

A BILL FOR

ORDINANCE NO. 6, SERIES OF 2006

AN ORDINANCE PROVIDING FOR THE CONTROL OF CROSS-CONNECTIONS IN ORDER TO PREVENT BACKFLOW AND PROTECT THE CITY'S WATER SUPPLY SYSTEM FROM CONTAMINATION.

WHEREAS, the Cañon City Water Department is a water activity enterprise of the City of Cañon City that operates and maintains a public water system for the use and benefit of the inhabitants of the City and other water users within its service area; and

WHEREAS, the federal Safe Drinking Water Act, codified as 42 USC § 300f, et seq., and the regulations promulgated with respect thereto, create a duty for federal, state and local authorities to do those things necessary to protect public water systems, such as the City's, from the entry of contaminants that could be harmful to the health of persons connected to and otherwise using such system; and

WHEREAS, federal law authorizes civil and criminal actions against persons, including governmental entities that operate water supply systems, that fail to comply with lawful orders issued pursuant to the Safe Drinking Water Act and associated regulations; and

WHEREAS, the State of Colorado has adopted a statute generally making it unlawful for any person, including local governments and the officials thereof, to willfully violate, disobey or disregard any public health law of the state (see § 24-1-114, C.R.S.); and

WHEREAS, in response to the federal mandate in the Safe Drinking Water Act, this Colorado statute specifically makes it unlawful for any person to make, install or maintain any cross-connection between a water system providing drinking water to the public and any pipe, plumbing fixture or water system which contains water of a quality below the minimum general standards for drinking water supplied to the public [§ 24-1-114(1)(h), C.R.S.]; and

WHEREAS, in addition to possible criminal penalties, Colorado law permits the institution of civil actions and the imposition of civil penalties against those who violate state public health standards and regulations (§ 24-1-114.1, C.R.S.); and

WHEREAS, the Colorado Primary Drinking Water Regulations, at Article 12 thereof, mandate that a public water system shall have no uncontrolled cross connections to pipes, fixtures or supplies that contain water not meeting minimum state standards for drinking water and also require all public water system operators to protect their water supply systems from contamination; and

WHEREAS, said regulations also enumerate four ways in which a supplier of water "shall protect the public water system," including:

- a. Identification of hazardous service connections;

b. Requiring system users to install and maintain containment devices on health hazard service connections;

c. Requiring that containment devices be approved by the water supplier prior to installation; and

d. Requiring that all containment devices be tested and maintained as necessary on installation and at least annually thereafter, by a trained cross-connection control technician (Article 12, Section 2, 5CCR 1003-1); and

WHEREAS, in order to comply with the foregoing federal and state mandates, and—more importantly—to do what is necessary and prudent to protect the City's water supply system and the health and welfare of those connected to its system, the Council of Cañon City has determined that a cross-connection control ordinance, as hereinafter set forth, should be adopted and enforced.

NOW, THEREFORE, BE IT HEREBY ORDAINED BY THE COUNCIL OF CAÑON CITY, as follows:

Section 1. There is hereby added to the Cañon City Municipal Code a new Chapter 13.06 to read as follows:

**CHAPTER 13.06
BACKFLOW PREVENTION AND CROSS-CONNECTIONS**

Sections:

- 13.06.010** **Definitions**
- 13.06.020** **Requirements**
- 13.06.030** **Compliance procedures**
- 13.06.040** **Appeals**
- 13.06.050** **Jurisdictional issues and conflicts**
- 13.06.060** **Violation – Penalties**

13.06.010 **Definitions.** Unless the context specifically indicates otherwise, the meanings of terms used in this Chapter shall be as follows:

A. "Approved backflow prevention assembly" means a backflow prevention assembly described in Foundation for Cross-Connection Control and Hydraulic Research's (FCCC&HR) most current "list of approved backflow prevention assemblies" or American Society of Sanitary Engineers (ASSE).

B. "Backflow" means the undesirable reversal of the direction of flow of water or mixtures of water and other liquids, gases, or other substances into the distribution pipes of the potable water supply from any source(s) caused by backpressure and/or backsiphonage.

- C. "Backflow preventer" means a device designed to prevent backflow created by backpressure or backsiphonage.
- D. "Backpressure" means backflow caused by a pump, elevated tank, boiler or means that could create an elevated pressure within the nonpotable system greater than the supply pressure.
- E. "Backsiphonage" 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 negative or sub-atmospheric pressure in the potable water supply system.
- F. "Certified cross-connection control technician" means a person who is certified in accordance with the provisions of Article 12 of the Colorado Primary Drinking Water Regulations.
- G. "Colorado Cross-Connection Control Manual" means the most recent edition of a manual that has been published by the state addressing cross-connection control practices which will be used as a guidance document for the utility in implementing a cross-connection control program as outlined in Section 13.06.020.
- H. "Containment" means the installation of an approved backflow prevention device, or method, on the water service line(s), so that water delivered to the service line cannot return to the City potable water distribution system due to any backpressure and/or backsiphonage condition which might arise.
- I. "Contamination" means an impairment of the quality of the potable water by sewage, industrial fluids or waste liquids, compounds or other materials to a degree which creates an actual hazard to the public health through poisoning or through the spread of disease.
- J. "Cross-connection" means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture or other device which contains, or may contain, contaminated water, sewage or other waste or liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water supply as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices, four-way valve connections, and other temporary or permanent devices through which, or because of which, backflow could occur are considered to be cross-connections.
- K. "Director" means the Director of Public Works of the City or, if none, a City water department employee designated by the City Administrator in writing.
- L. "Hazard, degree of" means an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.
- M. "Isolation" means a backflow device installed on a branch of the internal plumbing to protect the customer's water system.

N. "Nonpotable water" means water that is not safe for human consumption or that is of questionable quality.

O. "Pollution: means the presence of any foreign substance (organic, inorganic, radiological or biological) in the water that may degrade the water quality so as to constitute a hazard or impair its usefulness.

P. "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 of Colorado Department of Public Health and Environment Primary Drinking Water Regulations.

Q. "Utility" means the City of Cañon City Water Department, a water activity enterprise of the City of Cañon City.

R. "Water service connection" means the terminal end of the City's service connection from the public potable water system; i.e., where the City loses jurisdiction and sanitary control over the water at its point of delivery to the customer's stop box or shut-off valve or meter, whichever comes first, from the utility water main. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. There shall be no unprotected takeoffs from the service line ahead of any meter or backflow prevention device located at the point of delivery to the customer's water system. Service connection shall also include any water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system.

13.06.020 Requirements.

A. Implementation and Enforcement of a Cross-Connection Control Program The director is vested with the authority and responsibility for implementing and enforcing an effective cross-connection control program in accordance with the provisions of this Chapter.

B. Backflow Preventers Required At All Service Connections. An approved backflow preventer shall be required at each and every service connection to a water service customer's premises for the safety and protection of the City water supply system and water users connected to that system.

C. The director shall have the authority to specify the type of backflow preventer to be installed at each service connection. The director's decision with respect to the type of backflow preventer that will be required in any specific situation shall be based upon the degree of hazard posed by the facility connected or to be connected to the City water supply system. The degree of hazard shall be determined on a case-by-case basis, depending upon the circumstances of each particular case. In making determinations as to the degree of hazard and the type of device required, the director shall rely upon the latest published edition of the Colorado Cross-Connection Control Manual for guidance and may rely upon other generally accepted authorities, including but not limited to the official publications of the American Society of Sanitary

Engineering. The director shall give notice in writing to the customer to install such an approved backflow prevention device at each service connection to the customer's premises.

D. Inspections and Testing Procedures. The director has the authority to inspect any system owned and maintained by a utility customer to determine the extent and degree of hazard.

E. The utility shall notify the utility customer at any premises where containment backflow preventers are installed to have certified inspections and operational tests made upon installation of the containment device and at least once per year thereafter. The director may require certified tests at more frequent intervals if the director deems the potential hazard to be great enough. These inspections and tests shall be performed by a certified cross-connection control technician.

F. The director reserves the right to inspect or require the inspection of installed backflow preventers at any time to ensure the devices are in proper working order. The devices shall be repaired, overhauled or replaced whenever they are found to be defective. These inspections, tests and repairs shall be at the owners' expense. Records of such tests, repairs and overhaul, including materials and parts changed, shall be filed with the director within ten days of such activities. The utility shall keep and maintain such records in accordance with the requirements of applicable law.

1. Containment devices will be tested annually according to the Colorado Revised Statutes and Colorado Department of Public Health and Environment Primary Drinking Water Regulations.
2. If such devices are allowed by the director as an acceptable alternative to total containment, isolation devices used to isolate and lower the overall degree of hazard for a property will be tested on a schedule determined by the director.
3. Isolation devices used on lawn irrigation sprinkler devices will be tested upon installation, repair or relocation, but in any event no less often than once annually.

G. Policy.

1. No water service connection to any premises shall be installed or maintained unless the water supply is protected as required by Colorado Revised Statutes, the regulations of the Colorado Department of Public Health and Environment and by this Chapter.
2. Water service to any premises shall be denied or discontinued, as the case may be, by the utility if:
 - a. a backflow preventer required by this Chapter is not installed within the time period specified by the director;
 - b. an approved backflow preventer has been removed or bypassed; or

- c. an unprotected cross-connection exists on the premises.
 - d. an approved backflow preventer is not maintained.
3. Whenever service is denied or discontinued, it shall not be provided or restored until the condition or defect identified in subparagraph C.2 has been corrected.
 4. The customer's system shall be open for inspection at all reasonable times to authorized representatives of the director to determine whether cross-connections or other structural or sanitary hazards, including violations of this Chapter, exist.
 5. When, as a result of an inspection, a condition involving a violation of this Chapter resulting in a health or sanitary hazard is determined to exist, or a utility customer fails to properly test, repair, or otherwise maintain a backflow preventer as required by this Chapter, the director shall have the option of immediate discontinuance of water service to the premises until the condition has been corrected, or the director may specify a date for compliance after which time the director may discontinue service until the customer has corrected the condition.

H. Installations of Backflow Prevention Devices.

1. Backflow preventers shall be installed immediately downstream of the water service customer's water meter, whether the meter is a pit set or an interior set. In all cases, backflow preventers must be installed before the first branch line leading off the service line.
2. With the director's approval, a backflow preventer may be installed to isolate a hazard and lower the degree of hazard for containment. Such approval shall not be given unless the director is convinced that the use of the isolation device will pose no threat to the public water supply system.
3. All backflow preventers shall be located and installed according to the manufacturer's specifications and in accordance with this Chapter and the City of Cañon City Design Standards and Construction Specifications or the Colorado Cross-Connection Control Manual. The director shall review and approve all plans as to the type, location and installation of backflow prevention devices.
4. Utility customers shall be responsible for the design, installation and maintenance of properly sized and located drains and drain systems whenever the type of backflow preventer specified or approved by the director requires a drain.
5. Plans shall not be modified relative to the type, location or installation of any backflow preventer approved by the director without the director's prior knowledge and written authorization.

6. If the location or removal of the backflow preventer results in the meter becoming contaminated, the customer shall bear the cost of decontamination.

I. Device Testing Equipment.

1. The acceptability of any testing gauge or apparatus shall be determined by the utility.
2. Any testing gauge, apparatus or scientific instrument utilized for the testing of backflow prevention devices shall be checked for accuracy at least yearly and be in calibration. The director may require certificates or other proof of calibration for such items to be filed with the utility.
3. At a minimum, all test gauges must meet ASSE-1064 Standards for Gauges.
4. All Certified Cross-Connection Technicians who perform work in the City shall file copies of their licenses with the utility, upon the director's request.

J. Listings Identifying Approved Backflow Prevention Devices. Any approved backflow prevention assembly required in this Chapter shall be of a model and size approved by the director and listed in the FCCC & HR's List of Approved Backflow Prevention Assemblies and/or American Society of Sanitary Engineers (ASSE) Series 5000.

13.06.030 Compliance procedures.

A. Installation of Required Devices.

1. Upon completion of inspection of the premises, or, in the case of new construction, on review of the construction plans, the director shall notify the owner in writing of the type of device that will be required at each service connection within the owner's facility.
2. The owner shall, at its expense, purchase and install the device and any necessary plumbing or construction. Such plumbing and construction shall meet all provisions of the Colorado Cross-Connection Control Manual and the City of Cañon City Design Standards and Construction Specifications and must be inspected and approved by the utility. The device, including any device installed prior to the effective date of this ordinance, shall be the property of the owner.

B. Compliance Required.

1. The utility will take necessary action to ensure compliance with the Colorado Department of Health, Primary Drinking Water Regulations, 5 CCR 1003-1, and more specifically Article 12 thereof, and the Colorado Revised Statutes, Section 25-1-114, as amended.

2. The owner of the premises is required to permit entry to the premises for inspection, testing and maintenance purposes at reasonable times. Failure to permit entry to the premises will result in the premises being regarded as a high hazard, and a reduced-pressure-principle device will be required to protect the City's water supply system.
3. The owner is required to provide all necessary plumbing and construction needed for the installation of the device. Failure to provide such required plumbing and construction will result in action being taken as provided for in Section 13.06.060.

13.06.040 Appeals.

A. Any decision of the director regarding the type of backflow preventer required with respect to any water service connection may be appealed to the City Administrator, provided that a notice of appeal is filed in the office of the City Administrator not later than 20 days following the date upon which the director's written notice specifying the type of device is delivered to the property owner or its agent.

B. The notice of appeal shall identify the property owner by name, mailing address, telephone number and email address, if any, and include the address of the owner's facility. Such notice shall:

1. Identify the director's decision that is being appealed;
2. Identify the type of backflow preventer that the owner believes should be installed at the owner's facility; and
3. Include the owner's reasons for preferring such backflow preventer, instead of the backflow preventer designated by the director, with or without written documentation supporting the owner's position.

C. Within 10 days following the filing of the notice of appeal, the City Administrator, by written notice specifying the date, time and place of the hearing, shall schedule a hearing. Such hearing shall be conducted no later than 30 days following the date upon which the notice of appeal was filed, unless the owner and the City Administrator both agree to a later hearing date. At the hearing, the owner may present testimony, evidence and arguments in support of the owner's position and the director may present testimony, evidence and arguments in support of the director's decision.

D. The director's decision shall be affirmed unless the City Administrator finds that the director's decision was arbitrary or capricious or that such decision violates applicable federal, state or local law. The City Administrator's decision shall be rendered in writing no later than 10 days following the hearing and shall be final.

E. The paramount issue with respect to any appeal will be whether the type of backflow preventer authorized will adequately protect the public water supply system.

- F. Before deciding any appeal, the City Administrator shall consider:
1. Whether the backflow preventer specified by the director is necessary to adequately protect the City's water supply system;
 2. Whether the backflow preventer preferred by the owner would adequately protect the City's water supply system;
 3. Whether the use of the backflow preventer preferred by the owner, when compared to the backflow preventer designated by the director, is likely to result in a material decrease in the level of protection to the public water supply system.

G. In cases where an existing structure is being remodeled or reconstructed or where a change in the use of an existing structure will or may create a greater degree of hazard to the public water supply system than previously existed, the City Administrator may consider:

1. Differences in the cost of devices and backflow prevention assemblies, when comparing the type of backflow preventer specified by the director to the type of backflow preventer preferred by the owner;
2. Differences in the cost of installing and maintaining the two types of backflow preventers being compared;
3. Other significant cost differences or practical difficulties associated with the use, installation and/or maintenance of the backflow preventers being compared;
4. Other relevant life, safety or health concerns raised by the director or the owner.

13.06.050 Jurisdictional issues and conflicts. In the event the provisions of this Chapter are in conflict with the requirements of any plumbing code or regulation applicable in the City, the provisions of this Chapter shall apply to the extent necessary to resolve the conflict and shall be binding upon all plumbing officials performing official duties within the City.

13.06.060 Violation – Penalties.

A. The director shall notify the owner, or authorized agent of the owner, of the building or premises of a violation of this Chapter. The director shall set a specific time for the owner to have the violation removed or corrected. If the owner fails to correct the violation in the specified time, the director may, if in his or her judgment an imminent health hazard exists, suspend water service to the building or premises. Additional fines or penalties may also be invoked following suspension of service.

B. Violations of this Chapter may be prosecuted in municipal court and, upon conviction thereof, a violator may be fined an amount not to exceed \$1000 per violation, per day.

BE ADVISED that the foregoing Bill for Ordinance No. 6, Series of 2006, will be considered for adoption on second reading at a regular meeting of the City Council to be held at 7:00 p.m. on Monday, March 6, 2006, at City Hall, 128 Main Street, at which time all persons wishing to speak will be heard.

/s/Becky Walker, City Clerk
City of Cañon City, Colorado

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