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TRUSTEE'S BILL

ORDINANCE NO.

NO. 09-06  
Series of 2009

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**TITLE: A BILL FOR AN ORDINANCE AMENDING THE TOWN OF HUDSON MUNICIPAL CODE BY THE ADDITION THERETO OF A NEW ARTICLE 7 OF CHAPTER 13 ENACTING A CROSS CONNECTION CONTROL PROGRAM**

BE IT ORDAINED BY THE BOARD OF TRUSTEES FOR THE TOWN OF HUDSON, COLORADO, THAT:

Section 1. Chapter 13 of the Town of Hudson Municipal Code is amended by the addition thereto of a new Article 7 to read as follows:

**Article 7**

**CROSS CONNECTION CONTROL PROGRAM**

**Sec. 13-121. Short title.**

This article is known and may be cited as the Town of Hudson Cross Connection Control Ordinance.

**Sec. 13-122. Legislative intent.**

It is the intent of the Board of Trustees to protect the Town's water system as follows:

(a) To protect the public potable water supply served by the Town of Hudson from the possibility of contamination or pollution by isolating, within its customers internal distribution system, such contaminants or pollutants which could backflow or back-siphon into the public water system.

(b) To promote the elimination or control of existing cross-connections, actual or potential, between its customers in-plant potable water system and non-potable systems.

(c) To provide for the maintenance of a continuing program of cross-connection control which will effectively prevent the contamination or pollution of all potable water systems by cross-connection.

**Sec. 13-123. Responsibility.**

The Public Works Director is hereby delegated the responsibility for implementing a cross connection control program in accordance with this Article and for enforcement thereof. If a backflow prevention device is required at the Town water service connection to any owner's premises for the protection of the Town water system, the Public Works Director shall give notice in writing to the owner to install an approved backflow prevention device at each service connection to the premises. The owner shall install an approved device or devices at the owner's own expense.

**Sec. 13-124. Definitions**

When not clearly otherwise indicated by the context, the following words and phrases in this Article 7 have the following meanings.

(1) *Approved* means accepted by the Public Works Director as meeting an applicable specification stated or cited in this regulation, or as suitable for the proposed use.

(2) *Auxiliary Water Supply* means any water supply on or available to the premises other than the purveyor's approved public potable water supply. These auxiliary waters may include water from another purveyor's public potable water supply or any natural source such as a well, spring, river, stream, pond, lake, etc., or "used waters" or "industrial fluids." These waters may be polluted or contaminated or may be objectionable and constitute an unacceptable water source over which the Town does not have sanitary control.

(3) *Backflow* means the flow of water or other liquids, mixtures or substances, under positive or reduced pressure in the distribution pipes of a potable water supply from any source other than its intended source.

(4) *Backflow Preventer* means a device or means designed to prevent backflow or back-siphonage into the public water supply by isolating the owner's water system from the public water system. The following definitions apply to backflow preventers:

*Air Gap* means physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system. Physically defined as a distance equal to twice the diameter of the supply side pipe diameter but never less than one (1) inch.

*Atmospheric Vacuum Breaker* means a device which prevents back-siphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in a water system.

*Double Check Valve Assembly* means an assembly of two (2) independently operating spring loaded check valves with tightly closing shut off valves on each side of the check valves plus properly located test cocks for the testing

of each check valve.

*Pressure Vacuum Breaker* means a device containing one (1) or two (2) independently operated spring loaded check valves and an independently operated spring loaded air inlet valve located on the discharge side of the check or checks. Device includes tightly closing shut-off valves on each side of the check valves and properly located test cocks for the testing of the check valve(s).

*Reduced Pressure Principle Backflow Preventer* means an assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between the two (2) check valves, tightly closing shut-off valves on each side of the check valves plus properly located test cocks for the testing of the check valves and the relief valve. The device will operate to maintain the pressure in the zone between the two check valves at a level less than the pressure on the public water supply side of the device. At cessation of normal flow, the pressure between the two (2) check valves will be less than the pressure on the public water supply of the device. In case of leakage of either of the check valves, the differential relief valve will operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two (2) pounds per square inch or less, the relief valve will open to the atmosphere.

(5) *Backpressure* means the condition in which the owner's system pressure is greater than the supplier's system pressure caused by a pump, elevated tank, boiler or other means.

(6) *Back Siphonage* means the flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

(7) *Certified Inspector and Tester* means any person who has passed a state approved or sponsored testing and inspection course, and who is listed by the state as a certified inspector/tester.

(8) *Town* means the Town of Hudson.

(9) *Colorado Cross Connection Control Manual* means the manual published by the State of Colorado addressing cross connection control practices, which will be used as a guidance document for the Town in implementing a cross connection control program.

(10) *Compliance Period* means the time between the receipt by the owner of a notice from the Public Works Director or designee thereof to install, test, or repair a backflow preventer and the day upon which such installation, testing, or repair shall be

completed or ready for inspection by the Public Works Director or a designee thereof.

(11) *Containment* means the method of backflow prevention which requires a backflow preventer at the water service entrance.

(12) *Contaminant* means a substance that will impair the quality of the water to a degree that it creates a health hazard to the public leading to poisoning or the spread of disease.

(13) *Cross-connection* means any actual or potential connection between the public water supply and a source of contamination or pollution.

(14) *Fixture Isolation* means the method of backflow prevention in which a backflow preventer is located to correct a cross connection at an in-plant location rather than at a water service entrance.

(15) *Hazard* means any condition, device, or practice in the water supply system and its operation which, in the judgment of the Public Works Director, creates or may create a danger to the health and well-being of the water consumer. Hazards include, but are not limited to, plumbing type cross connections that have not been properly protected by an approved backflow preventer, any actual or potential threat to the physical properties of the water system or to the potability of the Town's potable water system or the owner's potable water system which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, or any actual or potential introduction of a pollutant or contaminant into the Town's potable water system or the owner's potable water system which would have a protracted effect on the quality of the potable water. The degree of hazard will be derived from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the Town's potable water system and/or the owner's potable water system.

(16) *Non-Potable Water* means water that is not safe for human consumption or that is of questionable potability.

(17) *Owner* means any person who has legal title to, or license to operate or habitat in, a property upon which a cross-connection inspection is to be made or upon which a cross-connection is present.

(18) *Person* means any individual, partnership, company, public or private corporation, political subdivision or agency of the State Department, agency or instrumentality or the United States or any other legal entity.

(19) *Pollutant* means a foreign substance that, if permitted to get into the public water system, will 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 and unreasonably affect such water for domestic use.

(20) *Potable Water* means water free from impurities in amounts sufficient to cause disease or harmful physiological effects. The bacteriological, chemical, and radiological quality shall conform with State drinking water regulations.

(21) *Water Service Entrance* means that point in the owners water system beyond the sanitary control of the Town; generally considered to be the outlet end of the water meter and always before any unprotected branch.

**Sec. 13-125. Administration**

(a) The Town will operate a cross-connection control program, to include the keeping of necessary records, which fulfills the requirements of the Colorado Cross Connection Control Manual.

(b) The owner shall allow his property to be inspected for possible cross-connections and shall follow the provisions of the Town's program and the Colorado Regulations if a cross-connection is permitted.

(c) If the Town requires that the public supply be protected by containment, the owner shall be responsible for water quality beyond the outlet end of the containment device and should utilize fixture outlet protection for that purpose. The owner may utilize public health officials, or personnel from the Town, or their delegated representatives, to assist in the survey of the facilities and to assist in the selection of proper fixture outlet devices and the proper installation of these devices.

**Sec. 13-126. Requirements**

(a) Town

(1) On new installations, the Town will inspect building plans and/or premises to determine the type of backflow preventer that will be required. Building plans must show water service type, size and location; meter size and location; backflow preventer size, type and location; and fire system service line, size and type of backflow preventer.

(2) For premises existing prior to the start of this program, the Town will perform evaluations and inspections of plans and/or premises and inform the owner by letter of any corrective action deemed necessary, the method of achieving the correction, and the time allowed for the correction to be made. Ordinarily, sixty (60) days will be allowed, however, this time period may be shortened depending upon the degree of hazard involved and the history of the device(s) in question.

(3) The Town will not allow any cross-connection to remain unless it is protected by an approved backflow preventer.

(4) The Town shall inform the owner by letter of any failure to comply. The Town will allow an additional fifteen (15) days for the correction. In the event the owner fails to comply with the necessary correction, the Town will inform the owner by letter that the water service to the owner's premises will be terminated within a period not to exceed five (5) days. In the event that the owner informs the Town of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the Town but in no case will exceed an additional thirty (30) days.

(5) If the Town determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

(6) The Town will begin initial premise inspections to determine the nature of existing or potential hazards following the approval of this program. The Town may perform additional premise inspections at any time thereafter.

(b) Owner

(1) The owner shall be responsible for the elimination or protection of all cross-connections on his premises.

(2) Backflow preventers shall be installed immediately inside the structure being served and immediately downstream of the water meter and, in all cases, before the first branch line leading off the service line.

(3) Backflow preventers shall be installed in an accessible location to facilitate inspection, testing and maintenance. Adequate drainage for the device must be provided for in the event that water is released.

(4) Backflow preventers on fire lines shall have outside stem and yoke ("O.S. & Y") valves and be listed by the National Fire Protection Association.

(5) Backflow preventers shall be installed in the horizontal position. A variance may be granted upon review by the Public Works Director.

(6) Reduced pressure backflow preventers shall be installed at least twelve (12) inches above finished grade to allow clearance for repair work. Proper drainage shall be provided for the relief valve and may be piped away from the location provided it is readily visible from above grade and provided the relief valve is separated from the drain line by a minimum of double the diameter of the supply line.

(7) The owner, after having been informed by a letter from the Town, shall at his expense, install, maintain, and test, or have tested, any and all backflow

preventers on his premises.

(8) The owner shall correct any malfunction of the backflow preventer which is revealed by periodic testing.

(9) The owner shall inform the Town of any proposed or modified cross-connections and any existing cross-connections of which the owner is aware but has not been found by the Town.

(10) The owner shall not install a by-pass around any backflow preventer unless there is a backflow preventer of the same type on the bypass. Owners who cannot shut down operation for testing of the device(s) must supply additional devices necessary to allow testing to take place.

(11) The owner shall install backflow preventers in a manner approved by the Town.

(12) The owner shall install only backflow preventers approved by the Town.

(13) Any owner having a private well or other private water source, must have written permission from the Town if the well or source is cross-connected to the Town's system. Permission to cross-connect may be denied by the Town. The owner may be required to install a backflow preventer at the service entrance if a private water source is maintained, even if it is not cross-connected to the Town's system.

(14) In no case will it be permissible to have connections or tees upstream of the backflow preventer.

(15) The owner shall be responsible for the payment of all fees for device testing and re-testing in the case that the device fails to operate correctly.

(16) All laws and regulations contained in this Ordinance shall apply regardless of the age of the facility.

**Sec. 13-127. Existing In-Use Backflow Preventers**

(a) Any existing backflow preventer will be allowed by the Town to continue in service unless, in the opinion of the Public Works Director, the degree of hazard is such as to supercede the effectiveness of the present backflow preventer, or result in an unreasonable risk to the public health. Where the degree of hazard has increased, as in the case of a residential installation converting to a business establishment, any existing backflow preventer must be upgraded to a reduced pressure principle device or a reduced pressure principle device must be installed in the event that no backflow device was present.

(b) Backflow preventers currently installed which are not approved shall be replaced with an approved device within three (3) years of adoption of this Ordinance, unless the device fails an annual operational test. If the device fails any such test, it shall be replaced with an approved device within thirty (30) days from the date of the test. However, this time period may be shortened depending upon the degree of hazard involved and the history of the device(s) in question.

**Sec. 13-128. Periodic Testing**

(a) It is the responsibility of the owner to have certified inspections and operational tests made on all backflow preventers upon installation and at least once per year thereafter. The Public Works Director may require certified inspections at more frequent intervals. These inspections and tests shall be made at the expense of the owner and shall be performed by a certified inspector.

(b) The testing shall be conducted during the Town's regular business hours. Exceptions to this, when at the request of the owner, may require additional charges to cover the increased costs to the Town.

(c) Any backflow preventer which fails during a periodic test shall be repaired or replaced. When repairs are necessary, upon completion of the repair the device will be re-tested at owner's expense to insure correct operation. High hazard situations will not be allowed to continue unprotected if the backflow preventer fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than thirty (30) days after the test date will be established. The owner is responsible for spare parts, repair tools, or a replacement device. Parallel installation of two (2) devices is an effective means of the owner insuring that uninterrupted water service during testing or repair of devices and is strongly recommended when the owner desires such continuity.

**Sec. 13-129. Compliance**

(a) The compliance period for installation, inspection and testing, or repair of a backflow preventer shall be as follows:

- (1) Existing Facilities: Within sixty (60) days from the effective date of



this Ordinance.

(2) New Construction or Alteration Requiring a Building Permit: Prior to Certificate of Occupancy or final inspection by the building division.

(3) Any Facility with a Backflow Incident: Within ten (10) days from date of occurrence.

(b) Backflow prevention shall be provided using an air-gap or a reduced pressure principal backflow preventer for the following facilities:

- (1) Automotive service station or repair shop
- (2) Auxiliary water supply
- (3) Boiler (non-domestic)
- (4) Carbonator
- (5) Commercial service line greater than four-inch diameter
- (6) Car wash
- (7) Food processing and packing plant
- (8) Greenhouse
- (9) Hospital
- (10) Hotel and lodging facility
- (11) Kennel
- (12) Laboratory
- (13) Laundry or dry cleaning service
- (14) Manufacturing and industrial facility
- (15) Medical office
- (16) Morgue and mortuary
- (17) Multi-storied building
- (18) Photographic studio and laboratory
- (19) Sewage treatment plant
- (20) School
- (21) Swimming pool
- (22) Veterinary office
- (23) Water treatment plant

(c) Backflow prevention shall be provided using a reduced pressure principal backflow preventer for the following facilities:

- (1) Solar heating system with make-up water
- (2) Fire sprinkler system with antifreeze or other additives

(d) Backflow prevention shall be provided using an air-gap, a reduced pressure principal backflow preventer, or a double check valve assembly for the following facilities:

- (1) Fire sprinkler system with no chemicals added
- (2) Dry type fire sprinkler systems

(e) The owner of any building or facility not listed above may be required by the Public Works Director to install a backflow preventer. The compliance period and type of backflow preventer required will be determined by the Public Works Director.

**Sec. 13-130. Reporting and Record-Keeping**

The certified inspector will provide a report to the Public Works Director of the results of inspections, tests, and maintenance. This report will be submitted within ten (10) days following the completion of the inspection, test, or maintenance of the device. The certified inspector shall also attach a card to the backflow preventer following each inspection, test, or maintenance activity to document and date the activities performed. Records of all inspections, tests, or maintenance activities, including materials and parts changed, shall be kept by the certified inspector, the owner, and the Public Works Director for a period of not less than three (3) years.

**Sec. 13-131. Backflow Preventers**

(a) Any backflow preventer required herein will be of a model and size approved by the Public Works Director. The term "approved backflow preventer" means a device that has been manufactured in full conformance with the standards established by the latest version of the Colorado Cross Connection Control Manual. Final approval is evidenced by a certificate of approval issued by an approved testing laboratory certifying full compliance with the Colorado Department of Public Health and Environment standards and ASSE or USC FCCC & HR specifications. In addition to the aforementioned standards and specifications, all backflow preventers will have a unique serial number attached to the device by the manufacturer.

(b) The following testing laboratory has been qualified to test and certify backflow preventers:

Foundation for Cross Connection Control and Hydraulic Research  
University of Southern California  
University Park  
Los Angeles, CA 90089-0231

Testing laboratories other than the laboratory listed above will be added to an approved list as they are qualified by the Public Works Director.

(c) Backflow preventers that may be subjected to back-pressure or back-siphonage that have been fully tested and have been granted a certificate of approval by said qualified laboratory and are listed on the laboratory's current list of "approved devices," and newly installed devices which have been inspected and installed to the satisfaction of the

Public Works Director, are deemed to be in compliance with this article.

**Sec. 13-132. Right of Entry**

By previously arranged appointment, the Public Works Director or a designee thereof, shall have the right of entry to inspect any and all buildings and premises for cross connections relative to possible hazards. This right of entry shall be a condition of the water service in order to protect the health, safety and welfare of the water customers. Where building security is required, the backflow preventer should be located in an area not subject to security.

**Sec. 13-133. Violation.**

Any person who violates any provision of this article shall be subject to the penalties set forth in section 13-84 of this Code and, after notice and hearing, be subject to termination of water service to the owner's property.

Section 2. Safety Clause. The Town Board of Trustees hereby finds, determines, and declares that this ordinance is promulgated under the general police power of the Town of Hudson, that it is promulgated for the health, safety, and welfare of the public, and that this ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare. The Board of Trustees further determines that the ordinance bears a rational relation to the proper legislative object sought to be attained.

Section 3. Severability. If any clause, sentence, paragraph, or part of this ordinance or the application thereof to any person or circumstances shall for any reason be adjudged by a court of competent jurisdiction invalid, such judgment shall not affect application to other persons or circumstances.

Section 4. Effective Date. This Ordinance shall become effective thirty (30) days after final publication.

INTRODUCED, READ IN FULL, AND ADOPTED this \_\_\_\_\_ day of \_\_\_\_\_, 2009.

TOWN OF HUDSON, COLORADO

\_\_\_\_\_  
Neal Pontius, Mayor

ATTEST:

\_\_\_\_\_  
Rachael Arnold, Assistant Town Clerk

PASSED ON SECOND AND FINAL READING this \_\_\_\_\_ day of \_\_\_\_\_,  
2009, AND ORDERED PUBLISHED ONCE IN FULL.

TOWN OF HUDSON, COLORADO

\_\_\_\_\_  
Neal Pontius, Mayor

ATTEST:

\_\_\_\_\_  
Rachael Arnold, Assistant Town Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Corey Y. Hoffmann, Town Attorney