

**WSR 20-02-072**  
**PERMANENT RULES**  
**BUILDING CODE COUNCIL**  
[Filed December 26, 2019, 1:21 p.m., effective July 1, 2020]

Effective Date of Rule: July 1, 2020.

Purpose: The purpose of this permanent rule making is to amend the 2018 Uniform Plumbing Code, as directed by the state building code council on November 8, 2019. The implementation date is July 1, 2020.

## Summary of WA Amendments

### **WAC 51-56-0200 Chapter 2—Definitions.**

**205.0 Certified Backflow Assembly Tester** - A person certified by the Washington state department of health under chapter 246-292 WAC to inspect (for correct installation and approval status) and test (for proper operation), maintain and repair (in compliance with chapter [18.106](#) RCW) backflow prevention assemblies, devices and air gaps.

**210.0 Hot Water** - Water at a temperature exceeding or equal to 100°F.

**211.0 Insanitary** - A condition that is contrary to sanitary principles or is injurious to health.

Conditions to which "insanitary" shall apply include the following:

- (1) A trap that does not maintain a proper trap seal.
- (2) An opening in a drainage system, except where lawful, that is not provided with an approved liquid-sealed trap.
- (3) A plumbing fixture or other waste discharging receptor or device that is not supplied with water sufficient to flush and maintain the fixture or receptor in a clean condition, except as otherwise provided in this code.
- (4) A defective fixture, trap, pipe, or fitting.
- (5) A trap, except where in this code exempted, directly connected to a drainage system, the seal of which is not protected against siphonage and backpressure by a vent pipe.
- (6) A connection, cross-connection, construction, or condition, temporary or permanent, that would permit or make possible by any means whatsoever for an unapproved foreign matter to enter a water distribution system used for domestic purposes.
- (7) The foregoing enumeration of conditions to which the term "insanitary" shall apply, shall not preclude the application of that term to conditions that are, in fact, insanitary.

**218.0 Plumbing System** - Includes all potable water, building supply and distribution pipes, all reclaimed or other alternate source water systems, all rainwater systems, all plumbing fixtures and traps, all drainage and vent pipe(s), and all building drains including their respective joints and connection, devices, receptors, and appurtenances within the property lines of the premises and shall include potable water piping, potable water treating or using equipment, medical gas and medical vacuum systems, and water heaters: Provided, That no certification shall be required for the installation of a plumbing system within the property lines and outside a building.

**221.0 Spray Sprinkler Body** - The exterior case or shell of a sprinkler incorporating a means of connection to the piping system designed to convey water to a nozzle or orifice.

**225.0 Water Heater (consumer electric storage)** - A consumer product that uses electricity as the energy source to heat domestic potable water, has a nameplate input rating of twelve kilowatts or less, contains nominally forty gallons but no more than one hundred twenty gallons of rated hot water storage volume, and supplies a maximum hot water delivery temperature less than one hundred eighty degrees Fahrenheit.

**Water Heater (mini-tank electric)** - A small electric water heater that has a measured storage volume of more than one gallon and a rated storage volume of less than twenty gallons.

**Water/Wastewater Utility** - A public or private entity, including a water purveyor as defined in chapter 246-290 WAC, which may treat, deliver, or do both functions to reclaimed (recycled) water, potable water, or both to wholesale or retail customers.

#### **WAC 51-56-0400 Chapter 4—Plumbing fixtures and fixture fittings.**

**402.5 Setting.** Fixtures shall be set level and in proper alignment with reference to adjacent walls. No water closet or bidet shall be set closer than fifteen (15) inches (381 mm) from its center to any side wall or obstruction nor closer than thirty (30) inches (762 mm) center to center to any similar fixture. The clear space in front of any water closet or bidet shall be not less than twenty-four (24) inches (610 mm). No urinal shall be set closer than twelve (12) inches (305 mm) from its center to any side wall or partition nor closer than twenty-four (24) inches (610 mm) center to center.

EXCEPTIONS: 1. The clear space in front of a water closet, lavatory or bidet in dwelling units and sleeping units shall be not less than 21 inches (533 mm).  
2. The installation of paper dispensers or accessibility grab bars shall not be considered obstructions.

**405.4 Application.** No individual, public or private corporation, firm, political subdivision, government agency, or other legal entity, may, for purposes of use in the state of Washington, distribute, sell, offer for sale, import, install, or approve for installation any plumbing fixtures or fittings unless the fixtures or fittings meet the standards as provided for in this chapter.

**407.2 Water Consumption.** The maximum water use allowed in gallons per minute (gpm) or liters per minute (lpm) for any of the following faucets and replacement aerators is the following:

|   |  |
|---|--|
| Lavatory faucets                            | <del>((2.5))</del> <u>2.2</u> gpm/9.5<br>lpm |
| Kitchen faucets                             | <del>((2.5))</del> <u>2.2</u> gpm/9.5<br>lpm |
| Replacement aerators                        | <del>((2.5))</del> <u>2.2</u> gpm/9.5<br>lpm |
| Public lavatory faucets other than metering | 0.5 gpm/1.9 lpm                              |

**407.4 Metering Valves.** Lavatory faucets located in restrooms intended for use by the general public shall be equipped with a metering valve designed to close by spring or water pressure when left unattended (self-closing).

- EXCEPTIONS:
1. Where designed and installed for use by persons with a disability.
  2. Where installed in day care centers, for use primarily by children under 6 years of age.

**408.2 Water Consumption.** Showerheads shall have a maximum flow rate of not more than 2.5 gpm at 80 psi (9.5 L/m at 552 kPa), in accordance with ASME A112.18.1/CSA B125.1.

EXCEPTION: Emergency use showers shall be exempt from the maximum water usage rates.

**408.4 Waste Outlet.** Showers shall have a waste outlet and fixture tailpiece not less than two (2) inches (50 mm) in diameter. Fixture tailpieces shall be constructed from the materials specified in Section 701.1 for drainage piping. Strainers serving shower drains shall have a waterway at least equivalent to the area of the tailpiece.

EXCEPTION: In a residential dwelling unit where a 2 inch waste is not readily available and approval of the AHJ has been granted, the waste outlet, fixture tailpiece, trap and trap arm may be 1-1/2 inch when an existing tub is being replaced by a shower sized per Section 408.6(2). This exception only applies where one shower head rated at 2.5 gpm is installed.

**408.6 Shower Compartments.** Shower compartments, regardless of shape, shall have a minimum finished interior of nine hundred (900) square inches (0.58 m<sup>2</sup>) and shall also be capable of encompassing a thirty (30) inch (762 mm) circle. The minimum required area and dimensions shall be measured at a height equal to the top of the threshold and at a point tangent to its centerline. The area and dimensions shall be maintained to a point of not less than seventy (70) inches (1,778 mm) above the shower drain outlet with no protrusions other than the fixture valve or valves, shower

head, soap dishes, shelves, and safety grab bars or rails. Fold-down seats in accessible shower stalls shall be permitted to protrude into the thirty (30) inch (762 mm) circle.

EXCEPTIONS: 1. Showers that are designed to comply with ICC/ANSI A117.1.

2. The minimum required area and dimension shall not apply for a shower receptor having overall dimensions of not less than thirty (30) inches (762 mm) in width and sixty (60) inches (1,524 mm) in length.

**411.2 Water Consumption.** Water closets shall have a maximum consumption not to exceed 1.6 gallons (6.0 L) of water per flush in accordance with ASME A112.19.2/CSA B45.1. No water closet that operates on a continuous flow or continuous flush basis shall be permitted.

EXCEPTIONS: 1. Water closets located in day care centers, intended for use by young children may have a maximum water use of 3.5 gallons per flush or 13.25 liters per flush.

2. Water closets with bed pan washers may have a maximum water use of 3.5 gallons per flush or 13.25 liters per flush.

3. Blow out bowls, as defined in ANSI/ASME A112.19.2M, Section 5.1.2.3 may have a maximum water use of 3.5 gallons per flush or 13.25 liters per flush.

**412.1 Application.** Urinals shall comply with ASME A112.19.2/CSA B45.1, ASME A112.19.19, or CSA B45.5/IAPMO Z124. Urinals shall have an average water consumption not to exceed 1 gallon (3.8 L) of water per flush. No urinal that operates on a continuous flow or continuous flush basis shall be permitted.

**414.3 Drainage Connection.** Domestic dishwashing machines shall discharge indirectly through an air gap fitting in accordance with Section ~~((807.4))~~807.3 into a waste receptor, a wye branch fitting on the tailpiece of a kitchen sink, or dishwasher connection of a food waste disposer. Commercial dishwashing machines shall discharge indirectly through an air gap.

**415.2 Drinking Fountain Alternatives.** This section is not adopted. See Building Code chapter 29.

**418.3 Location of Floor Drains.** Floor drains shall be installed in the following areas:

1. Toilet rooms containing two (2) or more water closets or a combination of one (1) water closet and one (1) urinal, except in a dwelling unit. The floor shall slope toward the floor drains.

2. Laundry rooms in commercial buildings and common laundry facilities in multifamily dwelling buildings.

## **420.0 Sinks**

**420.1 Application.** Sinks shall comply with ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4, or CSA B45.5/IAPMO Z124. Moveable sink systems shall comply with ASME A112.19.12.

**420.2 Water Consumption.** Sink faucets shall have a maximum flow rate of not more than 2.2 gpm at 60 psi (8.3 L/m at 414 kPa) in accordance with ASME A112.18.1/CSA B125.1.

EXCEPTION: Clinical sinks, laundry trays, service sinks.

**422.0 Minimum Number of Required Fixtures.** For minimum number of plumbing fixtures required, see Building Code Chapter 29 and Table 2902.1.

Sections 422.1 through 422.5 and Table 422.1 are not adopted.

AMENDATORY SECTION(Amending WSR 17-10-074, filed 5/3/17, effective 6/3/17)

**WAC 51-56-0500Chapter 5—Water heaters.**

**501.1 Applicability.** The regulations of this chapter shall govern the construction, location, and installation of fuel burning and other types of water heaters heating potable water. The minimum capacity for water heaters shall be in accordance with the first hour rating listed in Table 501.1(2). See the Mechanical Code for combustion air and installation of all vents and their connectors. No water heater shall be hereinafter installed that does not comply with the manufacturer's installation instructions and the type and model of each size thereof approved by the authority having jurisdiction. A list of accepted water heater appliance standards is referenced in Table 501(2). Listed appliances shall be installed in accordance with the manufacturer's installation instructions. Unlisted water heaters shall be permitted in accordance with Section 504.3.2.

TABLE 501.1(2)1,3

| Number of Bathrooms                      | 1 to 1.5                |                         |                         | 2 to 2.5                |                         |                         |                         | 3 to 3.5                |                         |                         |                         |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|  | 1                       | 2                       | 3                       | 2                       | 3                       | 4                       | 5                       | 3                       | 4                       | 5                       | 6                       |
| Number of Bedrooms                       |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| First Hour Rating <sup>2</sup> , Gallons | <del>((42))</del><br>38 | <del>((54))</del><br>49 | <del>((54))</del><br>49 | <del>((54))</del><br>49 | <del>((67))</del><br>62 | <del>((67))</del><br>62 | <del>((80))</del><br>74 | <del>((67))</del><br>62 | <del>((80))</del><br>74 | <del>((80))</del><br>74 | <del>((80))</del><br>74 |

Notes:

<sup>1</sup>The first hour rating is found on the "Energy Guide" label.

<sup>2</sup>Nonstorage and solar water heaters shall be sized to meet the appropriate first hour rating as shown in the table, and shall be capable of delivering hot water at the maximum system demand flow, as calculated in Section 610.0 or Appendix A, as applicable.

<sup>3</sup>For replacement water heaters, see Section ~~((401.4.1.1.1))~~102.4.

**504.1 Location.** Water heater installation in bedrooms and bathrooms shall comply with one of the following:

- (1) Fuel-burning water heaters may be installed in a closet located in the bedroom or bathroom provided the closet is equipped with a listed, gasketed door assembly and a listed self-closing device. The self-closing door assembly shall meet the requirements of Section 505.1.1. The door assembly shall be installed with a threshold and bottom door seal and shall meet the requirements of Section 505.1.2.

All combustion air for such installations shall be obtained from the outdoors in accordance with the International Mechanical Code. The closet shall be for the exclusive use of the water heater.

(2) Water heater shall be of the direct vent type.

**505.2 Safety Devices.** All storage-type water heaters deriving heat from fuels or types of energy other than gas, shall be provided with, in addition to the primary temperature controls, an over-temperature safety protection device constructed, listed, and installed in accordance with nationally recognized applicable standards for such devices and a combination temperature and pressure relief valve.

**506.0 Combustion Air.** For issues relating to combustion air, see the Mechanical Code.

Sections 506.1 through 506.9 are not adopted.

Sections 507.6 through 507.9 are not adopted.

**507.2 Seismic Provisions.** Water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion. Strappings shall be at points within the upper one-third and lower one-third of its vertical dimensions. At the lower point, a distance of not less than four (4) inches (102 mm) shall be maintained from the controls to the strapping.

**507.13 Installation in Garages.** Appliances in garages and in adjacent spaces that open to the garage and are not part of the living space of a dwelling unit shall be installed so that burners, burner-ignition devices and ignition sources are located not less than eighteen (18) inches above the floor unless listed as flammable vapor ignition resistant.

**507.16 Venting of Flue Gases - Delete entire section.**

Sections 507.18 through 507.22 are not adopted.

**509.0 Venting of Equipment.** Delete entire section.

**510.0 Sizing of Category I Venting Systems.** Delete entire section.

**511.0 Direct Vent Equipment.** Delete entire section.

AMENDATORY SECTION(Amending WSR 17-10-074, filed 5/3/17, effective 6/3/17)

## **WAC 51-56-0600 Chapter 6—Water supply and distribution.**

**601.1 Applicability.** This chapter shall govern the materials, design and installation of *water supply systems*, including backflow prevention devices, assemblies and methods used for backflow prevention.

**603.1 General.** Cross-connection control shall be provided in accordance with the provisions of this chapter. Devices or assemblies for protection of the public water system must be models approved by the department of health under WAC 246-290-490. The authority having jurisdiction shall coordinate with the local water purveyor where applicable in all matters concerning cross-connection control within the property lines of the premises.

No person shall install any water operated equipment or mechanism, or use any water treating chemical or substance, if it is found that such equipment, mechanism, chemical or substance may cause pollution or contamination of the domestic water supply. Such equipment or mechanism may be permitted only when equipped with an approved backflow prevention device or assembly.

**603.2 Approval of Devices or Assemblies.** Before any device or assembly is installed for the prevention of backflow, it shall have first been approved by the authority having jurisdiction. Devices or assemblies shall be tested for conformity with recognized standards or other standards acceptable to the authority having jurisdiction. Backflow prevention devices and assemblies shall comply with Table 603.2, except for specific applications and provisions as stated in Section 603.5.1 through 603.5.21.

All devices or assemblies installed in a potable water supply system for protection against backflow shall be maintained in good working condition by the person or persons having control of such devices or assemblies. Such devices or assemblies shall be tested in accordance with Section 603.4.2 and WAC 246-290-490. If found to be defective or inoperative, the device or assembly shall be replaced or repaired. No device or assembly shall be removed from use or relocated or other device or assembly substituted, without the approval of the authority having jurisdiction.

Testing shall be performed by a Washington state department of health certified backflow assembly tester.

**TABLE 603.2**  
**Backflow Prevention Devices, Assemblies and Methods**  
**The following line is deleted from the table:**

| Device, Assembly or Method  | Applicable Standards | Pollution (Low Hazard) |               | Contamination (High Hazard) |               | Installation  |
|---|----------------------|------------------------|---------------|-----------------------------|---------------|---|
|   |                      | Back Siphonage         | Back Pressure | Back Siphonage              | Back Pressure |   |
| Backflow preventer for carbonated beverage dispensers (two independent check valves with a vent to the atmosphere.) | ASSE 1022            | X                      |               |                             |               | Installation includes carbonated beverage machines or dispensers. These devices operate under intermittent or continuous pressure conditions. |

**603.4.2 Testing.** For devices and assemblies other than those regulated by the Washington department of health in conjunction with the local water purveyor for the protection of public water systems, the authority having jurisdiction shall ensure that the premise owner or responsible person shall have the backflow prevention assembly tested by a Washington state department of health certified backflow assembly tester:

- (1) At the time of installation, repair or relocation; and
- (2) At least on an annual schedule thereafter, unless more frequent testing is required by the authority having jurisdiction.

**603.4.9 Prohibited Location.** Backflow prevention devices with atmospheric vents or ports shall not be installed in pits, underground or in submerged locations. Backflow preventers shall not be located in any area containing fumes or aerosols that are toxic, poisonous, infectious, or corrosive.

**603.5.6 Protection from Lawn Sprinklers and Irrigation Systems.** Potable water supplies to systems having no pumps or connections for pumping equipment, and no chemical injection or provisions for chemical injection, shall be protected from backflow by one of the following:

- (1) Atmospheric vacuum breaker (AVB).
- (2) Pressure vacuum breaker backflow prevention assembly (PVB).
- (3) Spill-resistant pressure vacuum breaker (SVB).
- (4) Reduced pressure principle backflow prevention assembly (RP).
- (5) A double check valve backflow prevention assembly (DC) may be allowed when approved by the water purveyor and the authority having jurisdiction.

**603.5.10 Steam or Hot Water Boilers.** Potable water connections to steam or hot water boilers shall be protected by an air gap or a reduced pressure principle backflow preventer.

**603.5.12 Beverage Dispensers.** Potable water supply to carbonators shall be protected by a listed reduced pressure principle backflow preventer as approved by the



authority having jurisdiction for the specific use. The backflow preventer (~~((shall be located in accordance))~~) shall comply with Section 603.4.3. The piping downstream of the backflow preventer shall not be of copper, copper alloy, or other material that is affected by carbon dioxide.

**603.5.14 Protection from Fire Systems.** Except as provided under Sections 603.5.14.1 and 603.5.14.2, potable water supplies to fire protection systems that are normally under pressure, including but not limited to standpipes and automatic sprinkler systems, except in one or two family or townhouse residential flow-through or combination sprinkler systems piped in materials approved for potable water distribution systems, shall be protected from back-pressure and back-siphonage by one of the following testable assemblies:

1. Double check valve backflow prevention assembly (DC).
2. Double check detector fire protection backflow prevention assembly.
3. Reduced pressure principle backflow prevention assembly (RP).
4. Reduced pressure detector fire protection backflow prevention assembly.

Potable water supplies to fire protection systems that are not normally under pressure shall be protected from backflow and shall meet the requirements of the appropriate standard(s) referenced in Table 1401.1.

**604.14 Plastic Pipe Termination.** Plastic water service piping may terminate within a building, provided the connection to the potable water distribution system shall be made as near as is practical to the point of entry and shall be accessible. Barbed insert fittings with hose clamps are prohibited as a transition fitting within the building.

**606.5 Control Valve.** A control valve shall be installed immediately ahead of each water-supplied appliance and immediately ahead of each slip joint or appliance supply.

Parallel water distribution systems shall provide a control valve either immediately ahead of each fixture being supplied or installed at the manifold, and shall be identified with the fixture being supplied. Where parallel water distribution system manifolds are located in attics, crawl spaces, or other locations not accessible, a separate shutoff valve shall be required immediately ahead of each individual fixture or appliance served.

**608.3 Expansion Tanks, and Combination Temperature and Pressure-Relief Valves.** A water system provided with a check valve, backflow preventer, or other normally closed device that prevents dissipation of building pressure back into the water main, independent of the type of water used, shall be provided with an approved, listed, and adequately sized expansion tank or other approved device having a similar function to control thermal expansion. Such expansion tank or other

approved device shall be installed on the building side of the check valve, backflow preventer, or other device and shall be sized and installed in accordance with the manufacturer's installation instructions.

EXCEPTION: Instantaneous hot water systems installed in accordance with the manufacturer's installation instructions.

~~((608.3.1 A water system containing storage water heating equipment shall be provided with an approved, listed, adequately sized combination temperature and pressure relief valve, except for listed nonstorage instantaneous heater having an inside diameter of not more than three (3) inches (80 mm). Each such approved combination temperature and pressure relief valve shall be installed on the water-heating device in an approved location based on its listing requirements and the manufacturer's installation instructions. Each such combination temperature and pressure relief valve shall be provided with a drain in accordance with Section 608.5.))~~

**608.5 Discharge Piping.** The discharge piping serving a temperature relief valve, pressure relief valve or combination of both shall have no valves, obstructions or means of isolation and be provided with the following:

(1) Equal to the size of the valve outlet and shall discharge full size to the flood level of the area receiving the discharge and pointing down.

(2) Materials shall be rated at not less than the operating temperature of the system and approved for such use or shall comply with ASME A112.4.1.

(3) Discharge pipe shall discharge independently by gravity through an air gap into the drainage system or outside of the building with the end of the pipe not exceeding 2 feet (610 mm) and not less than 6 inches (152 mm) above the ground pointing downwards.

(4) Discharge in such a manner that does not cause personal injury or structural damage.

(5) No part of such discharge pipe shall be trapped or subject to freezing.

(6) The terminal end of the pipe shall not be threaded.

(7) Discharge from a relief valve into a water heater pan shall be prohibited.

EXCEPTION: Where no drainage was provided, replacement water heating equipment shall only be required to provide a drain pointing downward from the relief valve to extend between two (2) feet (610 mm) and six (6) inches (152 mm) from the floor. No additional floor drain need be provided.

**609.9 Disinfection of Potable Water System.** New or repaired *potable water systems shall* be disinfected prior to use where required by the *authority having jurisdiction*. The method to be followed *shall* be that prescribed by the health authority or, in case no method is prescribed by it, the following:

(1) The *pipe system shall* be flushed with clean, *potable water until potable water* appears at the points of outlet.

(2) The system or parts thereof *shall* be filled with a water-chlorine solution containing not less than 50 parts per million of chlorine, and the system or part

thereof *shall* be valved-off and allowed to stand for twenty-four hours; or, the system or part thereof *shall* be filled with a water-chlorine solution containing not less than 200 parts per million of chlorine and allowed to stand for three hours.

(3) Following the allowed standing time, the system *shall* be flushed with clean, *potable water* until the chlorine residual in the water coming from the system does not exceed the chlorine residual in the flushing water.

(4) The procedure *shall* be repeated when a standard bacteriological test for drinking water, performed by a laboratory certified for drinking water in Washington state, shows unsatisfactory results indicating that *contamination* persists in the system.

**609.11 Insulation of Potable Water Piping.** Domestic water piping within commercial buildings shall be insulated in accordance with Section C403.2.8 and Table C403.2.8 or Section C404.6 of the Washington State Energy Code, as applicable.

**610.4 Sizing Water Supply and Distribution Systems.** Systems within the range of Table 610.4 may be sized from that table or by the method set forth in Section 610.5.

Listed parallel water distribution systems shall be installed in accordance with their listing.

**611.1 Application.** Drinking water treatment units shall comply with NSF 42 or NSF 53. Water softeners shall comply with NSF 44. Ultraviolet water treatment systems shall comply with NSF 55. Reverse osmosis drinking water treatment systems shall comply with NSF 58. Drinking water distillation systems shall comply with NSF 62.

The owner of a building that serves potable water to twenty-five or more people at least sixty or more days per year and that installs drinking water treatment units including, but not limited to, the treatment units in Section 611.1, may be regulated (as a Group A public water system) by the Washington state department of health under chapter 246-290 WAC. See Washington state department of health publication 331-488 for guidance.

**612.1 General.** Where residential fire sprinkler systems are installed, they shall be installed in accordance with the International Building Code or International Residential Code.

Sections 612.2 through 612.7.2 are not adopted.

AMENDATORY SECTION(Amending WSR 16-02-044, filed 12/30/15, effective 7/1/16)

## WAC 51-56-0900 Chapter 9 - Vents

~~((903.1 Applicable Standards. Vent pipe and fittings shall comply with the applicable standards referenced in Table 701.1, except that:~~

~~1. No galvanized steel or 304 stainless steel pipe shall be installed underground and shall be not less than 6 inches (152 mm) above ground.~~

~~2. ABS and PVC DWV piping installations shall be installed in accordance with applicable standards in Table 1401.1. Except for individual single family dwelling units, materials exposed within ducts or plenums shall have a maximum flame spread index of 25 and a maximum smoke developed index of 50, when tested in accordance with ASTM E 84 and UL 723.))~~

**908.2.4 Water Closet.** This section is not adopted.

**911.1 Circuit Vent Permitted.** A maximum of eight fixtures connected to a horizontal branch drain shall be permitted to be circuit vented. Each fixture drain shall connect horizontally to the horizontal branch being circuit vented. The horizontal branch drain shall be classified as a vent from the most downstream fixture drain connection to the most upstream fixture drain connection to the horizontal branch. Given its grease-producing potential, restaurant kitchen equipment shall not be connected to a circuit vented system.

AMENDATORY SECTION(Amending WSR 16-02-044, filed 12/30/15, effective 7/1/16)

## WAC 51-56-1500 Chapter 15 – Alternative water sources for nonpotable applications

~~((1501.1.1 Allowable use of Alternative Water. Where approved or required by the authority having jurisdiction, alternate water sources (reclaimed (recycled) water, gray water and on-site treated nonpotable water) shall be permitted to be used in lieu of potable water for the applications identified in this chapter. Reclaimed (recycled) water shall not be used to flush toilets or for other indoor use in any residential property or dwelling unit where residents have access to plumbing systems for repairs or modifications.~~

**1501.2 System Design.** ~~Alternate water source systems shall be designed in accordance with this chapter by a registered design professional or person who demonstrates competency to design the alternate water source system as required by the authority having jurisdiction. Components, piping, and fittings used in an alternate water source system shall be listed.~~

**1501.7 Minimum Water Quality Requirements.** ~~The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the authority having jurisdiction. In the absence of water quality requirements, the EPA/625/R-04/108 contains recommended water reuse guidelines to assist regulatory agencies develop, revise, or expand alternate water source water quality standards.~~

~~The treatment for gray water used to flush toilets or urinals shall be oxidized, coagulated, filtered and disinfected, and be consistent at all times with Washington Class A reclaimed water or better and be approved by the authority having jurisdiction.~~

**1501.11.2.3 Discovery of Cross-Connection.** ~~In the event that a cross connection is discovered, the following procedure, in the presence of the AHJ, shall be activated immediately:~~

~~(1) Reclaimed (recycled) water piping to the building shall be shutdown at the meter, and the reclaimed (recycled) water riser shall be drained.~~

~~(2) Potable water piping to the building shall be shutdown at the meter.~~

~~(3) The cross connection shall be uncovered and disconnected.~~

~~(4) The building shall be retested following procedures listed in Sections 1501.11.2.1 and 1501.11.2.2.~~

~~(5) The potable water system shall be chlorinated with 50 parts per million (ppm) chlorine for twenty four hours.~~

~~(6) The potable water system shall be flushed after twenty four hours, and a standard bacteriological test for drinking water shall be performed by a laboratory certified for drinking water in Washington state. Where test results are satisfactory to the authority having jurisdiction, health authority having jurisdiction, and the water purveyor, the potable water system shall be permitted to be recharged. See also chapter 246-290 WAC.~~

**1501.13.1 General.** ~~An abandoned system or part thereof covered under the scope of this chapter shall be disconnected from remaining systems, drained, plugged, and capped in an approved manner. Components of the abandoned system including, but not limited to, pipe, tubing, fittings, and valves shall not be used for potable water systems.~~

**1502.0 Gray Water Systems, is not adopted.** ~~Gray water shall not be used for irrigation except as permitted by the department of health rules.~~

**1503.4 Connection to Potable or Reclaimed (Recycled) Water Systems.** ~~Reclaimed (recycled) water systems shall have no connection to a potable water supply or alternate water source system. Potable water is permitted to be used as makeup water~~

for a reclaimed (recycled) water storage tank provided the water supply inlet is protected by an approved air gap in accordance with this code.

~~**1504.1 General.** The provisions of this section shall apply to the installation, construction, alteration, and repair of on-site treated nonpotable water systems intended to supply uses such as water closets, urinals, trap primers for floor drains and floor sinks, and other uses approved by the authority having jurisdiction.~~

~~**1504.7 On-Site Treated Nonpotable Water Devices and Systems.** Devices or equipment used to treat nonpotable water for on-site use in order to maintain the minimum water quality requirements determined by the authority having jurisdiction shall be listed or labeled (third-party certified) by a listing agency (accredited conformity assessment body) or approved for the intended application. Devices or equipment used to treat gray water or sewage for use in water closet and urinal flushing, surface irrigation, and similar applications shall oxidize, coagulate, filter and disinfect the gray water or sewage, and be consistent at all times with Washington Class A reclaimed water or better and be approved by the authority having jurisdiction.~~

~~**1504.10.2 Reserved.**~~ **1501.1 Applicability.** The provisions of this chapter and the Washington state department of health shall apply to the construction, alteration, and repair of alternate water source systems for nonpotable applications.

AMENDATORY SECTION(Amending WSR 16-02-044, filed 12/30/15, effective 7/1/16)

## **WAC 51-56-1600 Chapter 16 – Nonpotable rainwater catchment systems/**

~~**(1601.11.1 General.** An abandoned system or part thereof covered under the scope of this chapter shall be disconnected from remaining systems, drained, plugged and capped in an *approved* manner. Components of the abandoned system including, but not limited to, pipe, tubing, fittings and valves shall not be used for potable water systems.~~

### **1602.0 Nonpotable Rainwater Catchment Systems.**

~~**1602.1 General.** The installation, construction, alteration, and repair of rainwater catchment systems intended to supply uses such as water closets, urinals, trap primers for floor drains and floor sinks, irrigation, industrial processes, water features, cooling tower makeup and other uses shall be approved by the authority having jurisdiction.~~

~~EXCEPTION:~~

~~Exterior irrigation piping.~~

**1602.11.2.3 Discovery of Cross-Connection.** In the event that a cross-connection is discovered, the following procedure, in the presence of the AHJ, shall be activated immediately:

(1) Rainwater catchment water piping to the building shall be shutdown at the meter, and the rainwater water riser shall be drained.

(2) Potable water piping to the building shall be shutdown at the meter.

(3) The cross-connection shall be uncovered and disconnected.

(4) The building shall be retested following procedures listed in Sections 1603.11.2.1 and 1603.11.2.2.

(5) The potable water system shall be chlorinated with 50 parts per million (ppm) chlorine for twenty-four hours.

(6) The potable water system shall be flushed after twenty-four hours, and a standard bacteriological test for drinking water shall be performed by a laboratory certified for drinking water in Washington state. Where test results are satisfactory to the authority having jurisdiction, health authority having jurisdiction, and the water purveyor, the potable water system shall be permitted to be recharged. See also chapter 246-290 WAC.)

**1601.1 Applicability.** The provisions of this chapter and the Washington state department of health shall apply to the construction alteration and repair of nonpotable rainwater catch systems.