

**SULTAN CITY COUNCIL  
SUBCOMMITTEE  
AGENDA ITEM COVER SHEET**

**ITEM NO:** D – 1

**DATE:** June 10, 2010

**SUBJECT:** Cross Connection Program  
Annual Backflow Testing

**CONTACT PERSON:** Bill Ferry, Water Plant Operator

**ISSUE:**

The issue before the City Council Subcommittee is to discuss the Cross Connection Program regarding the response time allowed to complete the annual backflow test.

**STAFF RECOMMENDATION:**

Staff is seeking direction from council on whether the compliance period should be 30 or 45 days. The council decision will be formerly adopted as part of the compliance program.

**SUMMARY:**

WAC # 246-290-490 (Attachment A) requires all City's Businesses and Residents that have backflow assemblies to be tested on an annual basis. In 1991, the City adopted the WAC Code for the purpose of protecting the water supply of the City of Sultan from contamination or pollution due to any existing or potential cross connection through the Sultan Municipal Code Chapter 13.14 (Attachment B).

Initially, the City of Sultan program requested testing in the Fall months and testing could not always be completed because of freezing and off-line sprinkler systems. Through the process of implementing the required annual testing, the program was refined and it was determined that Spring is the best time to require testing.

During the 2010 compliance review process, the City received a complaint from one of the affected customers that the timeframe given to respond was not adequate. The letter sent to the customer gave 45 days to respond. During staff review of the complaint, it was noticed that the timeframes have been inconsistent from year to year. Staff also noticed the date the first compliance letter is mailed has changed each year.

The following four (4) charts show from 2007 to 2010 each notice sent, the date mailed, the number of letter/notices mailed, when the date testing was to be complete and how many days the City allowed for the testing to be complete. In looking at the charts, it is clear the inconsistency of the dates and timeframe along with how many mailings had to be done to complete the testing.

**CROSS CONNECTIONS MAILINGS**

<b>2010</b>	<b>Mailed</b>	<b># of Notices Mailed</b>	<b>Due By</b>	<b>Time</b>
1 <sup>st</sup> Notice	4/6	59	5/15	45 days
2 <sup>nd</sup> Notice	6/2	8	7/2	30 days

<b>2009</b>	<b>Mailed</b>	<b># of Notices Mailed</b>	<b>Due By</b>	<b>Time</b>
1 <sup>st</sup> Notice	3/26	60	6/26	90 days
2 <sup>nd</sup> Notice	7/2	13	8/15	45 days
Final Notice	8/28	5	9/18	20 days

<b>2008</b>	<b>Mailed</b>	<b># of Notices Mailed</b>	<b>Due By</b>	<b>Time</b>
1 <sup>st</sup> Notice	4/23	47	7/18	86
2 <sup>nd</sup> Notice	8/11	47	8/29	18
Final Notice	9/8	10	9/26	15 days

<b>2007</b>	<b>Mailed</b>	<b># of Notices Mailed</b>	<b>Due By</b>	<b>Time</b>
1 <sup>st</sup> Notice	5/11	50	7/16	66
2 <sup>nd</sup> Notice	7/27	22	8/31	35
Final Notice	9/11	10	9/30	10 days
2 <sup>nd</sup> Final Notice	10/7	4	10/17	10 days

Since 2006, the City has been consistent in mailing compliance letters in the Spring. For 2010, the letters also included a reminder that there is a \$25 fee per the 2010 Fee Schedule (Attachment C) for every reminder letter sent after the initial mailing. A 45-day timeframe was given and the response has been improved over previous years.

**FISCAL IMPACT:**

With a 30 or 45 day consistent timeframe to complete the backflow testing along with the fee, the City staff efficiency improves due to a lesser amount of additional request letters.

**RECOMMENDED ACTION:**

Direct staff in one of the following to bring back as a recommendation to the June 24<sup>th</sup> Council:

1. Agree to a 30-day timeframe for annual backflow testing of all devices within Sultan Water System; or
2. Agree to a 45-day timeframe for annual backflow testing of all devices within the Sultan Water System.

A 2010 goal is to review Sultan Municipal Code Chapter 13 – Utility Services. This would be included in the amends to this code section, adopted through public process.

**ATTACHMENTS:**

- A WAC 246-290-490
- B Sultan Municipal Code 13.14
- C 2010 Rate Schedule, Page 10
- D 2010 Letter (1<sup>st</sup> Mailing)
- E 2010 Letter (2<sup>nd</sup> Mailing)

**WAC 246-290-490**Agency filings affecting this section**Cross-connection control.**

## (1) Applicability, purpose, and responsibility.

(a) All community water systems shall comply with the cross-connection control requirements specified in this section.

(b) All noncommunity water systems shall apply the principles and provisions of this section, including subsection (4)(b) of this section, as applicable to protect the public water system from contamination via cross-connections. Noncommunity systems that comply with subsection (4)(b) of this section and the provisions of WAC 51-56-0600 of the UPC (which addresses the installation of backflow preventers at points of water use within the potable water system) shall be considered in compliance with the requirements of this section.

(c) The purpose of the purveyor's cross-connection control program shall be to protect the public water system, as defined in WAC 246-290-010, from contamination via cross-connections.

(d) The purveyor's responsibility for cross-connection control shall begin at the water supply source, include all the public water treatment, storage, and distribution facilities, and end at the point of delivery to the consumer's water system, which begins at the downstream end of the service connection or water meter located on the public right of way or utility-held easement.

(e) Under this section, purveyors are not responsible for eliminating or controlling cross-connections within the consumer's water system. Under chapter 19.27 RCW, the responsibility for cross-connection control within the consumer's water system, i.e., within the property lines of the consumer's premises, lies with the authority having jurisdiction.

## (2) General program requirements.

(a) The purveyor shall develop and implement a cross-connection control program that meets the requirements of this section, but may establish a more stringent program through local ordinances, resolutions, codes, bylaws, or operating rules.

(b) Purveyors shall ensure that good engineering and public health protection practices are used in the development and implementation of cross-connection control programs. Department publications and the most recently published editions of references, such as, but not limited to, those listed below, may be used as guidance for cross-connection program development and implementation:

(i) *Manual of Cross-Connection Control* published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California (USC Manual);

(ii) *Cross-Connection Control Manual, Accepted Procedure and Practice* published by the Pacific Northwest Section of the American Water Works Association (PNWS-AWWA Manual); or

(iii) Guidance document: *Cross-Connection Control for Small Water Systems* published by the department.

(c) The purveyor may implement the cross-connection control program, or any portion thereof, directly or by means of a contract with another agency or party acceptable to the department.

(d) The purveyor shall coordinate with the authority having jurisdiction in all matters concerning cross-connection control. The purveyor shall document and describe the coordination, including delineation of responsibilities, in the written cross-connection control program required in (e) of this subsection.

(e) The purveyor shall include a written description of the cross-connection control program in the water system plan required under WAC 246-290-100 or the small water system management program required under WAC 246-290-105. The cross-connection control program shall include the minimum program elements described in subsection (3) of this section.

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(f) The purveyor shall ensure that cross-connections between the distribution system and a consumer's water system are eliminated or controlled by the installation of an approved backflow preventer commensurate with the degree of hazard. This can be accomplished by implementation of a cross-connection program that relies on:

(i) Premises isolation as defined in WAC 246-290-010; or

(ii) Premises isolation and in-premises protection as defined in WAC 246-290-010.

(g) Purveyors with cross-connection control programs that rely both on premises isolation and in-premises protection:

(i) Shall comply with the premises isolation requirements specified in subsection (4)(b) of this section; and

(ii) May reduce premises isolation requirements and rely on in-premises protection for premises other than the type addressed in subsection (4)(b) of this section, only if the following conditions are met:

(A) The in-premises backflow preventers provide a level of protection commensurate with the purveyor's assessed degree of hazard;

(B) Backflow preventers which provide the in-premises backflow protection meet the definition of approved backflow preventers as described in WAC 246-290-010;

(C) The approved backflow preventers are installed, inspected, tested (if applicable), maintained, and repaired in accordance with subsections (6) and (7) of this section;

(D) Records of the backflow preventers are maintained in accordance with subsections (3) (j) and (8) of this section; and

(E) The purveyor has reasonable access to the consumer's premises to conduct an initial hazard evaluation and periodic reevaluations to determine whether the in-premises protection is adequate to protect the purveyor's distribution system.

(h) The purveyor shall take appropriate corrective action as authorized by the legal instrument required by subsection (3)(b) of this section, when:

(i) A cross-connection exists that is not controlled commensurate to the degree of hazard assessed by the purveyor; or

(ii) A consumer fails to comply with the purveyor's requirements regarding the installation, inspection, testing, maintenance or repair of approved backflow preventers required by this chapter.

(i) The purveyor's corrective action may include, but is not limited to:

(i) Denying or discontinuing water service to a consumer's premises until the cross-connection hazard is eliminated or controlled to the satisfaction of the purveyor;

(ii) Requiring the consumer to install an approved backflow preventer for premises isolation commensurate with the degree of hazard; or

(iii) The purveyor installing an approved backflow preventer for premises isolation commensurate with the degree of hazard.

(j) Except in the event of an emergency, purveyors shall notify the authority having jurisdiction prior to denying or discontinuing water service to a consumer's premises for one or more of the reasons listed in (h) of this subsection.

(k) The purveyor shall prohibit the intentional return of used water to the purveyor's distribution system. Used water includes, but is not limited to, water used for heating, cooling, or other purposes within the consumer's water system.

(3) Minimum elements of a cross-connection control program.

(a) To be acceptable to the department, the purveyor's cross-connection control program shall include the minimum elements identified in this subsection.

(b) Element 1: The purveyor shall adopt a local ordinance, resolution, code, bylaw, or other written legal instrument that:

(i) Establishes the purveyor's legal authority to implement a cross-connection control program;

(ii) Describes the operating policies and technical provisions of the purveyor's cross-connection control program; and

(iii) Describes the corrective actions used to ensure that consumers comply with the purveyor's cross-connection control requirements.

(c) Element 2: The purveyor shall develop and implement procedures and schedules for evaluating new and existing service connections to assess the degree of hazard posed by the consumer's premises to the purveyor's distribution system and notifying the consumer within a reasonable time frame of the hazard evaluation results. At a minimum, the program shall meet the following:

(i) For connections made on or after April 9, 1999, procedures shall ensure that an initial evaluation is conducted before water service is provided;

(ii) For all other connections, procedures shall ensure that an initial evaluation is conducted in accordance with a schedule acceptable to the department; and

(iii) For all service connections, once an initial evaluation has been conducted, procedures shall ensure that periodic reevaluations are conducted in accordance with a schedule acceptable to the department and whenever there is a change in the use of the premises.

(d) Element 3: The purveyor shall develop and implement procedures and schedules for ensuring that:

(i) Cross-connections are eliminated whenever possible;

(ii) When cross-connections cannot be eliminated, they are controlled by installation of approved backflow preventers commensurate with the degree of hazard; and

(iii) Approved backflow preventers are installed in accordance with the requirements of subsection (6) of this section.

(e) Element 4: The purveyor shall ensure that personnel, including at least one person certified as a CCS, are provided to develop and implement the cross-connection control program.

(f) Element 5: The purveyor shall develop and implement procedures to ensure that approved backflow preventers relied upon to protect the public water system are inspected and/or tested (as applicable) under subsection (7) of this section.

(g) Element 6: The purveyor shall develop and implement a backflow prevention assembly testing quality control assurance program, including, but not limited to, documentation of BAT certification and test kit calibration, test report contents, and time frames for submitting completed test reports.

(h) Element 7: The purveyor shall develop and implement (when appropriate) procedures for responding to backflow incidents.

(i) Element 8: The purveyor shall include information on cross-connection control in the purveyor's existing program for educating consumers about water system operation. The public education program may include periodic bill inserts, public service announcements, pamphlet distribution, notification of new consumers and consumer confidence reports.

(j) Element 9: The purveyor shall develop and maintain cross-connection control records including, but not limited to, the following:

(i) A master list of service connections and/or consumer's premises where the purveyor relies upon approved backflow preventers to protect the public water system from contamination, the assessed hazard level of each, and the required backflow preventer(s);

ATTACHMENT A

(ii) Inventory information on backflow preventers that protect the public water system including:

(A) Approved air gaps installed in lieu of approved assemblies including exact air gap location, assessed degree of hazard, installation date, history of inspections, inspection results, and person conducting inspections;

(B) Approved backflow assemblies including exact assembly location, assembly description (type, manufacturer, model, size, and serial number), assessed degree of hazard, installation date, history of inspections, tests and repairs, test results, and person performing tests; and

(C) Approved AVBs used for irrigation system applications including location, description (manufacturer, model, and size), installation date, history of inspection(s), and person performing inspection(s).

(iii) Cross-connection program summary reports and backflow incident reports required under subsection (8) of this section.

(k) Element 10: Purveyors who distribute and/or have facilities that receive reclaimed water within their water service area shall meet any additional cross-connection control requirements imposed by the department in a permit issued under chapter 90.46 RCW.

(4) Approved backflow preventer selection.

(a) The purveyor shall ensure that a CCS:

(i) Assesses the degree of hazard posed by the consumer's water system upon the purveyor's distribution system; and

(ii) Determines the appropriate method of backflow protection for premises isolation as described in Table 8.

TABLE 8

APPROPRIATE METHODS OF BACKFLOW PROTECTION FOR PREMISES ISOLATION

Degree of Hazard	Application Condition	Appropriate Approved Backflow Preventer
High health cross-connection hazard	Backsiphonage or backpressure backflow	AG, RPBA, or RPDA
Low cross-connection hazard	Backsiphonage or backpressure backflow	AG, RPBA, RPDA, DCVA, or DCDA

(b) Premises isolation requirements.

(i) The purveyor shall ensure that an approved air gap, RPBA, or RPDA is installed for premises isolation for service connections to premises posing a high health cross-connection hazard including, but not limited to, those premises listed in Table 9, except those premises identified as severe in (b)(ii) of this subsection.

(ii) For service connections to premises posing a severe health cross-connection hazard including wastewater treatment plants, radioactive material processing plants, and nuclear reactors, the purveyor shall ensure that either an:

(A) Approved air gap is installed for premises isolation; or

(B) Approved RPBA or RPDA is installed for premises isolation in combination with an in-plant approved air gap.

(iii) If the purveyor's CCS determines that no hazard exists for a connection serving premises of the type listed in Table 9, the purveyor may grant an exception to the premises isolation requirements of (b)(i) of this subsection.

(iv) The purveyor shall document, on a case-by-case basis, the reasons for granting an exception under (b)(i) of this subsection and include the documentation in the cross-connection control program annual summary report required in subsection (8) of this section.

**TABLE 9**

**SEVERE\* AND HIGH HEALTH CROSS-CONNECTION HAZARD PREMISES REQUIRING PREMISES ISOLATION BY AG OR RPBA**

Agricultural (farms and dairies)
Beverage bottling plants
Car washes
Chemical plants
Commercial laundries and dry cleaners
Premises where both reclaimed water and potable water are provided
Film processing facilities
Food processing plants
Hospitals, medical centers, nursing homes, veterinary, medical and dental clinics, and blood plasma centers
Premises with separate irrigation systems using the purveyor's water supply and with chemical addition <sup>+</sup>
Laboratories
Metal plating industries
Mortuaries
Petroleum processing or storage plants
Piers and docks
Radioactive material processing plants or nuclear reactors <sup>*</sup>
Survey access denied or restricted
Wastewater lift stations and pumping stations
Wastewater treatment plants <sup>*</sup>
Premises with an unapproved auxiliary water supply interconnected with the potable water supply

+ For example, parks, playgrounds, golf courses, cemeteries, estates, etc.

\* RPBA's for connections serving these premises are acceptable only when used in combination with an in-plant approved air gap; otherwise, the purveyor shall require an approved air gap at the service connection.

(c) Backflow protection for single-family residences.

(i) For single-family residential service connections, the purveyor shall comply with the premises isolation requirements of (b) of this subsection when applicable.

(ii) If the requirements of (b) of this subsection do not apply and the requirements specified in subsection (2)(g)(ii) of this section are met, the purveyor may rely on backflow protection

provided at the point of hazard in accordance with WAC 51-56-0600 of the UPC for hazards such as, but not limited to:

- (A) Irrigation systems;
- (B) Swimming pools or spas;
- (C) Ponds; and
- (D) Boilers.

For example, the purveyor may accept an approved AVB on a residential irrigation system, if the AVB is properly installed under the UPC.

(d) Backflow protection for fire protection systems.

(i) Backflow protection is not required for residential flow-through or combination fire protection systems constructed of potable water piping and materials.

(ii) For service connections with fire protection systems other than flow-through or combination systems, the purveyor shall ensure that backflow protection consistent with WAC 51-56-0600 of the UPC is installed. The UPC requires minimum protection as follows:

(A) An RPBA or RPDA for fire protection systems with chemical addition or using unapproved auxiliary water supply; and

(B) A DCVA or DCDA for all other fire protection systems.

(iii) For connections made on or after April 9, 1999, the purveyor shall ensure that backflow protection is installed before water service is provided.

(iv) For existing fire protection systems:

(A) With chemical addition or using unapproved auxiliary supplies, the purveyor shall ensure that backflow protection is installed within ninety days of the purveyor notifying the consumer of the high health cross-connection hazard or in accordance with an alternate schedule acceptable to the purveyor.

(B) Without chemical addition, without on-site storage, and using only the purveyor's water (i.e., no unapproved auxiliary supplies on or available to the premises), the purveyor shall ensure that backflow protection is installed in accordance with a schedule acceptable to the purveyor or at an earlier date if required by the code official administering the State Building Code as defined in chapter 51-04 WAC.

(C) When establishing backflow protection retrofitting schedules for fire protection systems that have the characteristics listed in (d)(iv)(B) of this subsection, the purveyor may consider factors such as, but not limited to, impacts of assembly installation on sprinkler performance, costs of retrofitting, and difficulty of assembly installation.

(e) Purveyors may require approved backflow preventers commensurate with the degree of hazard as determined by the purveyor to be installed for premises isolation for connections serving premises that have characteristics such as, but not limited to, the following:

(i) Complex plumbing arrangements or plumbing potentially subject to frequent changes that make it impracticable to assess whether cross-connection hazards exist;

(ii) A repeated history of cross-connections being established or reestablished; or

(iii) Cross-connection hazards are unavoidable or not correctable, such as, but not limited to, tall buildings.

(5) Approved backflow preventers.

(a) The purveyor shall ensure that all backflow prevention assemblies relied upon by the purveyor are models included on the current list of backflow prevention assemblies approved for use in Washington state. The current approved assemblies list is available from the department upon request.

(b) The purveyor may rely on testable backflow prevention assemblies that are not currently approved by the department, if the assemblies:

(i) Were included on the department and/or USC list of approved backflow prevention assemblies at the time of installation;

(ii) Have been properly maintained;

(iii) Are commensurate with the purveyor's assessed degree of hazard; and

(iv) Have been inspected and tested at least annually and have successfully passed the annual tests.

(c) The purveyor shall ensure that an unlisted backflow prevention assembly is replaced by an approved assembly commensurate with the degree of hazard, when the unlisted assembly:

(i) Does not meet the conditions specified in (b)(i) through (iv) of this subsection;

(ii) Is moved; or

(iii) Cannot be repaired using spare parts from the original manufacturer.

(d) The purveyor shall ensure that AVBs meet the definition of approved atmospheric vacuum breakers as described in WAC 246-290-010.

(6) Approved backflow preventer installation.

(a) The purveyor shall ensure that approved backflow preventers are installed in the orientation for which they are approved (if applicable).

(b) The purveyor shall ensure that approved backflow preventers are installed in a manner that:

(i) Facilitates their proper operation, maintenance, inspection, in-line testing (as applicable), and repair using standard installation procedures acceptable to the department such as those in the USC Manual or PNWS-AWWA Manual;

(ii) Ensures that the assembly will not become submerged due to weather-related conditions such as flooding; and

(iii) Ensures compliance with all applicable safety regulations.

(c) The purveyor shall ensure that approved backflow assemblies for premises isolation are installed at a location adjacent to the meter or property line or an alternate location acceptable to the purveyor.

(d) When premises isolation assemblies are installed at an alternate location acceptable to the purveyor, the purveyor shall ensure that there are no connections between the point of delivery from the public water system and the approved backflow assembly, unless the installation of the connection meets the purveyor's cross-connection control requirements and is specifically approved by the purveyor.

(e) The purveyor shall ensure that approved backflow preventers are installed in accordance with the following time frames:

(i) For connections made on or after April 9, 1999, the following conditions shall be met before service is provided:

(A) The provisions of subsection (3)(d)(ii) of this section; and

(B) Satisfactory completion of the requirements of subsection (7) of this section.

(ii) For existing connections where the purveyor identifies a high health cross-connection hazard, the provisions of (3)(d)(ii) of this section shall be met:

(A) Within ninety days of the purveyor notifying the consumer of the high health cross-connection hazard; or

(B) In accordance with an alternate schedule acceptable to the purveyor.

(iii) For existing connections where the purveyor identifies a low cross-connection hazard, the provisions of subsection (3)(d)(ii) of this section shall be met in accordance with a schedule acceptable to the purveyor.

(f) The purveyor shall ensure that bypass piping installed around any approved backflow preventer is equipped with an approved backflow preventer that:

(i) Affords at least the same level of protection as the approved backflow preventer that is being bypassed; and

(ii) Complies with all applicable requirements of this section.

(7) Approved backflow preventer inspection and testing.

(a) For backflow preventers that protect the public water system, the purveyor shall ensure that:

(i) A CCS inspects backflow preventer installations to ensure that protection is provided commensurate with the assessed degree of hazard;

(ii) Either a BAT or CCS inspects:

(A) Air gaps installed in lieu of approved backflow prevention assemblies for compliance with the approved air gap definition; and

(B) Backflow prevention assemblies for correct installation and approval status.

(iii) A BAT tests approved backflow prevention assemblies for proper operation.

(b) The purveyor shall ensure that inspections and/or tests of approved air gaps and approved backflow assemblies that protect the public water system are conducted:

(i) When any of the following occur:

(A) Upon installation, repair, reinstallation, or relocation of an assembly;

(B) Upon installation or replumbing of an air gap;

(C) After a backflow incident involving the assembly or air gap; and

(ii) Annually thereafter, unless the purveyor requires more frequent testing for high hazard premises or for assemblies that repeatedly fail.

(c) The purveyor shall ensure that inspections of AVBs installed on irrigation systems are conducted:

(i) At the time of installation;

(ii) After a backflow incident; and

(iii) After repair, reinstallation, or relocation.

(d) The purveyor shall ensure that approved backflow prevention assemblies are tested using procedures acceptable to the department, such as those specified in the most recently published edition of the USC Manual. When circumstances, such as, but not limited to, configuration or location of the assembly, preclude the use of USC test procedures, the purveyor may allow, on a case-by-case basis, the use of alternate (non-USC) test procedures acceptable to the department.

(e) The purveyor shall ensure that results of backflow prevention assembly inspections and tests are documented and reported in a manner acceptable to the purveyor.

(f) The purveyor shall ensure that an approved backflow prevention assembly or AVB, whenever found to be improperly installed, defective, not commensurate with the degree of hazard, or failing a test (if applicable) is properly reinstalled, repaired, overhauled, or replaced.

ATTACHMENT A

(g) The purveyor shall ensure that an approved air gap, whenever found to be altered or improperly installed, is properly replumbed or, if commensurate with the degree of hazard, is replaced by an approved RPBA.

(8) Recordkeeping and reporting.

(a) Purveyors shall keep cross-connection control records for the following time frames:

(i) Records pertaining to the master list of service connections and/or consumer's premises required in subsection (3)(j)(i) of this section shall be kept as long as the premises pose a cross-connection hazard to the purveyor's distribution system;

(ii) Records regarding inventory information required in subsection (3)(j)(ii) of this section shall be kept for five years or for the life of the approved backflow preventer whichever is shorter; and

(iii) Records regarding backflow incidents and annual summary reports required in subsection (3)(j)(iii) of this section shall be kept for five years.

(b) Purveyors may maintain cross-connection control records in original form or transfer data to tabular summaries.

(c) Purveyors may maintain records or data in any media, such as paper, film, or electronic format.

(d) The purveyor shall complete the cross-connection control program summary report annually. Report forms and guidance on completing the report are available from the department.

(e) The purveyor shall make all records and reports required in subsection (3)(j) of this section available to the department or its representative upon request.

(f) The purveyor shall notify the department, authority having jurisdiction, and local health jurisdiction as soon as possible, but no later than the end of the next business day, when a backflow incident is known by the purveyor to have:

(i) Contaminated the public water system; or

(ii) Occurred within the premises of a consumer served by the purveyor.

(g) The purveyor shall:

(i) Document details of backflow incidents contaminating the public water system on a backflow incident report form available from the department; and

(ii) Include all backflow incident report(s) in the annual cross-connection program summary report referenced in (d) of this subsection, unless otherwise requested by the department.

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**Chapter 13.14**  
**CROSS-CONNECTION REGULATIONS**

Sections:

<u>13.14.010</u>	Definitions.
<u>13.14.020</u>	Purpose.
<u>13.14.030</u>	Cross-connections regulated.
<u>13.14.040</u>	Backflow prevention device requirement.
<u>13.14.050</u>	Installation requirements.
<u>13.14.060</u>	Access to premises.
<u>13.14.070</u>	Annual testing and repairs.
<u>13.14.080</u>	Costs of compliance.
<u>13.14.090</u>	Termination of service.

**13.14.010 Definitions.**

The words and phrases set out in this section are defined as follows:

A. "Approved backflow prevention assembly" means a device to counteract back pressures or prevent back siphonage. This device must appear on the list of approved devices issued by the Washington State Board of Health.

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

C. "Backflow" means the flow in the direction opposite to the normal flow or the introduction of any foreign liquids, gases, or substances into the water system of the city of Sultan.

D. "Back pressure" means backflow caused by other means that could create pressure within the system greater than the potable water supply system.

E. "Cross-connection" means any physical arrangement where a public water system is connected, directly or indirectly, with another nondrinkable water system or auxiliary system, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp coolers, or any other device 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 devices, or other temporary or permanent devices through which, or because of which, backflow may occur are considered to be cross-connections.

F. "Premises" means any piece of land to which water is provided including all structures, improvements, mobile home(s) and other facilities located on it.

G. "Public water system" means any system excluding a system serving one single-family residence, providing piped water for human consumption.

H. "Purveyor" means any agency or subdivision of the state or any municipal corporation, firm, company, mutual or cooperative association, institution, partnership or person or any other entity that owns or operates a public water system. It also means the authorized agents of any such entities.

I. "Reduced pressure principle assembly" shall mean 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. A check valve is approved if it appears on the list of approved devices issued by the Washington State Board of Health.

J. "City" means the city of Sultan. (Ord. 566, 1991)

**13.14.020 Purpose.**

The purpose of these regulations is to protect the water supply of the city of Sultan from contamination or pollution due to any existing or potential cross-connections. (Ord. 566, 1991)

**13.14.030 Cross-connections regulated.**

A. No cross-connections shall be created, installed, used or maintained within the territory served by the city of Sultan, except in accordance with these regulations.

B. The control or elimination of cross-connections shall be governed by Chapter 246 -290 WAC as it now exists or as it may hereafter be amended, and these regulations. The policies, procedures and other criteria for determining appropriate levels of protections shall be in accordance with the "Accepted Procedure and Practice in Cross-Connection Control Manual," Pacific Northwest Section, American Water Works Association Fifth Edition or any superseding edition.

C. The city of Sultan requires that all plumbing and sprinkler plans be submitted to the utility department for review and approval prior to installation on all new construction or any plumbing or sprinkler system changes. (Ord. 566, 1991)

**13.14.040 Backflow prevention device requirement.**

Approved backflow prevention assemblies shall be installed at the expense of the owner, either at the service connection or within the premises as determined by a certified cross-connection inspector employed by the city in each of the following circumstances:

A. If the nature and extent of any activity of the premises, or the materials used in connection with any activity of the premises, or materials stored on the premises, could contaminate or pollute the drinking water supply;

B. On premises having any one or more cross-connections as that term is defined in SMC 13.14.010(E);

C. Internal cross-connections that are not correctable, or intricate plumbing arrangements which make it impractical to ascertain whether or not cross-connections exist;

D. A repeated history of cross-connections being established or reestablished;

E. Unduly restricted entry so that inspections for cross-connections cannot be made with sufficient frequency or with sufficient notice to assure that cross-connections do not exist. A reduced pressure backflow assembly will be required to be installed at the service connection;

F. Materials of a toxic or hazardous nature being used such that, if back siphonage should occur, a health hazard could result;

G. Any mobile apparatus which uses the city's system or water from any premises within the city's system;

H. On any premises where installation of an approved backflow prevention assembly is deemed to be necessary to accomplish the purpose of these regulations in the judgment of a certified cross-connection specialist employed by the city;

I. On any premises where an appropriate cross-connection report form has not been filed with the office of the city utility department;

J. All unified plumbing codes must be maintained;

K. All rental properties shall have a RP assembly at the service connection. (Ord. 566, 1991)

**13.14.050 Installation requirements.**

To ensure proper operation and accessibility of all backflow prevention assemblies, the following requirements shall apply to the installation of these assemblies:

A. No part of the backflow prevention assembly shall be submerged in water or installed in a location subject to flooding. If installed in a vault or basement, adequate drainage shall be provided;

B. Assemblies must be installed at the location specified in the inspection report by the city. Alternate locations must be approved in writing by the city prior to installations;

C. The device must be protected from freezing and other severe weather conditions;

D. All backflow device prevention assemblies to be installed shall be of a type and model preapproved by the Washington State Board of Health and the city of Sultan;

E. Only assemblies specifically approved by the Washington State Board of Health for vertical installation may be installed vertically;

F. The device shall be readily accessible with adequate room for maintenance and testing. Devices two inches and smaller shall have at least six inches clearance on all sides of the device. All devices 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 device and 36 inches above the device;

G. If written permission is granted to install the backflow assembly inside of the building, the assembly shall be readily accessible during working hours of 8:00 a.m. to 4:00 p.m., Monday through Friday;

H. Upon completion of inspection by the city or an authorized specialist employed by the city and where a backflow assembly is deemed necessary, the type of device and installation plans shall be submitted to the city for approval prior to installation;

I. Upon completion of inspection, the city shall be notified and all assemblies must be inspected and tested by a state certified tester. All backflow assemblies must be registered with the city. Registration shall consist of date of installation, make, model, serial number of the backflow assembly, and initial test report. (Ord. 566, 1991)

#### **13.14.060 Access to premises.**

Authorized employees of the city of Sultan, with proper identification, shall have access during reasonable hours to all parts of a premises and within the building to which water is supplied. However, if any water user refuses access to a premises or to the interior of a structure at reasonable times and on reasonable notice for inspection by a cross-connection specialist appointed by the city, a reduced pressure principle assembly will be required to be installed at the service connection to that premises. (Ord. 566, 1991)

#### **13.14.070 Annual testing and repairs.**

All backflow devices installed within the territory served by the city shall be tested immediately upon installation and annually thereafter by a state certified tester. All such assemblies found not functioning properly shall be promptly repaired or replaced by the water user. If any such assembly is not promptly repaired or replaced, the city may deny or discontinue water to the premises. All testing and repairs are the financial responsibility of the water user. (Ord. 566, 1991)

#### **13.14.080 Costs of compliance.**

All costs associated with purchase, installation, inspections, testing, replacement, maintenance, parts and repairs of the backflow assembly are the financial responsibility of the property owner to which water is supplied. (Ord. 566, 1991)

#### **13.14.090 Termination of service.**

Failure on the part of any customer to discontinue the use of all cross-connections and to physically separate cross-connections is sufficient cause for the immediate discontinuance of public water service to the premises (WAC 246-290-490). The city of Sultan reserves the right to deny service or discontinue the supply of water to any consumer not in compliance with this and all other applicable regulations pertaining to public water systems. (Ord. 566, 1991)

**PUBLIC WORKS FEES**

**WORK BEGUN OR COMPLETED BEFORE PERMIT ISSUANCE**

**Permit Fees Double**

**Cross Connection/Backflow Inspections and Certifications**

Business/Residents are required to contract with a Licensed Backflow Assembly Tester (BAT) Yearly

- First letter and First City of Sultan Staff Call or Contract.....Free
- Second Call and thereafter each call to assure Backflow Device is tested.....\$25.00

**Driveway Permit Fee within Right of Way**

Residential

Minimum 10 foot cut to a maximum of 20 foot cut.....\$100.00

Non-Residential.....\$200.00 + direct cost

Culvert.....\$150.00 + direct cost

**Site Development Fees**

*Plan Review Fees - When a plan or other data are required to be submitted, a plan review fee shall be paid at the time of submitting plans and specifications for review. Separate plan review fees shall apply to retaining walls or major drainage structures as required elsewhere in this code. For the excavation and fill on the same site, the fee will be based on the volume of excavation or fill, whichever is greater.*

**Grading Plan Review Fees**

- Application Fee.....\$100.00
- 50 cubic yards or less.....\$110.00
- 51 to 100 cubic yards.....\$217.00
- 101 to 1,000 cubic yards \*SEPA Required after 350 yards.....\$359.00
- 1,001 to 10,000 cubic yards.....\$576.00
- 100,001 or more.....\$861.00 for the first 100,000 cubic yards plus \$50.00 for Additional 10,000 cubic yards or fraction thereof

**Other Fees**

Additional plan review required by changes, additions or revisions to approved plans \$69.00 per hour (Minimum Charge 1/2 hour)

Outside Consultant Review.....Actual costs plus ten percent (10%) administrative fee

**Grading Permit Fees**

*Grading Permit Fees - A fee for each grading permit shall be paid as set forth. Separate permits and fees shall apply to retaining walls or major drainage structures as required elsewhere in this code. There shall be no separate charge for standard terrace drains and similar facilities.*

- Application Fee.....\$100.00
- 50 cubic yards or less.....\$189.00
- 51 to 1,000 cubic yards.....\$300.00
- 1,001 to 10,000 cubic yards.....\$300.00 for the first 1,000 cubic yards plus \$50.00 for Each additional 1,000 cubic yards or fraction thereof
- 10,001 cubic yards or more.....\$730.00 for the first 10,000 cubic yards plus \$88.00 for Each additional 10,000 cubic yards or fraction thereof
- 1000,001 or more.....\$929.00 for the first 100,000 cubic yards plus \$35.00 for Each additional 10,000 cubic yards or fraction thereof

**Other Grading Inspections and Fees**

1. Inspections outside of normal business hours - per hour.....\$93.00 (Minimum Charge - one hour)
2. Re-Inspection Fees after 3<sup>rd</sup> visit - per hour.....\$62.00
3. Inspections for which no fee is specifically indicated - per hour.....\$62.00



# City of Sultan

WATER DEPARTMENT

319 Main St. #200 • P.O. Box 1199 • Sultan, WA 98294  
360.793.2231 City Hall • 360.793.3344 Fax

**TEST FORM DUE NO LATER THAN: May 15, 2010 at 5:00pm**

April 5, 2010

«Name»

«Company»

«Mailing\_Address»

«City» «State» «Zip»

RE: Backflow Device at «Physical\_Address»

In order to comply with the regulations set forth by Washington Administrative Code (WAC) 246-290-490 and/or outlined by City of Sultan Ordinance 13.14.070, your backflow prevention assembly is required to be tested annually by a certified and licensed tester.

Please have your backflow prevention device tested and have the results mailed or faxed to the City no later than **May 15, 2010 at 5:00pm**. If the City has not received your test results by the above date, a reminder letter will be sent. This letter along with all subsequent letters will be \$25.00 a piece which will be added to your utility bill.

Attached you will find a list of City of Sultan approved Certified Backflow Assembly Testers for your convenience and the Backflow Prevention Assembly Test Report. After the test report is filled out by the tester, please send a copy to the City at the address above or bring in the form and we will make a copy.

If you have any questions, feel free to contact me directly at 360.793.2590 or 425.508.9121.

Sincerely,

**BILL FERRY**  
Water Plant Operator

Cc: Connie Dunn, Public Works Director  
Carolyn Eslick, Mayor  
Deborah Knight, City Administrator



# City of Sultan

WATER DEPARTMENT  
319 Main St. #200  
P.O. Box 1199  
Sultan, WA 98294

## SECOND NOTICE

**TEST FORM DUE NO LATER THAN: July 2, 2010 at 5:00pm**

June 2, 2010

Name  
Address  
City

Dear Citizen:

A letter was mailed to you in April 2010 informing you that in order to comply with the regulations set forth by Washington Administrative Code (WAC) 248-54-283 and/or outlined by City of Sultan Ordinance 13.14.070, your backflow prevention assembly is required to be tested annually by a certified and licensed tester. This testing was to be completed by May 31, 2010 and as of the date of this letter, the City has not received your backflow test results.

This letter is serving as a **SECOND NOTICE/CALL** to have your backflow prevention device tested and per the City of Sultan Fee Schedule, a \$25.00 fee will be charged on your account. Please have the results sent to the City no later than **July 2, 2010 at 5:00pm**.

Attached you will find a list of City of Sultan approved Certified Backflow Assembly Testers for your convenience and the Backflow Prevention Assembly Test Report. After the test report is filled out by the tester, please do one of the following: a) send a copy to the City at the address above; b) bring in the form and we will make a copy; or c) fax to 360.793.3344.

If you have any questions, feel free to contact our Backflow Prevention Specialist, Bill Ferry at 360.793.2590 or 425.508.9121.

Sincerely,

CITY OF SULTAN WATER SYSTEM

Cc: Connie Dunn, Public Works Director  
Carolyn Eslick, Mayor  
Deborah Knight, City Administrator

ATTACHMENT E