

ORDINANCE NO. 1946

An Ordinance establishing a Cross Connection Control Program and amending Chapter 28 of the Sheridan City Code to include Article IV Cross Connection Control.

WHEREAS, the City of Sheridan owns a drinking water system that has been assigned Public Water System Number WY5600052 from the Federal Environmental Protection Agency; and

WHEREAS, the City of Sheridan is required to operate and maintain that system in accordance with Federal Environmental Protection Agency and Wyoming Department of Environmental Quality rules and regulations; and

WHEREAS, failure to operate and maintain said system in accordance with these rules and regulations will result in violation subjecting the City to enforcement action including potential fines; and

WHEREAS, the Wyoming Department of Environmental Quality on March 12, 2003, adopted amendments to Chapter 12 of the Wyoming Water Quality Rules and Regulations as relates to Cross Connection Control and places responsibility on the public water system to ensure said rules and regulations are implemented; and

WHEREAS, Section 14 (i)(i)(A)(II) states that any service connection made to facilities constructed under a permit to construct issued after adoptions of this regulation shall be in full compliance with this section. This requirement applies to all service connections made or initially activated after the adoption of this regulation; and

WHEREAS, the Wyoming Department of Environmental Quality has held up issuance of Permits to Construct for water replacement projects until the public water system demonstrates compliance with said rules and regulations; and

WHEREAS, the Wyoming Department of Environmental Quality has provided the City of Sheridan with a deadline (June 1, 2004) by which to develop a program and proposed implementation schedule (with all existing and new taps being retrofitted by June 1, 2009) or Permits to Construct for water replacement projects will not be issued.

WE ORDAINED by the City Council of the City of Sheridan, Wyoming:

Article IV. Cross Connection Control

Sec. 28-45. Purpose

- (a) To protect the public potable water supply served by the City of Sheridan from the possibility of contamination or pollution by containing, within its customers internal distribution system, such contaminants or pollutants that could back-flow or back-siphon into the public water system.
- (b) To promote the elimination or control of existing cross-connections, actual or potential, between its customer's internal 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.

Sec. 28-46. Definitions.

- (a) "Approved" means accepted by the Director as meeting an applicable specification stated or cited in this regulation and the City of Sheridan Standard Specification for Street and Utility Construction or as suitable for the proposed use.
- (b) "A.S.S.E." means the American Society of Sanitary Engineering.
- (c) "A.B.P.A." means the American Back-flow Prevention Association.
- (d) "Auxiliary Water Supply" means any water supply; on or available, to the premises other than the purveyor's approved public potable water supply.
- (e) "Back-flow" means the undesirable reversal of the direction of flow of water or mixtures of water and other liquid, gases, or other substances into the distribution pipes of the potable water supply from any source or sources caused by backpressure and/or backsiphonage.
- (f) "Back-flow Preventer" (also referred to as "back-flow prevention assembly") means an approved device or means designed to prevent back-flow created by backpressure, backsiphonage, or both acting together. The most common devices are air gap, reduced pressure principle device, double check valve assembly, pressure vacuum breaker, atmospheric vacuum breaker, hose bibb vacuum

breaker, residential dual check, double check with intermediate atmospheric vent, and barometric loop.

Air Gap: A physical separation sufficient to prevent back-flow between the free-flowing discharge end of the potable water system and any other system. To be used where either backsiphonage or backpressure conditions may exist. 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: A device, which prevents backsiphonage by creating an atmospheric vent when there, is either a negative pressure or sub-atmospheric pressure in a water system. To be used to protect against backsiphonage, not against backpressure.

Barometric Loop: A fabricated piping arrangement rising at least thirty five (35) feet at its top most point above the highest fixture it supplies. It is utilized in water supply systems to protect against backsiphonage, not against backpressure.

Double Check Detector Check: An assembly of two (2) approved double check valve assemblies, set in parallel, equipped with a meter on the bypass line to detect small amounts of water leakage or use. This unit must be purchased as a complete assembly.

Double Check Valve Assembly: An assembly of two (2) independently operating spring loaded check valves with tightly closing (resilient seated) shut off valves on each side of the check valves, plus four (4) properly located test cocks for the testing of each check valve.

Double Check Valve with Intermediate Atmospheric Vent: A device having two- (2) spring loaded check valves separated by an atmospheric vent chamber. Protects against backpressure preferable in ½" and ¾" pipe.

Hose Bibb Vacuum Breaker: A device which is permanently attached to a hose bibb consisting of a spring loaded check valve that seals and acts as an atmospheric vacuum breaker.

Pressure Vacuum Breaker: A device containing one or two 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 two (2) properly located test cocks for the testing of the check valve(s). Protects against backsiphonage preferably in ½" through 2" pipe.

Reduced Pressure Principle Back-flow Preventer: An assembly consisting of two (2) independently operating spring-loaded check valves with a reduced pressure zone between checks. An automatically operating differential relief valve located on the underside of the reduced pressure zone, tightly closing shut-off valves on each side of the check valves plus four (4) properly located test cocks for the testing of the check valves and the relief valve. Protects against backsiphonage and backpressure.

Residential Dual Check: An assembly of two (2) spring loaded, independently operating check valves without tightly closing shut-off valves and test cocks. Generally employed immediately downstream of the water meter to act as a containment device. Protects against backsiphonage, preferably in ½", ¾" and 1" service lines.

Single Check Valve: Not an approved back-flow prevention assembly.

- (g) "Back-pressure" means back-flow caused by a pump, elevated tank, boiler, or "head" in pipe, or any means that could create greater pressure within a piping system than, that which exists within the potable water supply.
- (h) "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 the sudden reduction of pressure in the potable water supply system.
- (i) "Certified back-flow protection assembly tester" means a person who has shown his/her competency and has passed an approved Back-Flow Protection Assembly Tester Certification Examination. This person shall be familiar with appropriate laws, rules, and regulations, which address cross-connection control. He/she shall be able to make competent tests on all approved back-flow prevention assemblies, and stay abreast of all new products and information on the subject.
- (j) "Check valve" means a self-closing assembly, which is designed to permit the flow of fluids in one direction. A single check valve is not an approved back-flow prevention assembly.

- (k) "Containment" means the installation of an approved back-flow prevention assembly, or method, on the water service line(s) serving any premises, location, facility or area. Protection by containment shall be used when the potable water system may be contaminated or polluted by substances used or stored within a building or premises.
- (l) "Contaminant" means a substance that will impair 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.
- (m) "Cross-connection" means any physical arrangement whereby a potable water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, tank, plumbing fixture, or other assembly which contains, or may contain, contaminated water, sewage, or other waste, liquid or gas of unknown or unsafe quality which may be capable of imparting contamination or pollution to the potable water supply as a result of back-flow. Bypass arrangements, jumper connections, removable spools, swivel or changeover assemblies, four-way valve connections, and other temporary or permanent assemblies through which, or because of which, back-flow could occur are considered to be cross-connections.
- (n) "Department" means the City of Sheridan Public Works Department.
- (o) "Director" means the engineer of the City of Sheridan, Sheridan County, Wyoming, or his/her designee in charge of the Utilities with the authority and responsibility for the implementation of a cross-connection control program and for the enforcement of the provisions of this article.
- (p) "Fixture Isolation" means a method of back-flow prevention in which a back-flow preventer is located to correct a cross-connection at the fixture location rather than at a water service entrance.
- (q) "High Hazard" means a situation created when any substance, which is or may be introduced into a public water supply poses a threat to public health through poisoning, the spread of disease or pathogenic organisms, or any other health concern.
- (r) "Non-Potable Water" means water that is not safe for human consumption or that is of questionable quality.
- (s) "Person" means any individual, partnership, company, public or private corporation, political subdivision or agency of the State, agency or instrumentality or the United States or any other legal entity.
- (t) "Permit," means a document issued by the Department, which allows the use of a back-flow preventer. This may include water tap permit or building permit.
- (u) "Pollutant" means a foreign substance, that if permitted to get into the public water system, will degrade its quality so as to constitute a low 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 effect such water for domestic use.
- (v) "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 the primary drinking water standards of the US. Safe Drinking Water Act.
- (w) "Safe Drinking Water Act" Passed in 1974 and subsequent amendments to protect the public health by regulating the nations drinking water and its sources-rivers, lakes, reservoirs, springs and ground water wells.
- (x) "Water Service Entrance" means that point in the water users water system beyond the sanitary control of the City of Sheridan; generally considered to be the connection point on the main line and always before any unprotected branch.
- (y) "Water User" means any person who has legal title to or license to operate or inhabit in, a property upon which has a connection to the public water system.

Sec. 28-47. Responsibility.

City of Sheridan:

The Department has the primary responsibility of preventing water from unauthorized sources, or any other substance, from entering the public water system. The Department's responsibility starts at the source of supply and includes all of the water distribution system, up to service connections.

The Department shall exercise reasonable, informed judgement in assessing the degree of hazard posed to the public water system by the water users being served. The Department shall develop and implement a cross-connection control program in accordance with the minimum requirements set forth in this ordinance. When any back-flow prevention assembly is required by the Department, the water user shall install said assembly(s) at the water user's expense or as otherwise determined. The Department shall require all back-flow prevention assemblies to be tested upon installation and at least once a year thereafter; more often if deemed necessary by the Department because of the degree of hazard. Back-flow prevention

assemblies used for isolation, but which are approved by the Department, may reduce the hazard level for the total containment device needed and shall also be subject to the requirements of the Department. The Department shall keep accurate records of tests, inspections, and repairs on all containment assemblies for a period of three (3) years.

Certified Back-Flow Prevention Assembly Tester:

When employed by the water user or a water purveyor to test, repair, overhaul, or maintain back-flow prevention assemblies, the tester shall provide the Director with a copy of his/her certification and liability insurance consistent with the requirements of Sheridan Municipal Code section 7-12. This shall be done with each annual registration.

The certified back-flow prevention assembly tester's first responsibility is to the public. The tester has the duty to test, maintain, inspect and repair back-flow prevention assemblies, as authorized by the person having jurisdiction over those assemblies. All test inspections and repairs shall be made in accordance with the procedures specified by A.S.S.E. or A.B.P.A. Copies (originals if requested) of all records shall be sent to the Department within five (5) working days of the actual testing of the assemblies. The tester shall orally report any assembly that fails a test or inspection or cannot be repaired to the Department and to the water user. This notification shall be made immediately if possible and no later than one (1) work day after the discovery of the failed assembly. A written notification shall follow within three (3) working days.

The tester shall keep accurate records of all assembly tests, inspections, maintenance and repairs performed by the tester, regardless of the location of the assemblies, for a period of at least three (3) years before disposal, or as otherwise directed by the Department.

If a tester suspects that an assembly is not suitable for the hazard it contains or isolates, the tester shall so inform the water user and shall then proceed with the mechanical test of the assembly only upon request of the water user. Regardless of a passed or failed assembly, the tester shall record on the test report any installation that does not conform with specifications in this article or in the City of Sheridan Standard Specifications for Street and Utility Construction or current DEQ regs and send it to the Department. The records shall be on forms approved by the Department and shall include the list of materials or replacement parts used.

Water User:

The water user has the primary responsibility of preventing pollutants from entering the potable water system. The water user's responsibility starts at the point of delivery (service connection) for the public potable water system and includes all of the water user's water system(s). The water user is responsible for the expenses incurred for the proper installation and required testing and maintenance of the approved back-flow prevention assembly(s) under the water user's control as directed by the authority having jurisdiction. Following any repair, overhaul, or relocation of an assembly the water user shall have the back-flow assembly tested to ensure that it is in good operating condition and will prevent back-flow. A certified back-flow prevention assembly tester shall make tests, maintenance, and repairs of back-flow prevention assemblies.

In the event of accidental pollution or contamination of the public or the water user's potable water system due to back-flow on or from the water user's premises, the water user shall promptly take steps to confine further spread of the pollution or contamination within the system and shall notify the Department of the condition immediately. The person responsible for the water users water system(s) shall take appropriate measures to free the water system(s) of any pollutants or contaminants.

Sec. 28-48. Administration

(a) The water user shall allow his property to be inspected for possible cross-connection and shall follow the provisions of the Department's program if a cross-connection occurs.

(b) If the Department requires that the public supply be protected by containment, the water user shall be responsible for water quality beyond the outlet end of the containment device and should use fixture outlet protection for that purpose. The water user may use personnel from the Department 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. 28-49. Requirements.

(a) Department

1) On new installations, the Department will provide an on-site evaluation and/or inspection of plans in order to determine the type of back-flow preventer, if any, that will be required, and require documentation of inspection and testing. In any case, a minimum of a residential dual check valve will be required in any new residential construction.

2) For premises existing prior to the start of this program, the Department will perform evaluation and inspections of plans and/or premises and inform the water user 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, ninety (90) 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 Department will not allow any cross-connection to remain unless it is protected by an approved back-flow preventer for which a permit has been issued and shall be regularly tested to insure satisfactory operation.

4) The Department shall inform the water user by letter, that the water service to the water user's premises will be terminated within a period not to exceed five (5) days for any failure to comply within the ninety (90) days. In the event that the water user informs the Department of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the Department but in no case will exceed one extension of thirty (30) days.

5) If the Department determines at any time that a serious threat to the public health exists, the water service will be terminated immediately and will not require prior notification.

(b) Water User

1) The water user shall be responsible for the elimination or protection of all cross-connections beyond the water service entrance.

2) The water user, after having been informed by a letter from the Department, shall at his expense, install, maintain, and test, or have tested, any and all back-flow preventers beyond the water service entrance.

3) The water user shall immediately correct any malfunctions of the back-flow preventer that are revealed by periodic testing.

4) The water user shall inform the Department of any proposed or modified cross-connections and also any existing cross-connections that the water user is aware but has not been found by the Department.

5) The water user shall not install a by-pass around any back-flow preventer unless there is a back-flow preventer of the same type on the by-pass. Water users who cannot shut down operation for testing of the device(s) must supply additional devices necessary to allow testing to take place.

6) The water user shall install back-flow preventers in a manner approved by the Department and as specified by the City of Sheridan Standard Specifications for Street and Utility Construction.

7) Any water user having a private well or other private water source must ensure that the well or source is not cross-connected to the Department's system. The water user may be required to install a reduced pressure back-flow preventer at the service entrance if a private water source is maintained, even though it is not cross-connected to the Department's system.

8) In the event the water user installs plumbing to provide potable water for domestic purposes which is on the upstream side of the back-flow preventer, such plumbing must have its own back-flow preventer assembly installed.

9) The water user shall be responsible for the payment of all fees for permits, device testing, re-testing in the case that the device fails to operate correctly, and second re-inspections for non-compliance with Department requirements.

(c) New or Existing Residential Buildings - Residential Dual Check

1) All new residential buildings will be required to install a residential dual check device downstream of the water meter before any lines branch off. Installation of this residential dual check device on a retrofit basis on existing service lines will be required within 5 years from passage of this ordinance, and at cost to the water user.

2) A device approved by the Department must protect all existing commercial buildings with a lawn sprinkler system or drip irrigation system.

3) The water user must be aware that installation of a back-flow prevention assembly device results in a potential closed plumbing system within his/her residence. As such, provisions may have to be made by the water user to provide for thermal expansion within his closed loop system, i.e., the installation of thermal expansion devices.

(d) Strainers

1) All new and retrofit installation of reduced pressure principle devices and double check valve assembly back-flow preventers shall include the installation of strainers located immediately upstream of the back-flow device.

Sec. 28-50. Degree of Hazard.

The Department recognizes the threat to the public water system arising from cross-connections. All threats will be classified by degree of hazard and will require the installation of a approved device

according to the latest edition of the Plumbing Code, as adopted by the City of Sheridan Municipal Code section 7-2 and the current DEQ regulations.

Sec. 28-51. Standards for Back-flow Prevention Assemblies.

(a) Before any back-flow prevention assembly is installed for the prevention of back-flow, the Department shall first have approved it. Assemblies shall be installed and tested for conformity with recognized standards or other standards acceptable to the Department, which are consistent with the intent of the latest edition of the Plumbing Code and City of Sheridan Specifications for Street and Utility Construction.

(b) Existing back-flow prevention assembly installations that are not approved shall be replaced with an approved assembly.

Sec. 28-52. Installation.

Approved assemblies shall not be modified in any way after the assembly leaves the manufacturer's factory. If installation is not completed by a plumber licensed with the City of Sheridan, completed installation shall be inspected by a plumber licensed with the City of Sheridan. Upon completion of installation or inspection, the plumber licensed with the City of Sheridan shall notify the Department of the installation on forms provided by the Department.

Access and clearance shall be provided for the required testing, maintenance and repair of all assemblies. Access and clearance shall require a minimum of one (1) foot between the lowest portion of the assembly and grade, floor or platform. Installation elevated more than five (5) feet to the top most part of the assembly above the floor or grade shall be provided with a permanent platform capable of supporting a tester or maintenance person and necessary tools and equipment; a minimum of 300 pounds. Other clearance include:

(1) When the test cocks are facing a wall or other obstruction there should be a minimum of twenty-four (24) inches from the assembly to the obstruction. When the test cocks are facing away from the wall there must be a minimum of twelve (12) inches between the assembly and the wall or other obstruction.

(2) Adjacent and opposing walls must allow enough room for testing and maintenance. A minimum of three (3) feet of free air space in front and above the assembly must be maintained.

Back-flow assemblies shall be protected from freezing by a method equivalent to A.S.S.E 1060.

Direct connection between potable water piping and sewer connected waste shall not exist under any conditions, with or without back-flow protection. Separation must be by approved air gap of two (2) pipe diameters of the supply line but not less than one (1) inch separation.

Sec. 28-53. Testing and Maintenance.

(a) It is the duty of the Water User/occupant of any premises protected with a back-flow prevention assembly to have such assembly tested, at their expense, annually or as directed by the Department. The Department will, when possible, notify the customer or person responsible for the testing in writing in advance of the required test date. Failure to receive this notice does not relieve the customer of the responsibility to have this test completed by a certified tester as required.

(b) Any assembly that leaks, malfunctions or fails a test shall be repaired or replaced and re-tested upon notification of such failure by the tester and/or written notice from Department of the failure within five (5) working days of receipt of such notice. High hazard situations will not be allowed to continue unprotected if the back-flow preventer fails the test and cannot be repaired immediately. The Water User is responsible for spare parts, repair tools, or a replacement device. Parallel installation of two (2) devices is an effective means of the Water User insuring that uninterrupted water service during testing or repair of devices and is strongly recommended when the Water User desires such continuity.

(c) Back-flow prevention devices will be tested more frequently than specified in (a), above, in cases where there is a history of test failures and the Department feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional tests will be borne by the Water User.

(d) The Department will provide proper testing forms to a certified tester upon request.

(e) All back-flow assembly test equipment must be checked for accuracy and calibration at least once a year.

(f) Certification of test equipment calibration must be submitted with the testers annual registration with the Department.

(g) The Department reserves the right to spot check and test any containment assembly at any time to verify the proper operation and test results of the assembly.

Sec. 28-54. Existing in-use Back-flow Prevention Devices.

Any existing back-flow preventer shall be allowed by the Department to continue in service unless the degree of hazard is such as to supercede the effectiveness of the present back-flow preventer, results in an unreasonable risk to the public health, or fails an operational test.

Sec. 28-55. Right of Entry.

The Department representative shall, upon display of proper credentials, have the right to enter during normal business hours all buildings being served from the public water system for the purpose of inspection of cross-connections and existing or potential hazards. The right of entry shall be a condition of continuing water service in order to provide assurance that the health, safety and welfare are maintained for the people within the water distribution system of the City of Sheridan.

Sec. 28-56. Violations.

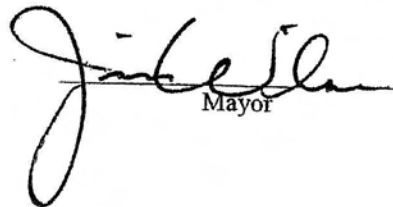
Failure of the water user to cooperate in the installation, maintenance, testing or inspection of back-flow prevention assemblies required by this article shall be grounds for the discontinuance of water service to the premises. Service of water to any premises may be discontinued by the Department if unprotected cross-connections exist on the premises. When any defect is found in an installed back-flow prevention assembly, or if the back-flow prevention assembly has been removed or bypassed, the service may be discontinued. Service shall not be restored until such conditions or defects are corrected.

Discontinuance of service may be summary, immediate, and without written notice whenever, in the judgment of the Department, such action is necessary to protect the purity of the public potable water supply or the safety of the water system.

In the event of a system contamination by a cross-connection not maintained and tested in accordance with this article and the City of Sheridan Standard Specifications for Street and Utility Construction, the water user may be held liable for costs the city incurs to correct the system contamination. Also, if the city is required to discontinue water service due to violations identified in this article, the water user will be charged in accordance with Section 28-38.

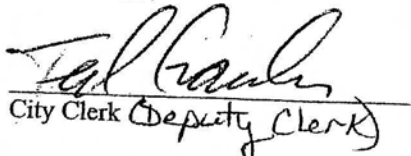
PASSED, ADOPTED, AND APPROVED 15th day of March 2004.

CITY OF SHERIDAN, WYOMING


Mayor

(SEAL)

ATTESTED:


City Clerk (Deputy Clerk)