



City of Longview

1525 Broadway
Longview, WA 98632
www.ci.longview.wa.us

Agenda

Public Works SubCommittee

Wednesday, September 16,
2026

3:00 PM

Training Room
2nd Floor, City Hall

1. **HYBRID MEETING DETAILS**

26-00822 To Join the Webinar: <https://us02web.zoom.us/j/85191031903>
Webinar ID: 851 9103 1903
Or Telephone: (253) 215 8782 or (253) 205 0468

2. **CALL TO ORDER**

3. **ROLL CALL**

4. **APPROVAL OF MINUTES**

26-00823 MINUTES FROM AUGUST 19, 2026

5. **NEW BUSINESS**

26-00824 CROSS CONNECTION MANUAL - DISCUSS DRAFT

6. **UNFINISHED BUSINESS**

7. **CURRENT PROJECT UPDATES**

8. **PUBLIC COMMENT**

9. **ADJOURNMENT**

Minutes

Public Works SubCommittee

Wednesday, August 19, 2026

3:00 PM

Training Room,
2nd Floor, City Hall

1. **HYBRID MEETING DETAILS**

26-00669 To Join the Webinar: <https://us02web.zoom.us/j/85191031903>
Webinar ID: 851 9103 1903
Or Telephone: (253) 215 8782 or (253) 205 0468

2. **CALL TO ORDER**

The meeting was called to order at 3:00 pm.

3. **ROLL CALL**

*Present: Councilmember Chris Bryant, Councilmember Mike Claxton, Councilmember Wayne Nichols, Assistant City Manager / PWD Chris Collins
Staff: Justin Brown, Park & Recreation Director; Sam Barham, City Engineer; Steve Hansen, Assistant Public Works Director; Aaron Hill, Finance Director; Tabitha Hayden, Contract Administrator; Nancy Vandehey, Admin*

4. **APPROVAL OF MINUTES**

26-00670 MINUTES FROM JULY 15, 2026

5. **NEW BUSINESS**

26-00671 MINT VALLEY TENNIS FACILITY CONDENSATION ISSUE

*Justin Brown and Chris Collins shared a history of the issue and changes to the facility up to today. Sam Barham added some details for the possible repair process. Consensus is to move this for Mike made a motion....
Wayne 2nd*

26-00679 TRANSPORTATION BENEFIT DISTRICT FUNDING OPTIONS

Chris Collins shared a history of the TBD within the City and possible paths forward. The existing funds and those incoming until 2028 will be focused on Columbia Heights.

Wayne Nichols made a motion, seconded by Chris Bryant, to move forward with Option D and at the next available election to repeal the \$20 car tab and then add 0.1% sales tax. This passed unanimously.

6. **UNFINISHED BUSINESS**

7. **CURRENT PROJECT UPDATES**

8. **PUBLIC COMMENT**

9. **ADJOURNMENT**

The meeting adjourned at 4:04 pm.

CROSS-CONNECTION CONTROL PROGRAM

Draft Manual + Longview Municipal Code 15.80

Protecting Longview's drinking water

City of Longview, Washington | 2026

Why cross-connection control matters

Cross-connection

A physical or potential connection through which contaminants could enter the potable water system.

Backflow

An unintended reversal of flow caused by backsiphonage or backpressure.

Public-health consequence

A single unprotected connection can expose customers beyond the originating property.

PROGRAM PURPOSE

Prevent contamination by eliminating cross-connections where feasible and requiring protection commensurate with the assessed hazard.

The manual implements the legal framework

1	Federal baseline	Safe Drinking Water Act and 40 CFR 141
2	State requirements	WAC 246-290-490 and operator certification rules
3	Local authority	LMC 15.80 establishes requirements and enforcement
4	Operating procedures	The manual documents the 10 minimum program elements

Premises isolation protects the system at the service boundary



The manual uses premises isolation as Longview's core control strategy

Clear roles make the program enforceable

City / water supplier

Protects the public system through the point of delivery; coordinates reviews, records, notices, and enforcement.

Cross-Connection Specialist

Assesses hazards, selects protection, inspects installations, reviews tests, investigates incidents, and directs corrective action.

Property owner / water user

Discloses hazards and pays to install, test, maintain, repair, and replace required protection.

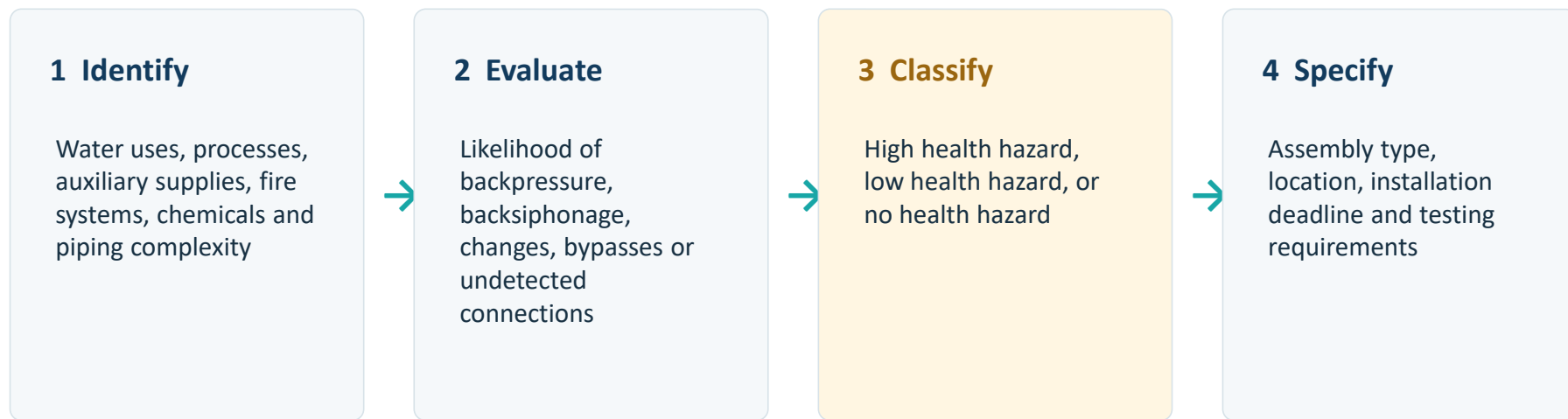
Backflow Assembly Tester

Washington-certified BAT tests and repairs assemblies and submits complete, accurate reports to the City and owner.

DOH / local authority

DOH regulates the public water system; local building and plumbing authority addresses in-premises cross-connections.

Risk assessment determines the required protection



If the degree of hazard is unknown, the City must assume the hazard is high

Protection increases with the degree of hazard

HIGH HEALTH HAZARD

RPBA / RPDA or air gap

- Commercial and industrial services
- Auxiliary or reclaimed-water supplies
- Chemical-injection irrigation or fire systems
- Car washes, salons/spas, pools, wastewater facilities
- Complex or inaccessible systems when required by the CCS

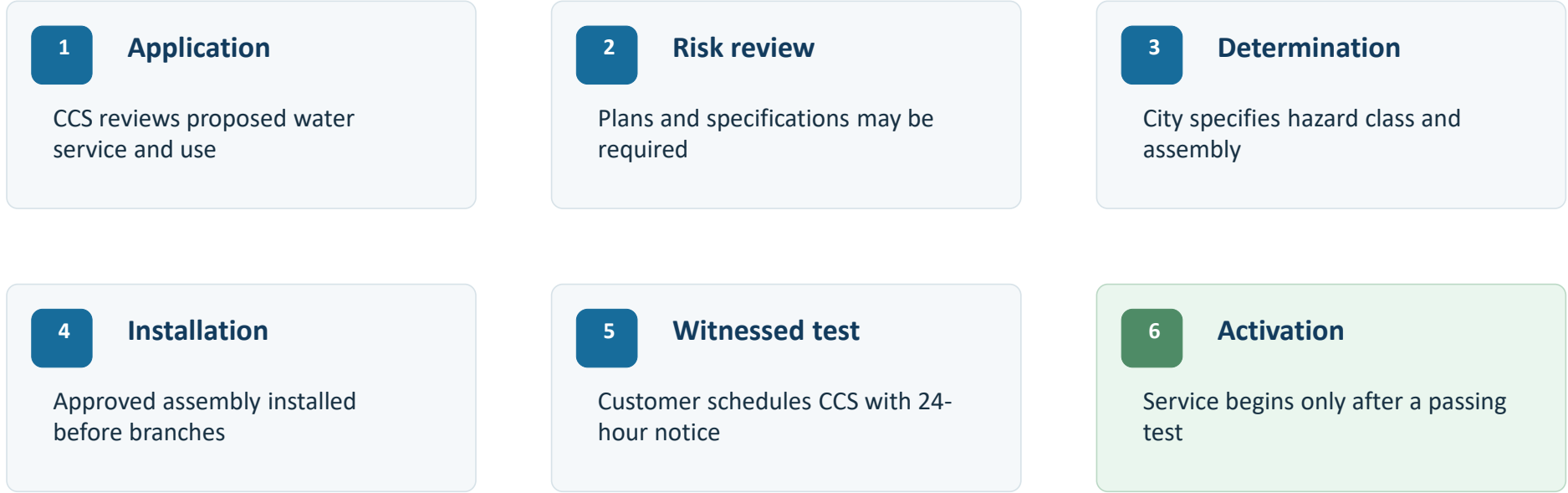
LOWER HAZARD / SYSTEM RISK

DCVA / DCDA

- Fire systems without chemical additives
- Irrigation without chemical additives
- Tall buildings or booster pumps when no higher hazard exists
- Multiple services in a common trench
- Multi-unit residential service: more than two units per meter

Final protection is determined by the City CCS based on the actual premises

New construction: protection before activation



Existing-premises compliance

Priority evaluation

High-hazard, commercial, industrial, fire-system, booster-pump, and 30-foot-plus premises are prioritized for CCS evaluation.

Written findings

The City documents cross-connections, evidence, requirements, and a corrective-action completion date.

Verification

The CCS reinspects on the completion date; service may be denied or discontinued if hazards remain uncontrolled.

Installation schedule in the draft manual

Existing high-hazard connections	Within 90 days
Fire service with chemical additives	Within 90 days
Existing low-hazard connections	Within 180 days
Fire service without chemical additives	Within 180 days

Installation standards preserve assembly performance

- Use an assembly on the current Washington State approved-products list
- Install downstream of the public connection and before any branch connection
- Do not install a maintenance bypass; use an equally protected parallel assembly when uninterrupted service is necessary
- Provide access, clearance, drainage, freeze protection, and protection from damage
- Install in the required orientation and location; above-ground installation is generally required for larger detector assemblies
- Coordinate initial inspection and witnessed testing with the City CCS

APPROVED
+
ACCESSIBLE
+
TESTABLE
+
MAINTAINABLE

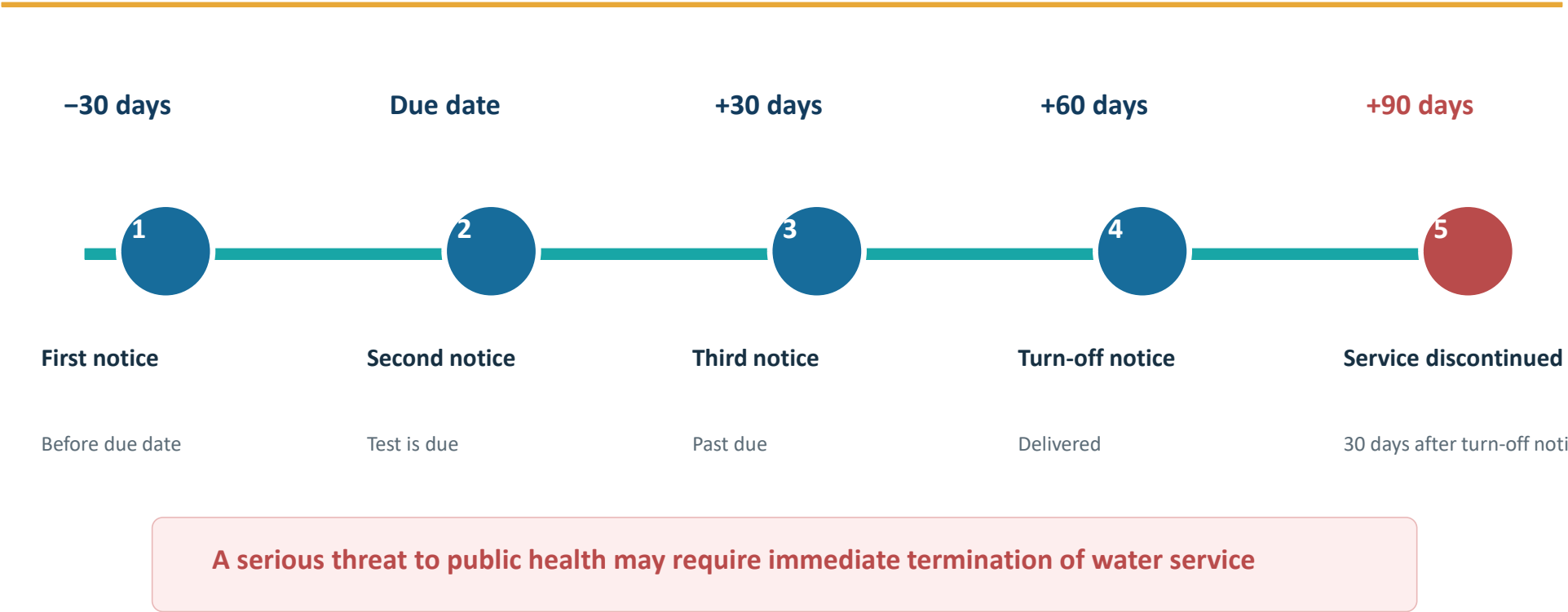
A correct device in the wrong location does not provide reliable premises isolation

Testing is required throughout the assembly life cycle

INSTALL At installation	ANNUAL At least annually	INCIDENT After a backflow event	CHANGE After repair, relocation, reinstallation, or air-gap replumbing
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Testing must be performed by a Washington-certified BAT; failed assemblies must be repaired or replaced and retested, with results submitted on the City form.

The compliance timeline provides repeated notice



Records, education, and special systems sustain compliance

Records and reports

Maintain customer correspondence, assessments, drawings/photos, test reports, enforcement records, and incident documentation; support DOH reporting.

Customer education

Use notices, surveys, direct outreach, website information, and technical guidance to explain hazards, responsibilities, and deadlines.

Reclaimed water

Require dedicated identification, separation, approved protection, inspections, testing, and coordination for premises served by potable and reclaimed water.

The program is more than an annual test list: it is an auditable system of risk identification, communication, verification, and follow-through.

Incident response and enforcement protect the public



ENFORCEMENT & COST RECOVERY

The City may refuse or discontinue service, complete corrective work and add installation/testing costs plus a 20% administrative fee, and recover losses caused by a violation.



CROSS-CONNECTION CONTROL MANUAL

Program Administration, Requirements, and Implementation 2026

This document contains the 10 minimum elements required under WAC 246-290-490 and provides the details supportive of City of Longview Municipal Code 15.80.

- 1 Purpose and Scope.**
- 2 Code Authority and Enforcement.**
- 3 Policy.**
- 4 References.**
- 5 Roles and Responsibilities.**
- 6 Minimum Requirements.**
- 7 Risk Assessment Surveys.**
- 8 New Construction.**
- 9 Existing buildings, structures, and grounds.**
- 10 Installations.**
- 11 Testing and Notifications.**
- 12 Records and Reports.**
- 13 Educating.**
- 14 Cost Recovery.**
- 15 Special requirements for reclaimed water.**
- 16 Backflow Incident Procedures.**
- 17 Definitions.**
- 18 Appendices.**

1 Purpose and Scope.

The purpose of the City of Longview cross-connection control program is to protect the public water system from contamination via cross-connections and backflow incidents. (Ord. 3533 § 1, 2024).

This Cross-Connection Control Procedures Manual, used in conjunction with Longview Municipal Code (LMC) 15.80 and state regulations WAC 246-290-490, outlines the framework for implementing cross-connection control requirements in the City of Longview. To be acceptable to the Washington State Department of Health (DOH), a cross-connection control program must include 10 minimum program elements listed in WAC 246-290-490(3). How the City of Longview meets those elements are described in this Manual.

The city of Longview relies on 'Premise Isolation' to administer the cross-connection program. The customer is responsible for installing the required premises isolation backflow assembly per city standard and installing backflow assemblies at fixtures within their establishment, per the 'Uniform Plumbing Code', to protect the potable water from contaminating other areas of the establishment. All pertinent departments within the City of Longview shall coordinate efforts in administering this policy.

The City of Longview Utilities Department will carry out the functions of the Cross Connection Control Program. The Utilities Department Manager will oversee the program administration and designate at least one employee to manage the implementation of the program and to carry out daily procedures. This designee will meet the requirements outlined for certification as a Cross-Connection Specialist (CCS). A joint effort will include communication between the CCS and other water operations staff, water system designers, engineers, finance, community development, and administrative staff.

2 Code Authority and Enforcement.

Enforcement of this cross-connection control program in the area served by the City water utility will be in accordance with this chapter and WAC [246-290-490](#), as amended. For water utility customers outside of Longview City limits, the provisions of this chapter shall be enforced as water utility policy, to the extent allowed by law. (Ord. 3533 § 1, 2024).

Service of the City water supply system to any premises upon which the potential for backflow exists, and/or a user has failed to complete backflow installation and/or testing requirements, shall be discontinued or refused unless such corrective action is taken. If at any time a serious threat to public health exists, water service will be terminated immediately.

Where approved backflow assembly preventers have been required for installation, the following schedules shall be used:

- | | |
|--|---------------------|
| • New construction | Prior to activation |
| • Existing high hazard connections | Within 90 days |
| • Existing fire service connections with chemical additives | Within 90 days |
| • Existing low hazard connections | Within 180 days |
| • Existing fire service connections without chemical additives | Within 180 days |

Backflow testing notification and compliance schedule:

- | | |
|------------------------------|--|
| • First Notification | Sent 30 days prior to test due date |
| • Second Notification | Sent at test due date |
| • Third Notification | Sent 30 days after the test due date |
| • Turn Off Notification | Delivered 60 days after test due date |
| • Discontinuation of service | 30 days after Turn Off Notice is delivered |

3 Policy.

This policy shall provide for the permanent abatement or control of cross-connections to the potable water system of the City of Longview. Where it is infeasible to find, eliminate, or permanently control cross-connections to the water system, at all commercial

connections to the water system, at all industrial connections to the water system, and when it is mandated by WAC [246-290-490](#) or deemed necessary by a city CCS, there shall be installed at the city water service connection and prior to any branch connections an approved backflow preventer commensurate with the degree of hazard posed by the customer's water system upon the public water system. (Ord. 3533 § 1, 2024)

4 References.

- Environmental Protection Agency Safe Drinking Water Act
 - a. 40 CFR 141. National Primary Drinking Water Regulations
- Washington Administrative Code (WAC) 246-290. Group A Public Water Suppliers
 - a. WAC 246-290-415. Operations and Maintenance
 - b. WAC 246-290-490. Cross Connection Control
- WAC 246-292. Waterworks Operator Certification
- Washington State Department of Health (DOH)
 - a. Publication #331-234 - Guidance Document: Cross-Connection Control for Small Water Systems.
- American Water Works Association (AWWA) Standards Cross-Connection Control Manual, Accepted Procedure and Practice
- USC Foundation for Cross-Connection Control and Hydraulic Research
 - a. Manual of Cross-Connection Control
- Uniform Plumbing Code (UPC) Chapter 10
- Uniform Fire Code (UFC)
- Longview Municipal Code 15.80 (Ord. 3533 1, 2024)

5 Roles and Responsibilities

Implementing an effective cross-connection control program requires the full cooperation of water users, suppliers, and local health agencies. If the drinking

water system on a premise is found to be contaminated, the health agency and water supplier should be promptly notified and appropriate measures taken to eliminate contamination. The responsibilities of the various entities involved are outlined below.

(a) Health agency

The WA DOH oversees and regulates all planning, capital construction, maintenance, and monitoring of the Longview Water system as an approved drinking water supply. This includes ensuring that drinking water systems have and implement cross-connection control programs to protect the health of consumers using public drinking water supplies.

(b) Water Supplier

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 customer'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.

The purveyor shall coordinate with the local administrative authority in all matters concerning cross-connection control.

(c) Authority Having Jurisdiction

Under the provisions of this section, purveyors are not responsible for eliminating or controlling cross-connections within the customer's water system. Under Chapter 19.27 RCW, the responsibility for cross-connections within the customer's water system, i.e., within the property lines of the customer's premises, falls under the jurisdiction of the local administrative authority.

(d) Cross Connection Control Specialist (CCS)

A designated Cross-Connection Control Specialists (CCS) shall develop, implement, and maintain a cross-connection control program that meets WAC requirements. This person

will serve as Cross-Connection Program Manager, with support as needed from additional certified CCSto ensure at least one certified operator is on staff at all times. All permanent City of Longview Utilities Department Operators are required to have a CCS.

A CCS shall perform the following duties:

- Assess the degree of hazard to the public water system
- Determine appropriate backflow protection
- Inspect backflow prevention assemblies to verify adequate protection for the degree of hazard and proper installation
- Investigate and respond to backflow incidents
- Develop and maintain cross-connection control records
- Complete and sign cross-connection related reports
- Take corrective action when a consumer fails to comply with requirements regarding installation, inspection, field testing, maintenance, or repair of a backflow preventer
- Review inspection and test reports for backflow preventers

(e) Backflow Assembly Tester (BAT)

A BAT shall inspect, test, maintain, and repair backflow prevention devices and air gaps that protect the public water system and report the results to the Utilities Department CCS and the owner of the backflow preventer. This will be accomplished by conforming to the following:

- Record inspection and test results completely, accurately, and legibly
- Submit all results to the City of Longview on the City of Longview Field Test Report Form
- Submit instrument calibration records and current BAT certification card along with business license information to the City of Longview Utilities Department
- Any suspected fraudulent test reports will be rejected

(f) Water User

A water user refers to the customer. The water user has the primary responsibility to keep contaminants out of the potable water system. This

responsibility begins at the user connection and includes all water distribution piping on the premises. The water user has the responsibility of notifying the water supplier when a cross-connection exists.

(g) Property Owner

If an actual or potential cross-connection exists, the property owner shall have a backflow prevention assembly installed, tested, and maintained at their expense as directed by the water supplier.

6 Minimum Requirements

- (1) All backflow preventers used for cross-connection control to protect the city of Longview water system shall be identified on the current list of approved backflow

prevention assemblies developed by the Washington State Department of Health, Office of Drinking Water, as amended.

- (2) All backflow preventers used to protect the public water system from potential premises hazards shall be installed downstream of connections to the public water system and prior to any branch connections, as determined by the city CCS.
- (3) When a RPBA is required for premises isolation but cannot be installed at the water meter/connection due to limited space for installation or the potential of being damaged, the CCS may allow the combination approach to isolate the water service connection. In this configuration, a DCVA shall serve as premises isolation, and each in-premises fixture shall be properly isolated as recommended in the Cross-Connection Control Manual, Accepted Procedure and Practice published by the Pacific Northwest Section of the American Water Works Association (PNWS AWWA Manual) or as required by the CCS.
- (4) Maintenance bypasses around backflow preventers are not allowed. If uninterrupted service is required, a parallel backflow preventer equal to the primary preventer is required.
- (5) The following methods of cross-connection control are the minimum protection required at the water service connection at the property line to protect the public water system from potential hazards on the premises.

Note: The lists may not include all premises that require mandatory premises isolation. For water service connections with potential hazards not listed and for in-premises isolation recommendations, the Cross-Connection Control Manual, Accepted Procedure and Practice published by the Pacific Northwest Section of the American Water Works Association (PNWS AWWA Manual) may be used as a reference to determine the minimum protection required.

Mandatory Minimum RPBA or RPDA Premises Isolation

- (a) All commercial and industrial water service connections, including connections to residences utilized as a Home Occupation for a business.

- (b) All premises listed under WAC 246-290-490(4)(b)(i), (4)(b)(ii), (4)(b)(iii) and Table 13 shall require installation of an air gap or a reduced pressure backflow assembly.
- (c) Severe Health Cross-Connection Hazards. Properties identified as a “Severe Health Cross-Connection Hazard” (as identified in WAC 246-290-490 Table 13) shall install an RPBA in combination with an approved air gap as a premise isolation. This includes radioactive material processing facilities, nuclear reactors, and wastewater treatment plants.
- (d) All premises on which material that may be dangerous to health is stored, handled, or processed, and which, in the assessment of a city CCS, poses a potential high health cross-connection hazard to the public water system.
- (e) All premises where both reclaimed water and potable water are provided shall require installation of an air gap or a reduced pressure backflow assembly.
- (f) All premises where entry is restricted such that inspection for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to ensure that cross-connections do not exist, and the risk of cross-connection hazards is low, shall require an air gap or a reduced pressure backflow assembly.
- (g) All premises with a repeated history of cross-connections being established or re-established.
- (h) All premises with an auxiliary water supply on or available to the customer’s property. (e.g., wells, rainwater catchment system, reclaimed or reused water, greywater, stormwater harvesting) shall require installation of an air gap or a reduced pressure backflow assembly.
- (i) All premises that have internal cross-connections that are not correctable, or which have complex plumbing arrangements that make it impractical to ascertain.
- (j) All premises with heat-exchangers, boilers, or solar hot-water systems.
- (k) All premises with fire protection systems that contain chemical additives, including food-grade additives, shall require a reduced pressure detector assembly (RPDA).
- (l) All premises with car washes or vehicle detailing operations.
- (m) All premises with Salons and Spas
- (n) All agricultural premises (e.g., farm, dairy, greenhouse)
- (o) All premises with Swimming pools.
- (p) All premises with Irrigation systems that use chemical injection or addition.
- (q) All premises with piers and docks.
- (r) All premises with film-processing equipment.
- (s) All premises with wastewater lift stations (e.g., sewage wet well, septic pump, grinder pump)
- (t) All premises with designated RV water and sewer connections.

Mandatory Minimum DCVA or DCDA Premises Isolation

- (a) All fire systems without chemical additives, require a double check detector assembly (DCDA). DCDA installations larger than 2.5” shall be installed above ground unless an exception has been granted. DCDA’s may be installed on the fire

riser if the riser is within 40' of the connection to the main, prior to any branch line connections, and at the first penetration of the building.

- (b) All premises with irrigation systems with no chemical additives.
- (c) All premises where cross-connections are unavoidable or not correctable, such as but not limited to tall buildings (extending 30' above the main) or water booster pump systems, shall require a double check valve assembly unless other hazards on the premises require a higher level of backflow protection.
- (d) All premises where multiple water service lines are installed in a common trench to provide service to separate properties.
- (e) A residential development (e.g. apartment complex, condominium, mobile home park, triplex) having one or more metered connections serving more than two living units per meter require premise isolation unless other hazards on the premises require a higher level of backflow protection.

Recommended Protection at Fixtures & Equipment

Extract from Cross-Connection Control Manual, Accepted Procedure and Practice, Seventh Edition, November 2012, Pacific Northwest Section, American Water Works Association, Cross-Connection Control Committee.

Description of Fixture or Equipment, or use of Water	Assessed Health Hazard	Minimum Protection at Fixture
Air compressor	Low	DCVA
Air conditioning systems	High	RPBA
Air washers (remove particulates to control air pollution)	High	RPBA
Aquarium make-up water	High	AG, RPBA
Aspirators, medical/lab	High	RPBA
Aspirator, weedicide, herbicide, pesticide	High	RPBA
Aspirator, vault drain	High	RPBA
Autoclave	High	RPBA
Autopsy tables, embalming equipment	High	RPBA
Baptismal fountain	High	RPBA, AG, AVB
Bathtub, below rim filler	High	RPBA
Bedpan washer	High	RPBA
Beverage dispenser, post-mix using CO ₂	High	RPBA
Bidets	Low/High	AVB
Boiler feed lines	High	RPBA
Booster pumps	Low/High	DCVA, RPBA
Bottle washing equipment	High	RPBA, PVB, SVB
Box hydrant (hose connection installed flush with the ground)	Low/High	PVB, SVB, DCVA
Brine tank	Low	AG, DCVA
Can washing equipment	High	RPBA, PVB, SVB
Chemical feed tank for industrial process	High	AG, RPBA
Chemical feeder for commercial cleaners	High	AG, RPBA
Chlorinators	High	RPBA
Commercial coffee urns	Low	AG, AVB
Computer cooling lines	High	RPBA
Condensate tanks	High	RPBA
Commercial cooking kettles	Low	AG, AVB
Cooling towers	High	AG, RPBA
Decorative ponds	High	AG, RPBA
Degreasing equipment	High	RPBA
Dental equipment, cuspidors	High	RPBA
Dialysis equipment	High	RPBA
Dishwashers	Low	AVB
Dishwashers, commercial	High	AVB, RPBA, AG
Dishwashers, high-temp	High	AVB, AG
Drinking fountains	Low	AG
Dye vats and tanks	High	AG, RPBA

Espresso machines	High	AG, RPBA
Etching tanks	High	AG, RPBA
Fermenting tanks	High	AG, RPBA
Fertilizer injection	High	RPBA
Film processing equipment	High	RPBA
Fire department connection	Low/High	DCVA, RPBA
Fire sprinkler system without chemical addition	Low	DCVA, DCDA
Fire sprinkler system with chemical addition	High	RPBA, RPDA
Floor drains	High	AG
Fluoride tanks (water treatment plants)	High	RPBA
Flushing floor drains	High	AVB
Frost-free yard hydrant (stop-and-drain valve)	High	DCVA, RPBA
Fume hoods (lab)	High	AVB
Garbage can washers	High	RPBA
Heat exchangers other than listed double wall types with leak path	High	RPBA
Heat pumps	High	RPBA
Hot water heating boilers, commercial	High	RPBA
Hydrotherapy baths	High	RPBA
Ice makers	High	AG, RPBA
Industrial fluid or piping systems	High	RPBA
Inter-connected (looped) services	High	DCVA
Irrigation system with chemical addition	High	RPBA
Irrigation system without chemical addition	High	PVB, SVB, DCVA
Janitor sinks	High	AVB, HBVB
Kitchen equipment	High	AVB
Laboratory equipment	High	AVB, LFVB
Laundry machines, commercial	High	RPBA
Livestock drinking tanks	High	AG, AVB
Make-up tanks	High	AG, RPBA
Mobile carpet cleaners (if connected to water supply)	High	RPBA
Mobile home park	High	DCVA, RPBA
Pesticide applicator trucks	High	AG, RPBA
Photo developing sinks, tanks	High	RPBA
Pressure washers without chemical injection	Low	DCVA
Private fire hydrants	Low	DCVA
Pump prime lines	High	RPBA

Radiant floor heating, hydronic heaters	High	AG, RPBA
Radiator flushing equipment	High	AG, RPBA
Recreational vehicle dump station	High	AG
Sewer connected equipment	High	AG
Sewer flushing	High	AG
Spas	High	AG, RPBA
Steam generating equipment	High	RPBA
Sterilizers	High	RPBA
Stills	High	RPBA
Sumps	High	AG
Swimming pools	High	AG, RPBA
Trap primers	High	AG
Used, reclaimed or gray water systems	High	RPBA
Water softener/water treatment	High	RPBA
X-ray equipment	High	RPBA

References:

Hydrant Meters and Tanker Trucks

Hydrant meters equipped with a Reduced Pressure Backflow Assembly (RPBA) are available for rent through the City of Longview Utilities Department. All hydrant meters are installed and tested on-site by a Longview Utilities Operator certified as a Backflow Assembly Tester (BAT).

Tanker trucks are inspected for proper air gaps in accordance with the City's Hydrant Meter Policy. Tanker trucks may only be filled using a City of Longview hydrant meter equipped with an RPBA.

7 Risk assessment survey.

(1) A risk assessment survey for cross-connections and sanitary hazards requires a water use evaluation of new and existing buildings, structures, and grounds to determine the degree of potential health hazard risk to the public water system. While assessing the risk of contamination of the public water system, if the degree of hazard posed by a substance or process is unknown, the city must assume the hazard is high. **Almost all substances other than potable water under the city's control are considered to be a health hazard to some degree.**

(2) Factors to consider while determining the level of probability that a cross-connection may occur include:

(a) The probability increases that an existing cross-connection will go undetected as the complexity of a piping system increases.

(b) Piping changes will create new cross-connections or change the operating risk from back-siphonage to back-pressure conditions.

(c) A backflow preventer could be bypassed or removed from service.

(d) A material stored, handled, or processed could be changed or increased in strength.

(e) A material stored or handled may deteriorate, thus becoming a health hazard.

(f) A material, when combined with the chemicals in the potable water supply or when exposed to certain piping material, may react and form a compound that poses a health hazard, such as CO₂ mixing with water to form carbolic acid, an acid that leaches copper from service pipes.

(g) A material that, if it contains a bacteriological contaminant, could become a health hazard long after it enters the potable water supply, through bacteria regrowth. (Ord. 3533 § 1, 2024).

8 New Construction.

(1) Risk assessments for new construction shall be conducted as outlined below: Upon application for a water service connection, a city CCS shall review the application and determine the risk posed to the public water system by the customer's water system. A city CCS shall classify the water service connection as either a high health hazard cross-connection, a low health hazard cross-connection, or no health hazard cross-connection, and shall specify the need for and identify the type of backflow protection required (if applicable) for premises isolation backflow protection. All commercial and industrial water services connected to the public water supply require the installation of a reduced pressure backflow assembly. When deemed necessary, a city CCS shall request the city's engineering division or local administrative authority to provide detailed plans and specifications for the plumbing installation to facilitate risk assessment review of the water use at the property.

(2) A city CCS shall review all water system-related plans and specifications to:

- (a) Assess the actual or potential health hazard or contamination risk to the public water system.
- (b) Assess the complexity of any existing and/or proposed water piping system.
- (c) Assess the probability of cross-connections within a customer's water system.
- (d) Determine what cross-connections might constitute acceptable risks.
- (e) Determine the reliability required of any backflow prevention assembly utilized within a facility or mandated for premises isolation.
- (f) Assess the actual or potential use and/or availability of any unapproved auxiliary water supply systems.
- (g) Assess the storage and handling of material dangerous to health and toxic substances that, if introduced into the water system, would constitute a water system, plumbing, or health hazard.

(3) If it is determined that any of these conditions will exist, a City CCS shall advise the customer in writing that such cross-connections exist and may, as a courtesy, offer technical guidance in eliminating or controlling such cross-connections. If a city CCS determines that the customer's water system represents a potential health hazard risk to the city water system, such as, but not limited to, WAC [246-290-490\(4\)\(b\)](#) (Table 13) facilities and/or systems, a backflow preventer commensurate with the assessed degree of hazard shall be required for premises isolation at the water service connection, notwithstanding any point of hazard, point of use, or fixture protection existing or proposed within the property lines of the premises.

(4) Backflow preventers, when required, shall be installed and tested before the water service is activated. A city CCS shall advise the customer that it is the customer's responsibility to install the backflow preventer, and have it tested by a Washington State certified backflow assembly tester (BAT) prior to use of the water service, and that annual testing and documentation is required thereafter. A city CCS shall attend and witness the initial test of all backflow assemblies installed for premises protection. It is the responsibility of the customer to contact a city CCS and coordinate an appointment time for a city CCS to attend and witness the required test of a backflow assembly (24-hour advance notice is required). (Ord. 3533 § 1, 2024).

9 Existing buildings, structures, and grounds.

(1) A city CCS shall evaluate all high health hazard premises, all commercial and/or industrial premises, all premises with fire systems, all premises with water systems using booster pumps, and all premises with tall buildings (extending 30' above the main) to ensure premises isolation backflow protection has been provided at the water service connection. All commercial and industrial water services connected to the public water supply require the installation of a reduced pressure backflow assembly. Premises to be evaluated shall be selected in order from an established list prioritized by expected degree of health hazard and/or risk of contamination. Premises not on the established priority list that come to the attention of a City CCS, and upon evaluation are determined deficient in required premises isolation backflow protection, shall be brought into current compliance without regard to any established priority list. Residential properties will not be routinely inspected unless those properties come to the attention of a City CCS and are identified to pose a potential health hazard risk to the city water system. If a customer requires a building or connection permit, the status of their current backflow protection will be reviewed. If a significant change of use or tenant improvement occurs that changes the facilities' risk, premises isolation may be required, or the existing required premises isolation type may be changed.

(2) The initial evaluation of existing facilities shall proceed according to the following steps:

(a) A priority list shall be established using existing water service records, GIS, and other resources as beneficial.

(b) Beginning with the highest-rated health hazard on the program's priority list, a city CCS shall make a risk assessment evaluation of each property for actual or potential cross-connections and/or any conditions that might tend to contaminate the city water system.

(c) Upon completion of the risk assessment evaluation, a city CCS shall determine whether premises isolation backflow protection is required and shall determine the level of protection required commensurate with the assessed degree of hazard.

(d) The City CCS shall prepare a written report that includes, but is not limited to, the following:

(i) A list of all cross-connections found, their locations, and any optional methods of elimination or control.

(ii) Any applicable drawings, sketches, blueprints, or photos.

(iii) A summary of the findings, recommendations, and requirements for corrective actions.

(e) A city CCS shall notify the customer, in writing, of the city's requirement for premises isolation backflow protection. The letter shall include the requirements for corrective actions and a corrective action completion date.

(f) Corrective action by the customer must be completed within the specified timeframe in most cases. Where existing cross-connections pose an immediate threat to public health and the city's water system, a city CCS may require immediate corrective action and may terminate water service until required backflow prevention is installed and tested. For cross-connections that are complex and may require additional time to design and install, a city CCS may allow additional time to complete corrective action.

(3) On the specified corrective action completion date, a city CCS shall inspect the customer's facility to determine if the corrective actions have been completed. If the corrective actions have been completed, a city CCS shall inspect each required premises isolation backflow assembly located at the city water service connections to the property. If the corrective actions are in progress but more time is required for completion, a new completion date may be set by a city CCS. If corrective actions have been disregarded, the city shall take appropriate corrective action within its authority, up to and including denying or discontinuing water service to a customer's premises until the cross-connection hazard is eliminated or controlled to the satisfaction of the city.

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

(a) Denying or discontinuing water service to a customer's premises until the cross-connection hazard is eliminated or controlled to the satisfaction of a city CCS.

(b) Requiring the customer to install an approved backflow preventer for premises isolation commensurate with the degree of hazard.

(c) Contracting with a properly licensed and certified company or individual to install an approved backflow preventer for premises isolation commensurate with the degree of hazard. The cost of installation and testing, plus a 20 percent administrative fee, shall be added to the customer's water bill.

(5) Reinspection of premises isolation for each premises subject to corrective action may be performed annually, or more often if the degree of hazard indicates, or whenever there is a change in the use of the premises.

10 Installations.

- (1) A permit is required for the installation of all backflow assemblies. Permits may be obtained at the City of Longview Community Development counter for properties located inside of City limits or Cowlitz County Building and Planning for properties located outside of City limits.
- (2) When installed inside a building, backflow assemblies must be installed by a Licensed Plumber in full compliance with all relevant aspects of the Uniform Plumbing Code and approved for use in Washington State.
- (3) When installed outside of a building, backflow assemblies may be installed by a Licensed Contractor in full compliance with all relevant aspects of the Uniform Plumbing Code and approved for use in Washington State.
- (4) Backflow assembly installation shall be inspected and approved by the City of Longview CCS prior to testing.
- (5) Backflow assemblies shall be tested at the time of installation and annually thereafter.
- (6) Backflow Assemblies shall not be installed in a location subject to flooding.
- (7) Backflow assemblies shall be installed per the City of Longview Standards.
- (8) For installations where uninterrupted water service is necessary, a parallel assembly should be installed to facilitate testing and maintenance. The parallel assembly shall be of the same type.
- (9) Assemblies used in domestic service lines shall be lead-free.

11 Testing and Notifications.

It is the responsibility of the water user to ensure their backflow prevention assemblies are tested in accordance with their required schedule and to have any failed assemblies repaired or replaced immediately. Failure to test will result in enforcement action as described in code authority and enforcement.

- (1) The city shall ensure that inspections and/or tests of backflow prevention facilities are conducted:
 - (a) At the time of installation.
 - (b) Annually after installation, or more frequently if required by the city for connections serving premises or systems that pose a high health cross-connection hazard, for assemblies that repeatedly fail, or to allow the city to better comply with annual state reporting requirements.

- (c) After a backflow incident.
 - (d) After an assembly is repaired, reinstalled, or relocated, or an air gap is replumbed. (Ord. 3533 § 1, 2024).
- (2) Backflow testing notifications are generated through the City’s backflow software based on the test due date. Customers are sent up to three notification letters informing them that annual testing is due. Prior to the City initiating non-compliance procedures, a fourth notice will be delivered notifying the customer of the termination date. All notifications will be sent with a list of Washington State Certified Backflow Assembly Testers.
- (a) First letter sent 30 days prior to the test due date.
 - (b) Second letter sent on the test due date.
 - (c) Third letter sent 30 days after the test due date.
 - (d) Turn-off notifications are delivered to the property 60 days after the test due date.
 - (e) Service will be discontinued 30 days after the turn-off notification has been delivered.
- (3) Certified Backflow Assembly Testers (BAT)
- (a) Any Washington State DOH certified BAT may apply for inclusion on the City of Longview Tester List by submitting a copy of their current certification card, instrument calibration, and Longview business license.
 - (b) Test forms shall be submitted on the City of Longview Field Test report form.
 - (c) A BAT may be removed from the list at any time if they are suspected of fraudulent testing, or if valid customer complaints are received.

12 Records and Reports.

- (1) The City of Longview’s cross-connection control program files shall include separate files for each customer requiring the installation of a premises isolation backflow prevention assembly. A computer software database is utilized for compiling and extracting information required for tracking compliance as well as Department of Health annual reporting.
- (2) The following information shall be maintained in each individual file:
 - (a) Copies of all correspondence with customer relative to cross-connection control.
 - (b) Copies of evaluation reports, complete with field drawings (if applicable).
 - (c) Copies of all completed backflow assembly test report forms.
 - (d) Copies of all reports or correspondence pertaining to enforcement action, cross-connections, or backflow incidents. (Ord. 3533 § 1, 2024).
- (3) A city CCS shall make available to all local administrative authorities information maintained in the city cross-connection control program files, which may include, but is not limited to:
 - (a) A master list of all premises that have been isolated from the city water system in accordance with the city’s cross-connection control program.
 - (b) Information concerning any internal cross-connections that come to the attention of a city CCS during risk assessment evaluations of premises; and
 - (c) Notification of any termination of water service for failure to comply with the requirements of WAC [246-290-490](#) or the city’s cross-connection control program. (Ord. 3533 § 1, 2024).

13 Education.

The City of Longview will educate the public regarding cross-connection hazards by various means including but not limited to brochure distribution, City website information, Consumer Confidence Reports, displays at public functions, site inspections, questionnaires, pre-development meetings, pre-construction meetings and over-the-counter dialogue.

14 Cost Recovery.

Any customer violating any of the provisions of this program when said violation results in damage to or impairs the city's water system, including, but not limited to, allowing contamination, pollution, any other substances, or non-potable water to enter the city's water system, shall be liable to the city for all expenses, loss, or damages caused by such violation. Such costs may include, but are not limited to, cleaning, purifying, repairing, or replacement work in the city's water system caused by the violation. (Ord. 3533 § 1, 2024).

15 Special requirements for Reclaimed Water.

The degree of hazard for this type of service is a high health hazard. An RPBA will be required on the water service to properties where both potable and reclaimed water are present. Where potable water is being used for makeup water for reclaimed water uses, the potable water supply must be protected with an air gap system.

16 Backflow Incident Procedures

In the event of a cross-connection incident that contaminates the City of Longview's water supply or occurs within the premises of a consumer served by the city, the city will notify the Washington State Department of Health (DOH), the Cowlitz County Health Department, and the City's Water Department Manager as soon as possible, but no later than the end of the next business day.

The City's response includes an on-site inspection by a City of Longview Certified Cross-Connection Specialist (CCS) to determine the extent of the backflow event. Depending on the nature of the incident, actions may include collecting samples, flushing the water line, or shutting off water service to contain the contamination.

The distribution system will also be evaluated as a potential source of contamination. The city will not begin flushing the distribution system until the contamination source is identified, as flushing may worsen the backflow situation or remove the contaminant before samples can be collected for proper identification.

A site-to-site survey will be conducted to locate the contamination source and determine how far the contaminant has spread within the distribution system. Once the cross-connection responsible for the contamination is identified, water service to that customer will be discontinued until all corrective actions required by the city have been completed.

A plan of action will be developed and implemented to clean the contaminated distribution system, based on the specific contaminant(s) identified. Where both chemical and bacteriological contamination has occurred, disinfection will occur after the removal of the chemical contaminant.

Following the incident, the Department of Health Backflow Incident Report Form (DOH 331-457-F) will be completed and filed.

17 Definitions

Except where specifically designated herein, all words used in this chapter and the cross-connection control program shall carry their customary meanings. Words used in the present tense include the future, and plural includes the singular. The word "shall" is always mandatory; the word "may" denotes a use of discretion in making a decision. Any definition not found in this section will take its meaning from the Washington Administrative Code (WAC) (Chapter 246-290 WAC), as amended, or the most recent edition of the Manual of Cross-Connection Control published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

(1) "Airgap" means a physical separation between the free-flowing end of a potable water supply pipeline and the overflow rim of an open or non-pressurized receiving vessel. To qualify as an air gap approved by the city, the separation must be at least:

(a) Twice the diameter of the supply piping measured vertically from the overflow rim of the receiving vessel, and in no case be less than one inch, when unaffected by vertical surfaces (sidewalls); or

(b) Three times the diameter of the supply piping if the horizontal distance between the supply pipe and a vertical surface (sidewall) is less than or equal to three times the diameter of the supply pipe, or if the horizontal distance between the supply pipe and intersecting vertical surfaces (sidewalls) is less than or equal to four times the diameter of the supply pipe and in no case less than one and one-half inches.

(2) "Authorized agent" means any person who:

(a) Makes decisions regarding the operation and management of the public water system whether or not engaged in the physical operation of the system;

(b) Makes decisions whether to improve, expand, purchase, or sell the system; or

(c) Has discretion over the finances of the system or is designated by an authorized agent as described above.

(3) "Backflow" means the undesirable reversal of flow of water or other substances through a cross-connection into the public water system or customer's potable water system.

(4) "Backflow assembly tester" means a person holding a valid backflow assembly tester (BAT) certificate issued in accordance with WAC 246-292-490.

(5) "Backflow preventer" means an air gap, backflow prevention assembly, or atmospheric vacuum breaker.

(6) "Backflow prevention assembly" means a device, combination of devices, or equipment of make, model, and size that is approved by the city for use to prevent backflow to the city's public water system. Backflow prevention assemblies include, but may not be limited to:

RPBA- Reduced pressure backflow assembly

RPDA - Reduced pressure detector assembly

DCVA- Double check valve assembly

DCDA- Double check detector assembly

PVBA- Pressure vacuum breaker assembly

SVBA- Spill-resistant vacuum breaker assembly

AVB - Atmospheric vacuum breaker.

(7) "Back-pressure" means pressure caused by a pump, elevated tank or piping, boiler, or other means on the customer's side of the service connection that is greater than the pressure provided by the public water system, and which may cause backflow.

(8) "Back-siphonage" means backflow due to a reduction in system pressure in the city's distribution system and/or customer's water system.

(9) "Combination fire protection system" means a fire sprinkler system that:

(a) is supplied only by the city's water system; and

(b) Does not have a fire department pumper connection; and

(c) Is constructed of approved potable water piping and materials that serve both the fire sprinkler system and the customer's potable water system.

(10) "Customer" means any person receiving water from a public water system from either the meter, or the point where the service line connects with the distribution system, if no meter is present. For purposes of cross-connection control, "customer" means the owner or operator of a water system connected to a public water system through a service connection.

(11) "Customer's water system," as stated in WAC 246-290-490, means any potable and/or industrial water system that begins at the public water system point of delivery; that is, at the immediate downstream side of the water meter or connection, and is located on the

customer's premises. The customer's water system includes all auxiliary sources of supply, storage, treatment, and distribution facilities, piping, plumbing, and fixtures under the control of the customer.

(12) "Contaminant" means a substance present in drinking water that may adversely affect the health of the customer or the aesthetic qualities of the water.

(13) "Cross-connection" means any actual or potential physical connection between the public water system or the customer's water system and any source of non-potable liquid, solid, or gas that could contaminate the potable water supply by backflow.

(14) "Cross-connection control program" means the administrative and technical procedures the city implements to protect the public water system from contamination via cross-connections, as required in WAC 246-290-490.

(15) "Cross-connection control specialist (CCS)" means a person holding a valid Washington State cross-connection control specialist certificate issued in accordance with Chapter 246-292 WAC.

(16) "Cross-connection control summary report" means the annual report required by the Washington State Department of Health, Office of Drinking Water, that describes the status of the city's cross-connection control program.

(17) "Department" means the Washington State Department of Health, Office of Drinking Water, or health officer as identified in a joint plan of operation in accordance with WAC 246-290-030.

(18) "Direct service connection" means a service hookup to a property that is contiguous to a water distribution main and where additional mains or extensions are not needed to provide service.

(19) "Distribution system" means all piping components of a public water system that serve to convey water from transmission mains linked to source, storage and treatment facilities to the customer, excluding individual services.

(20) "City" means the city of Longview or the city of Longview water utility.

(21) "Flow-through fire protection system" means a fire sprinkler system that: (a) Is supplied only by the city's water; and

(b) Does not have a fire department pumper connection; and

(c) Is constructed of approved potable water piping and materials to which sprinkler heads are attached; and

(d) Terminates at a connection to a toilet or other plumbing fixture that provides regular use to prevent the water from becoming stagnant.

(22) "Health hazard" means any condition, device, or practice in a water supply system and/or its operation that creates or may create a danger to the health and well-being of a customer.

(23) "Health officer" means the health officer of the Cowlitz County health department, or an authorized representative.

(24) "High health cross-connection hazard" means a cross-connection that could impair the quality of potable water and create an actual public health hazard through poisoning or spread of disease by sewage, industrial liquids or waste.

(25) "In-premises protection" means a method of protecting the health of customers served by the customer's potable water system, located within the property lines of the customer's premises by the installation of an approved air gap or backflow prevention assembly at the point of hazard, which is generally a plumbing fixture.

(26) "Local administrative authority" means the local official, board, department, or agency authorized to administer and enforce the provisions of the Uniform Plumbing Code as adopted under Chapter 19.27 RCW (WAC 51-46-0603).

(27) "Low health cross-connection hazard" means a cross-connection that could cause an impairment of the quality of potable water to a degree that does not create a hazard to the public health but does adversely and unreasonably affect the aesthetic qualities of such potable water for domestic use.

(28) "Potable" means water suitable for drinking by the public and meeting the requirements of the Safe Drinking Water Act and state of Washington Department of Health.

(29) "Premises isolation" means a method of protecting a public water system by installation of approved air gaps or approved backflow prevention assemblies at or near the service connection or alternative location acceptable to the city to isolate the customer's water system from the city's public water system.

(30) "Plumbing hazard" means a cross-connection in a customer's potable water system that may permit back-siphonage in the event of a negative pressure in the supply line.

(31) "Public water system" means as defined and referenced under WAC 246-290-020.

(32) "Purchased source" means water a purveyor purchases from a public water system not under the control of the city for distribution to the city's customers.

(33) "Purveyor" means an agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, person, or other entity owning or operating a public water system. "Purveyor" also means the authorized agents of such entities.

(34) "Regional public water supplier" means a water system that provides drinking water to one or more public water systems.

(35) "Resident" means an individual living in a dwelling unit served by a public water system.

(36) "Service connection" means a connection to a public water system designed to provide potable water to a single-family residence, or other residential or nonresidential population.

(37) "System hazard" means a threat to the physical properties of the public or the customer's potable water system by a material not dangerous to health but aesthetically objectionable that would have a degrading effect on the quality of the potable water in the system.

(38) "Unapproved auxiliary water supply" means a water supply (other than the city's water supply) on or available to the customer's premises that is either not approved for human consumption by the health agency having jurisdiction or is not otherwise acceptable to the city.

(39) "Used water" means water that has left the control of the city, typically through a service connection meter or use from a city hydrant. (Ord. 3208 § 1, 2012).

17 Appendices

1. WAC 246-190-490 Cross-Connection Control
2. Cross-Connection Control Rules and Definitions (331-355)
3. WAC 246-290-010 Definitions, Abbreviations, and Acronyms
4. WAC 246-292-033 Duties of a CCS
5. WAC 246-292-034 Duties of a BAT
6. WAC 246-292-036 Backflow Preventer inspection and field test report content
7. WAC 51-56-0600 Washington Amendments to UPC
8. DOH Backflow Incident Form (331-457-F)
9. Backflow Assembly Testing (and Installation) Requirements (331-680)
10. Residential Survey Letter
11. Non-Residential Survey Letter
12. Water Use Checklist
13. Hazard Assessment Report Form
14. Survey- Correction Required Letter
15. Survey- No Action Required Letter
16. Standard Drawings for Backflow Assembly Installation
17. Backflow Preventer Inspection and Field Test Report Form
18. Final Notice for Hazard Assessment Letter
19. Backflow Preventer Testing Notices
20. Fire Hydrant Use Permit