article.
- (b) Backflow prevention assemblies shall be maintained in a manner that allows them to be tested by a method that has been approved by the Director.
- (c) A person commits an offense if the person knowingly fails to maintain backflow prevention assemblies in compliance with this article.
- (d) A person commits an offense if the person knowingly fails to comply with a repair order issued by the Director.

(Ord. No. 97-14, § 10, 6-17-97)

Sec. 98-359. - Thermal expansion.

It is the responsibility of the property owner to eliminate the possibility of thermal expansion, if a closed system has been created by the installation of a backflow assembly.

(Ord. No. 97-14, § 11, 6-17-97)

Sec. 98-360. - Pressure loss.

Any water pressure drop caused by the installation of a backflow assembly shall not be the responsibility of the city. The department may give reasonable assistance to a property owner regarding information on adequate sizing of assemblies and proper plumbing practices to provide for required pressure and flows for fire protection.

(Ord. No. 97-14, § 12, 6-17-97)

Sec. 98-361. - Mobile units.

- (a) A person who owns or operates any vehicle that uses water from the city's public water system shall obtain a use permit from the Director before accessing the public water system. The Director may require a fixed air gap or backflow assembly mounted either on the vehicle or piping.
- (b) The failure of the owner or operator of the vehicle to comply with this article shall be grounds for the city to revoke any permit or license required under the city Code to operate the vehicle or the business for which such vehicle is used.
- (c) The Director may deny a use permit to any person who is not in compliance with this article or who has a history of violating the requirements of this section.
- (d) A person commits an offense if the person operates or causes to be operated a vehicle in violation of this section.

(Ord. No. 97-14, § 13, 6-17-97)

Sec. 98-362. - Right-of-way encroachment.

- (a) No person shall install or maintain a backflow prevention assembly upon or within any city right-of-way except as provided by this section.
- (b) No encroachment agreement as required by the "buildings" chapter of the city Code will be necessary, but all other permits required by the city Code to perform work in the right-of-way shall be obtained.
- (c) A backflow prevention assembly required by this article may be installed upon or within any city right-of-way only if the owner proves to the city that there is no other feasible location for installing the assembly, and installing it in the right-of-way will not interfere with traffic or utilities. The city retains the right to approve the location, height, depth, enclosure, and other requisites of the assembly prior to its installation.
- (d) Any assembly or portion of an assembly which extends above ground shall be located no closer than 18 inches to the face of the curb.
- (e) A property owner shall, at the request of the city and at the owner's sole expense, relocate a backflow prevention assembly which encroaches upon any city right-of-way when such relocation is necessary for street or utility construction or repairs, or for purposes of public safety.
- (f) A person commits an offense if the person installs or maintains a backflow prevention assembly in violation of this section.
- (g) A person commits an offense if the person fails to relocate a backflow prevention assembly located in or upon any city right-of-way after receiving a written order from the city to do so.
- (h) A backflow prevention assembly installed or maintained in city right-of-way in violation of this section or an order issued pursuant to this section is hereby declared to be an offense.

(Ord. No. 97-14, § 14, 6-17-97)

Sec. 98-363. - Certification of backflow prevention assembly testers.

- (a) All backflow assembly testers operating within the city shall be certified in accordance with all applicable regulations of the Commission and this article. No person shall operate as a backflow prevention assembly tester within the city without first being annually certified by the Director.
- (b) At the time of certification, recertification, and upon the Director's request, each person certified as a backflow prevention assembly tester shall furnish evidence to show that they are insured and bonded to perform services on private property, and have current licenses required by the state and the city to perform the contemplated services.
- (c) Persons certified as backflow prevention assembly testers shall meet the following requirements:
 - (1) Hold a current BPAT license issued by the TCEQ.
 - 2 Submit a completed "Contractor Registration Form" application to the Director.
 - (3) Receive confined space entry training certification.
 - (4) Maintain general commercial liability insurance in accordance with current city standards as specified in Ordinance Number 91-7.
- (d) A person commits an offense if the person knowingly operates as a backflow prevention assembly tester within the city without a valid certification issued by the Director.

(Ord. No. 97-14, § 15, 6-17-97)

Sec. 98-364. - Backflow prevention assembly tester responsibilities.

- (a) No certified backflow assembly tester shall operate within the city without first registering with the Director. The Director shall determine whether an applicant is eligible for registration.
- (b) A registration shall remain in effect provided:
 - (1) The tester maintains eligibility for registration and certification;
 - (2) The tester attends and successfully completes continuous education as required for licensing; and
 - (3) Registration is not revoked by the Director.
- (c) Upon recertifying, a tester shall renew his/her registration with the Director. If a certification remains expired for a period of one year, the tester shall reestablish registration eligibility.
- (d) Each applicant for registration shall:
 - (1) Provide evidence to the Director to establish that the applicant has available the necessary tools and equipment to properly test backflow prevention assemblies;
 - (2) Provide evidence to the Director that the applicant has successfully completed "Permit Confined Space Entry Training" as specified by Federal Occupational Safety and Health Agency's 29 CFR 1910.146; and
 - (3) Identify all test gauges the applicant will use in testing backflow prevention assemblies.
- (e) A registered backflow prevention assembly tester shall:
 - (1) File the serial number of each of his test kits with the Director;
 - (2) Annually have each recorded test kit tested for accuracy;

- (3) Perform competent and accurate certifications of each backflow prevention assembly tested and submit complete reports thereof to the Director;
- (4) List registered serial numbers of test gauges on tests and maintenance reports prior to submitting them to the Director; and
- (5) Shall not change the design or operation characteristics of a backflow prevention assembly.
- (f) The Director may revoke a registration if the Director determines that the tester:
 - (1) Has made false, incomplete, or inaccurate assembly testing reports;
 - (2) Has used inaccurate gauges;
 - (3) Has used improper testing procedures;
 - (4) Has expired insurance;
 - (5) Is not in compliance with safety regulations;
 - (6) Has failed to register the serial numbers of his test kits or failed to calibrate gauges annually as required by subsection (e); or
 - (7) Has violated any other provision of this section.
- (g) A person commits an offense if the person operates as a backflow prevention assembly tester within the city without a valid registration issued by the Director.

(Ord. No. 97-14, § 16, 6-17-97)

Sec. 98-365. - Reduced pressure principle backflow prevention assembly (RP).

- (a) RP's may be utilized at premises where a substance is handled that would be hazardous to the public health if introduced into the potable water system. An RP is normally used in locations where an air gap is impractical. An RP is effective against both backsiphonage and backpressure.
- (b) RP's shall be sized to provide an adequate supply of water and pressure for the premises being served. Flow characteristics are not standard. Consult manufacturer's specifications for specific performance data.
- (c) Premises where interruption of water supply is critical shall be provided with two assemblies installed in parallel. They shall be sized in such a manner that either assembly will provide the minimum water requirements while the two together will provide the maximum flow required.
- (d) Bypass lines are prohibited. Pipe fittings which could be used for connecting a bypass line shall not be installed.
- (e) The assembly shall be readily accessible for testing and maintenance and shall be located in an area where water damage to buildings or furnishings will not occur from relief valve discharge.
 - (1) An approved air gap funnel assembly may be used to direct minor discharges away from the assembly; this assembly will not control flow in a continuous relief situation. Drain lines to accommodate full relief valve discharge flow should be considered.
 - (2) RPs are typically installed above grade in well drained areas.
 - (3) Enclosures shall be designed for ready access and sized to allow for the minimum clearances established below. Removable protective enclosures are typically installed on the smaller

assemblies. Daylight drain ports shall be provided to accommodate full pressure discharge from the assembly.

- (4) All assemblies larger than two inches shall have a minimum of 12 inches on the back side, 24 inches on the test cock side, and the relief valve opening shall be at least 12 inches plus nominal size of assembly above the floor or highest possible water level. Headroom of six feet is required in vaults without a fully removable top. A minimum access opening of 24 inches square is required on all vault lids.
- (5) Assemblies installed more than five feet above floor level must have a suitable platform for use by testing or maintenance personnel.
- (f) The assembly must be protected from freezing and other severe weather conditions.
- (g) Vertical installation is prohibited.
- (h) Lines shall be thoroughly flushed prior to installation. A strainer with blowout tapping may be required ahead of the assembly.
- (i) The property owner assumes all responsibility for leaks and damage. The owner shall also see that the vault is kept reasonably free of silt and debris.
- (j) All RP assemblies shall be tested in accordance with this article. Tests are the responsibility of the assembly owner. The owner shall notify the Director upon installation of any backflow prevention assembly.
- (k) Variances from these specifications will be evaluated on a case-by-case basis. Any deviations shall be prohibited without prior written approval of the Director.

(Ord. No. 97-14, § 17, 6-17-97)

Sec. 98-366.- Double check valve backflow prevention assembly (DC).

- (a) Double check valve assemblies may be utilized at premises where a substance is handled that would be objectionable but not hazardous to health if introduced into the potable water system.
- (b) DCs shall be sized to provide an adequate supply of water and pressure for the premises being served. Flow characteristics are not standard. Consult manufacturer's specifications for specific performance data.
- (c) Premises where interruption of water supply is critical shall be provided with two assemblies installed in parallel. They shall be sized in such a manner that either assembly will provide the minimum water requirements while the two together will provide the maximum flow required.
- (d) Bypass lines are prohibited. Pipe fittings which could be used for connecting a bypass line shall not be installed.
- (e) The assembly shall be readily accessible with adequate room for testing and maintenance.
 - (1) DCs may be installed below grade, providing all test cocks are fitted with brass pipe plugs. All vaults shall be well drained, constructed of suitable materials, and sized to allow for the minimum clearances established below.
 - (2) Assemblies two inches and smaller shall have at least a three-inch clearance below and on both sides of the assembly, and if located in a vault, the bottom of the assembly shall be not more than 24 inches below grade. All assemblies larger than two inches shall have a minimum

clearance of 12 inches on the back side, 24 inches on the test cock side, and 12 inches below the assembly. Headroom of six feet is required in vaults without a fully removable top. A minimum access opening of 24 inches square is required on all vault lids.

- (3) Assemblies installed more than five feet above floor level shall have a suitable platform for use by testing or maintenance personnel.
- (f) Vertical installations are allowed on sizes up to and including four inches that meet the following requirements:
 - (1) Internally spring-loaded check valves.
 - (2) Flow is upward through assembly.
 - (3) Manufacturer states their assembly can be used in a vertical position.
 - (4) Approved by Director.
- (g) The assembly shall be protected from freezing and other severe weather conditions.
- (h) Lines shall be thoroughly flushed prior to installation. A strainer with blowout tapping may be required ahead of the assembly.
- (i) The property owner assumes all responsibility for foundation or basement wall penetration, leaks, and damage. The owner shall also see that the vault is kept reasonably free of silt and debris.
- (j) All DCs shall be tested in accordance with this article. Tests are the responsibility of the assembly owner. The owner shall notify the Director upon installation of any backflow prevention assembly.
- (k) Variances from these specifications will be evaluated on a case-by-case basis. No deviations shall be permitted without prior written approval of the Director.

(Ord. No. 97-14, § 18, 6-17-97)

Sec. 98-367. - Double detector check valve assembly (DDC).

Double detector check valve assemblies may be utilized in all installations requiring a double check valve assembly and detector metering. DDCs shall comply with the installation requirements applicable for double check valve assemblies (DCs).

(Ord. No. 97-14, § 19, 6-17-97)

Sec. 98-368. - Pressure vacuum breaker (PVB).

- (a) PVBs may be utilized at point of use protection only and where a substance is handled that would be objectionable but not hazardous to health if introduced into the potable water system. PVBs protect against backsiphonage only and shall not be installed where there is potential for backpressure.
- (b) The assembly shall be installed a minimum of 12 inches above the highest use outlet or overflow level downstream from the assembly.
- (c) PVBs shall not be installed in an area subject to flooding or where damage would occur from water discharge.
- (d) The assembly shall be protected from freezing.

- (e) The assembly shall be readily accessible for testing and maintenance, with a minimum clearance of 12 inches all around the assembly.
- (f) PVBs shall be located between 12 inches and 60 inches above ground level.
- (g) A strainer with blowout tapping may be required ahead of the assembly.
- (h) All PVBs must be tested in compliance with this article. Tests are the responsibility of the assembly owner. The owner shall notify the Director upon installation of any backflow prevention assembly.
- (i) Variances from these specifications will be evaluated on a case-by-case basis. No deviations shall be permitted without prior written approval of the Director.

(Ord. No. 97-14, § 20, 6-17-97)

Sec. 98-369. - Atmospheric vacuum breaker (AVB).

The use of AVBs is no longer permitted in the City of Saginaw. Existing AVB's are permitted to remain in place until they are no longer serviceable, at which time they must be replaced in accordance with this Ordinance.

(Ord. No. 97-14, § 22, 6-17-97)

Sec. 98-370. - Air gap separation.

- (a) Air gap separations provide maximum protection from backflow hazards and may be utilized at premises where a substance is handled that would be hazardous to health if introduced into the potable water system.
- (b) An air gap separation shall be at least twice the diameter of the supply pipeline measured vertically above the top rim of the receiving vessel; in no case less than one inch. If splashing is a problem, tubular screens may be attached or the supply line may be cut at a 45-degree angle. The air gap distance is measured from the bottom of the angle. Hoses shall not be allowed.
- (c) Air gap separations shall not be altered in any way without prior approval from the Director, and shall be available for inspection at all reasonable times.
- (d) Side walls, ribs or similar obstructions do not affect air gaps when spaced from the inside edge of the spout opening a distance greater than three times the diameter of the effective opening for a single, or a distance greater than four times the effective opening for two intersecting walls.
- (e) In cases where there are three or more side walls, ribs or similar obstructions extending from the water surface to or above the horizontal plane of the spout opening other than as specified in subsection (d) above, the air gap shall be measured from the top of the wall.
- (f) The effective opening shall be the minimum cross-sectional area at the seat of the control valve or the supply pipe or tubing which feeds the assembly or outlet. If two or more lines supply one outlet, the effective opening shall be the sum of the cross-sectional areas of the individual supply lines or the area of the single outlet, whichever is smaller.

(Ord. No. 97-14, § 12.5-560, 6-17-97)

Sec. 98-371. - Fire systems.

An approved double detector check valve assembly shall be the minimum protection for fire sprinkler systems using piping material that is not approved for potable water use and/or that does not provide for periodic flow-through during each twenty-four-hour period, unless a variance has been issued in writing from the Director. An RP assembly shall be installed if any solution other than the potable water can be introduced into the sprinkler system.

(Ord. No. 97-14, § 23, 6-17-97)

Secs. 98-372—98-390. - Reserved.

DIVISION 3. - VIOLATION

Sec. 98-391. - Offense.

A person commits an offense if the person knowingly installs or maintains backflow prevention assemblies or air gaps in violation of this article.

(Ord. No. 97-14, § 24, 6-17-97)

Sec. 98-392. - Access to premises.

- (a) Every person provided water service by the city directly or indirectly shall during the hours of 8:00 a.m. through 5:00 p.m. permit the Director to enter their premises and buildings for the purpose of inspecting pipes and fixtures and the manner in which the water is used to determine compliance with this article.
- (b) If any water user refuses access to a premises during said times for inspection by an inspector, the water user shall install a reduced pressure principle assembly at the service connection to that premise.
- (c) Any temporary or permanent obstruction to safe and easy access to the premises to be inspected shall be promptly removed by the water user at the written or verbal request of the Director and shall not be replaced. The costs of clearing such access shall be borne by the user.
- (d) A person commits an offense if the person knowingly fails to install a reduced pressure principle assembly in accordance with this section after receiving notice from the Director to do so.

(Ord. No. 97-14, § 25, 6-17-97)

Sec. 98-393. - Emergency suspension of utility service.

- (a) The Director may, without prior notice, suspend water service to any premises when such suspension is necessary to stop an actual or threatened backflow which:
 - (1) Presents or may present imminent and substantial danger to the environment or to the health or welfare of persons;
 - (2) Presents or may present imminent and substantial danger to the city's public water supply.
- (b) As soon as is practicable after the suspension of service, the Director shall notify the owner or person in charge of the premises of the suspension in person or by certified mail (return receipt requested),

and shall order such person to correct the cross-connection which allowed the backflow to occur. When time permits, the Director should also notify the owner or person in charge prior to suspending water service.

- (c) If the person fails to comply with an order issued under subsection (b), the Director may take such steps as the Director deems necessary to prevent or minimize damage to the public water supply or to minimize danger to persons.
- (d) The Director shall not reinstate suspended services until:
 - (1) The person presents proof, satisfactory to the Director, that the backflow has been eliminated and its cause determined and corrected;
 - (2) The person pays the city for all costs the city incurred in responding to the backflow or threatened backflow; and
 - (3) The person pays the city for all costs the city will incur in reinstating service.
- (e) A person whose service has been suspended may appeal such enforcement action to the Director, in writing, within ten days of notice of the suspension.
- (f) A person commits an offense if the person reinstates water service to premises suspended pursuant to this section, without the prior approval of the Director.
- (g) The city may obtain a lien against the property to recover its response, abatement, and remediation costs.
- (h) The remedies provided by this section are in addition to any other remedies set out in this article. Exercise of this remedy shall not be a bar against, nor a prerequisite for, taking other action against a violator.

(Ord. No. 97-14, § 26, 6-17-97)

Sec. 98-394. - Nonemergency termination of water supply.

- (a) The Director may terminate the city-provided water supply of any water user who violates the following conditions:
 - (1) Refusing the Director reasonable access to the water user's premises for the purpose of inspection.
 - (2) Hindering or denying the Director access to backflow prevention assemblies.
 - (3) Failing to install a reduced pressure principle assembly as required.
 - (4) Failing to install and maintain backflow prevention assemblies in compliance with this article.
 - (5) Failing to install, maintain, and operate their piping and plumbing systems in accordance with the plumbing code.
- (b) The Director will notify a water user of the proposed termination of its water supply. The water user may petition the Director for a reconsideration and hearing.
- (c) Exercise of this enforcement option by the Director shall not be a bar to, nor a prerequisite for, taking any other action against the water user.
- (d) The Director shall not reinstate suspended services until:

- (1) The person presents proof, satisfactory to the Director, that the backflow has been eliminated and its cause determined and corrected;
 - (2) The person pays the city for all costs the city will incur in reinstating service.
- (e) A person commits an offense if the person reinstates water service to premises terminated pursuant to this section, without the prior approval of the Director.

(Ord. No. 97-14, § 27, 6-17-97)

Sec. 98-395. - Penalties.

Any firm, person, or corporation violating any of the provisions, regulations and requirements of this article shall be guilty of a misdemeanor, and upon conviction thereof may be fined in any amount not less than \$10.00 and not more than \$2,000.00 for each such offense.

(Ord. No. 97-14, § 28, 6-17-97)

Secs. 98-396—98-410. - Reserved.