



PROPOSED RULE MAKING

CR-102 (June 2012)

(Implements RCW 34.05.320)

Do NOT use for expedited rule making

Agency: State Building Code Council

<input checked="" type="checkbox"/> Preproposal Statement of Inquiry was filed as WSR 15-10-078; or	<input checked="" type="checkbox"/> Original Notice
<input type="checkbox"/> Expedited Rule Making--Proposed notice was filed as WSR _____; or	<input type="checkbox"/> Supplemental Notice to WSR _____
<input type="checkbox"/> Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1).	<input type="checkbox"/> Continuance of WSR _____

Title of rule and other identifying information: (Describe Subject)

Adoption and amendment of the 2015 Uniform Plumbing Code, WAC 51-56

Hearing location(s):

September 11, 2015	October 16, 2015
Fire Dept Training Ctr	DES Presentation Room
1618 S. Rebecca Street	1500 Jefferson SE
Spokane, WA	Olympia, WA 98504

Date: Sept. 11/Oct 16 Time: 10 a.m

Submit written comments to:

Name: Dave Kokot, Chair, State Bldg Code Council
 Address: PO Box 41449
 Olympia, WA 98504-1449
 e-mail sbcc@ga.wa.gov
 fax (360) 586-9088 by (date) October 23, 2015

Assistance for persons with disabilities: Contact

Peggy Bryden by August 24, 2015

TTY () _____ or (360) 407-9280

Date of intended adoption: November 13, 2015

(Note: This is NOT the effective date)

Purpose of the proposal and its anticipated effects, including any changes in existing rules:

The proposed rules adopt the most recently published edition of the UPC and make changes to the state amendments to this code. Please see Attachment A for summary of proposed changes

Reasons supporting proposal: RCW 19.27.031 and RCW 19.27.074

Statutory authority for adoption: RCW 19.27.031 and 19.27.074

Statute being implemented: RCW 19.27 and RCW 34.05

Is rule necessary because of a:

Federal Law?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Federal Court Decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
State Court Decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

If yes, CITATION:

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER
 STATE OF WASHINGTON
 FILED

DATE: **August 04, 2015**

TIME: **8:39 AM**

WSR 15-16-099

DATE
August 4, 2015

NAME (type or print)
David F. Kokot

SIGNATURE

TITLE
Council Chair

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters:

The Council is seeking comments on the issues proposed in the attached rules.

Name of proponent: (person or organization) Washington State Building Code Council

- Private
- Public
- Governmental

Name of agency personnel responsible for:

Name	Office Location	Phone
Drafting..... Krista Braaksma	1500 Jefferson SE, PO Box 41449, Olympia WA	(360) 407-9278
Implementation.... Krista Braaksma	1500 Jefferson SE, PO Box 41449, Olympia WA	(360) 407-9278
Enforcement..... Local Jurisdictions		()

Has a small business economic impact statement been prepared under chapter 19.85 RCW or has a school district fiscal impact statement been prepared under section 1, chapter 210, Laws of 2012?

Yes. Attach copy of small business economic impact statement or school district fiscal impact statement.

A copy of the statement may be obtained by contacting:

Name:

Address:

phone () _____

fax () _____

e-mail _____

No. Explain why no statement was prepared.

As part of the review process, the technical advisory group (TAG) examined all changes to the plumbing code and found no items with a disproportional impact on small businesses. Five items with possible cost impact were both amended to remove any impact.

Section 418.3 does not require a floor drain for all boiler rooms

Section 606.5 was amended to require the valves be “accessible” but not “readily accessible”

Section 608.3 provides exemptions from the requirement for thermal expansion tanks

Section 707.4 does not require cleanouts on all urinals

Section 707.9 does not adopt the decreased distance for access to cleanouts

The State Building Code Council is not one of the agencies identified as required to prepare a school district impact statement.

Is a cost-benefit analysis required under RCW 34.05.328?

Yes A preliminary cost-benefit analysis may be obtained by contacting:

Name:

Address:

phone () _____

fax () _____

e-mail _____

No: Please explain: The State Building Code Council is not one of the agencies identified as required to prepare an analysis.

Attachment A

Summary of changes in existing rules:

1. The referenced edition of the model code, the Uniform Plumbing Code, was changed to the 2015 edition. The 2015 Uniform Plumbing Code was reorganized to move the Referenced Standards chapter to the end of the document, from Chapter 14 to Chapter 17. This change also renumbered Chapters 15 (Firestop Protection), 16 (Alternate Water Sources) and 17 (Nonpotable Rainwater Catchment) to Chapters 14, 15 and 16, respectively.
2. The language in -008 was modified to be consistent with the same section in other state building code adoption documents (i.e., building code, residential code, etc.).
3. Chapter 1 was reorganized and the state amendments were renumbered as a result.
4. The state amendment for the definition of Plumbing System was modified to reflect changes in the model code terminology. A new section, 301.3.2, was added to make it more explicit that local jurisdictions may adopt amendments for alternate means and methods, as allowed by RCW 19.27.
5. Section 301.3 was modified to use the same language as that found in other portions of the state code (i.e., building code, residential code, etc.).
6. Section 310.4 was modified to include reference to the new section on circuit venting.
7. Section 312.6 was modified to be consistent with the insulation requirements in the Washington State Energy Code.
8. Chapter 4 was another chapter that was significantly reorganized. The 2015 edition of the UPC no longer has a dedicated Water Conservation section. The majority of the changes in this chapter are the result of moving the state amendment language into the appropriate model code section. The only technical changes to the state amendments within this chapter are in Sections 402.5 and 415.2. Section 402.5 was previously modified for consistency with the International Residential Code. That modification created an inconsistency with the International Building Code. The language now has separate fixture placement spacing for residential and non-residential occupancies. In Section 415.2, new language on the use of alternates to drinking fountains was not adopted because the Building Code requirements take precedence over the Plumbing Code.
9. Section 501.0 was modified at the national level to provide clarity and better direction of the installation of water heaters.
10. Section 507.2 was amended to provide clarity and make it explicit that water heaters must be anchored. Previously, this section had cited seismic zones where strapping was required. All of Washington State fell within the cited zones. The amendment just removed the zone citation.
11. Section 601.1 was modified to include references to backflow devices and assemblies, which are also regulated by this chapter.
12. Section 603.5.13 was renumbered to become Section 603.4.9. The language was updated to reflect that in the 2015 UPC (“...with atmospheric vents or ports” added).
13. The state amendment to Section 604.11 was deleted, since this language was adopted into the 2015 edition of the UPC.
14. A title was added to Section 604.14 to match the formatting of the model code.
15. Section 606.5 was amended to change the requirement from having shutoff valves for parallel water systems being “readily accessible” to just “accessible.” This item was identified as having a potential for increasing cost with little gain. There would be no hindrance in having the shutoff being behind a panel door or similar circumstance.
16. Section 608.3 was modified to specify that expansion tanks were only necessary on instantaneous/on demand hot water systems when required by the manufacturer, such as when

used on a hydronic heating system. The model code language was split into two separate sections as part of the modification.

17. Item 4 of Section 609.9 was modified to correlate with Department of Health rules, specifying that testing of testing a potable water system must be done by an approved lab.
18. Section 613.0 was renumbered as 609.11 to coordinate with a new section added to the model code. This new section was not adopted; instead, the existing language, which coordinates with the Washington State Energy Code, is retained and moved to the new location.
19. A title was added to Section 610.4 to match the formatting of the model code.
20. Section 611.1 was modified to include an indication that some drinking water treatment systems could be regulated by the Department of Health as a public water system.
21. The 2015 Uniform Plumbing Code contains new specifications for the design of residential fire sprinklers. This new section is not adopted. Instead, the existing state amendment is retained, pointing users to the International Residential Code for those specifications.
22. State amendments to Sections 705.4.2 and 710.3 were deleted. It was determined that changes made to the 2015 model code adequately covered the concerns represented in the amendments.
23. The amendment to Section 707.4 deletes a new requirement in the 2015 UPC to require cleanouts on all urinals, regardless of location. It was felt this requirement was costly and unnecessary.
24. The amendment to Section 707.9 reinstates requirements from the 2012 edition of the UPC regarding distance of the cleanouts to the access point for those cleanouts. It was felt that the change in distance, from 20 feet down to 5 feet, could pose a serious hardship and cost, especially for residential applications.
25. The state amendment to Section 908.2 was deleted. The state amendment had added bidets to the list of fixtures allowed to be connected to a horizontal wet vent. The 2015 language went from listing the fixtures to using the defined term “bathroom group,” which includes bidets.
26. The new Section 908.2.4 in the 2015 UPC is not adopted. This section would require that the water closet connection be downstream of other connections. The new Section 911 on circuit venting would allow the water closet to be upstream and be compliant, so this section adds an element of confusion that is not necessary.
27. The state amendment to Section 1014.1.3 was deleted. The concerns raised were adequately addressed by changes to this section by the model code.
28. Chapter 11 was reorganized slightly and the numbering was changed to match the model code. Section 1101.4 was modified to coordinate with changes to the model code that replaced “brass” with “copper alloy” and also added stainless steel.
29. Chapter 13 was significantly reorganized to correlate better with NFPA 99. The majority of the state amendments were deleted, as they were no longer necessary. The state amendment to Section 1321.3 (which really should have been 1312.3) was relocated to 1305.3 and updated with the appropriate Department of Health WAC references.
30. A new state amendment was added to Section 1303.8, to clarify that the intent of the requirement was for two approved mains into a hospital, not necessarily coming from two different sources or purveyors, to ensure water supply when maintenance was necessary on the line.
31. The Referenced Standards were relocated to Chapter 17 and remain unchanged.
32. Chapter 15, in addition to be relocated, was also reorganized into a more coherent chapter. Redundancies were mostly eliminated with the creation of an initial General requirements section. The majority of the existing state amendments were deleted, with the exception of Section 1603.11.2.3/1603.12.2.3 which became 1501.11.2.3, Section 1502.0 which became Section 1602.0, 1603.4 which became 1503.4, and 1604.1 which became 1504.1. In addition, the following new amendments were added for consistency with other state regulations:

- 1) Section 1501.1.1 was modified for consistency with Department of Health rules for use of reclaimed water. This amendment prohibits the use of reclaimed water to flush toilets in residential applications where the residents have the ability to modify or repair the system.
 - 2) Section 1501.2 was also amended to harmonize with DOH standards for graywater. This amendment deletes exceptions allowing designs for small systems to be performed by someone other than a registered design professional.
 - 3) Section 1501.7 was amended to reference DOH requirements for treatment of gray water.
 - 4) Section 1501.13.1 incorporates the previous state amendment to 1601.10 on system abandonment with new model code language.
 - 5) Section 1504.10.2 was amended, again to harmonize with DOH requirements, to reference specific treatment criteria for nonpotable water.
 - 6) Finally, Section 1504.10.2 was deleted. This is a redundant water quality section and is adequately covered by Section 1501.7 in the General section.
33. Chapter 16 was modified by the model code in a manner similar to Chapter 15. Two existing state amendments were deleted entirely – 1702.2, Permits, and 1702.2.3 Plan Submission. The remaining existing amendments were renumbered and retained. The amendment to former Section 1702.12, on abandonment, was renumbered as Section 1601.11.1 and modified with new model code language.
34. Chapter 17 – See Item 1.

Chapter 51-56 WAC
STATE BUILDING CODE ADOPTION AND AMENDMENT OF THE ((2012)) 2015 EDI-
TION OF THE UNIFORM PLUMBING CODE

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-003 Uniform Plumbing Code. The ((2012)) 2015 edition of the Uniform Plumbing Code, including Appendices A, B, and I, published by the International Association of Plumbing and Mechanical Officials, is hereby adopted by reference with the following additions, deletions and exceptions: Provided that chapters 12 and ((15)) 14 of this code are not adopted. Provided further, that those requirements of the Uniform Plumbing Code relating to venting and combustion air of fuel fired appliances as found in chapter 5 and those portions of the code addressing building sewers are not adopted.

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-008 Implementation. The Uniform Plumbing Code adopted by chapter 51-56 WAC shall become effective in all counties and cities of this state on July 1, ((2013, unless local government residential amendments have been approved by the state building code council)) 2016.

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-0100 Chapter 1—Administration.

~~((101.4.1.4))~~ **102.1 Conflict Between Codes.** Delete paragraph.

~~((103.1.3))~~ **103.3.1 Certification.** State rules and regulations concerning certification shall apply.

AMENDATORY SECTION (Amending WSR 13-23-094, filed 11/20/13, effective 4/1/14)

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.

225.0 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.

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-0300 Chapter 3—General regulations.

301.1.2 Standards. Standards listed or referred to in this chapter or other chapters cover materials which will conform to the requirements of this code, when used in accordance with the limitations imposed in this or other chapters thereof and their listing. Where a standard covers materials of various grades, weights, quality, or configurations, the portion of the listed standard that is applicable shall be used. Design and materials for special conditions or materials not provided for herein (~~are allowed~~) shall be permitted to be used by

special permission of the authority having jurisdiction after the authority having jurisdiction has been satisfied as to their adequacy in accordance with Section 301.2.

301.3 Alternative Materials, Design and Methods of Construction and Equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternate material, design or method of construction is not approved, the code official shall respond in writing, stating the reasons why the alternative was not approved.

301.3.1 Research Reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

301.3.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the code official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the code official for the period required for retention of public records.

301.3.3 Material Use and Energy Efficiency. Jurisdictions are permitted to adopt or approve the use of material efficient and energy efficient methods of plumbing installation as recognized or prescribed by national codes and standards.

310.4 Use of Vent and Waste Pipes. Except as hereinafter provided in Sections 908.0(~~(, 909.0, 910.0,)~~) through 911.0 and Appendix C, no vent pipe shall be used as a soil or waste pipe, nor shall any soil or waste pipe be used as a vent.

312.6 Freezing Protection. No water, soil, or waste pipe shall be installed or permitted outside of a building, in attics or crawl spaces, or in an exterior wall unless, where necessary, adequate provision is made to protect such pipe from freezing. All hot and cold water pipes installed outside the conditioned space shall be insulated to a minimum (~~(R-4)~~) R-3.

312.7 Fire-Resistant Construction. All pipe penetrating floor/ceiling assemblies and fire-resistance rated walls or partitions shall be protected in accordance with the requirements of the building code.

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 one (21) inches (533 mm)))~~ 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: ~~((The installation of paper dispensers or accessibility grab bars shall not be considered obstructions.))~~ 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.

~~((403.0 Water-Conserving Fixtures and Fittings.~~

~~403.1 The purpose of this section shall be to implement water conservation performance standards in accordance with RCW 19.27.170.~~

~~403.2 Application.~~ This section shall apply to all new construction and all remodeling involving replacement of plumbing fixtures and fittings in all residential, hotel, motel, school, industrial, commercial use, or other occupancies determined by the council to use significant quantities of water. Plumbing fixtures, fittings and appurtenances shall conform to the standards specified in this section and shall be provided with an adequate supply of potable water to flush and keep the fixtures in a clean and sanitary condition without danger of back-flow or cross-connection.

~~403.3 Water Efficiency Standards.~~

~~403.3.1 Standards for Vitreous China Plumbing Fixtures.~~

~~403.3.1.1 The following standards shall be adopted as plumbing materials, performance standards, and labeling standards for water closets and urinals. Water closets and urinals shall meet either the ANSI/ASME standards or the CSA standard.~~

ANSI/ASME A112.19.2-2008/CSA B45.1-2008	Vitreous China Plumbing Fixtures
ANSI/ASME A112.19.6-1995	Hydraulic Requirements for Water Closets and Urinals

~~403.3.1.2 The maximum water use allowed in gallons per flush (gpf) or liters per flush (lpf) for any of the following water closets shall be the following:~~

Tank-type toilets	1.6 gpf/6.0 lpf
Flushometer-valve toilets	1.6 gpf/6.0 lpf
Flushometer-tank toilets	1.6 gpf/6.0 lpf
Electromechanical hydraulic toilets	1.6 gpf/6.0 lpf

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.

~~403.3.1.3 The maximum water use allowed for any urinal shall be 1.0 gallons per flush or 3.78 liters per flush.~~

~~403.3.1.3.1 Nonwater Urinals.~~ Nonwater urinals shall be listed and comply with the applicable standards referenced in Table 1401.1. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed, they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit.

~~403.3.1.4 No urinal or water closet that operates on a continuous flow or continuous flush basis shall be permitted.~~

~~403.3.1.5 This section does not apply to fixtures installed before the effective date of this section, that are removed and relocated to another room or area of the same building after the effective date of this section.~~

~~403.3.2 Standards for Plumbing Fixture Fittings.~~

~~403.3.2.1 The following standards are adopted as plumbing material, performance requirements, and labeling standards for plumbing fixture fittings. Faucets, aerators, and shower heads shall meet either the ANSI/ASME standard or the CSA standard.~~

ANSI/ASME A112.18.1- Plumbing Fixture Fittings
2005/CSA B125.1-2005

~~403.3.2.2 The maximum water use allowed for any shower head is 2.5 gallons per minute or 9.5 liters per minute.~~

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

~~403.3.2.3 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	2.5 gpm/9.5 lpm
Kitchen faucets	2.5 gpm/9.5 lpm
Replacement aerators	2.5 gpm/9.5 lpm
Public lavatory faucets other than metering	0.5 gpm/1.9 lpm

~~403.4 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.

~~403.5 Prerinse Spray Valve.~~ Commercial food service prerinse spray valves shall have a maximum flow rate of 1.6 gallons per minute (gpm) at 60 pounds force per square inch (psi) (0.10 L/s at 414 kPa) in accordance with ASME A112.18.1/CSA B125.1 and shall be equipped with an integral automatic shutoff.

~~403.6 Implementation.~~

~~403.6.1~~ The standards for water efficiency and labeling contained within Section 402.3 shall be in effect as of July 1, 1993, as provided in RCW 19.27.170 and amended July 1, 1998.

~~403.6.2~~) **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 (~~section~~) 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:

<u>Lavatory faucets</u>	<u>2.5 gpm/9.5 lpm</u>
<u>Kitchen faucets</u>	<u>2.5 gpm/9.5 lpm</u>
<u>Replacement aerators</u>	<u>2.5 gpm/9.5 lpm</u>
<u>Public lavatory faucets other than metering</u>	<u>0.5 gpm/1.9 lpm</u>

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 m²) 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 into a waste receptor, a wye branch fitting on the tail-piece of a kitchen sink, or dishwasher connection of a food waste (~~grinder~~) 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.

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 13-04-054, filed 2/1/13, effective 7/1/13)

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

501.0 General. 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. See the Mechanical Code for combustion air and installation of all vents and their connectors. ((All design, construction, and workmanship shall be in conformity with accepted engineering practices, manufacturer's installation instructions, and applicable standards and shall be of such character as to secure the results sought to be obtained by this Code. No water heater shall be hereinafter installed which does not comply in all respects with the type and model of each size thereof approved by the authority having jurisdiction. A list of accepted gas appliance standards is included in Table 1401.1.)) 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 accord-

ance with the manufacturer's installation instructions. Unlisted water heaters shall be permitted in accordance with Section 504.3.2.

TABLE 501.1^{1,3}

Number of Bathrooms	1 to 1.5			2 to 2.5				3 to 3.5			
Number of Bedrooms	1	2	3	2	3	4	5	3	4	5	6
First Hour Rating ² , Gallons	42	54	54	54	67	67	80	67	80	80	80

Notes:

¹The first hour rating is found on the "Energy Guide" label.

²Nonstorage and solar water heaters shall be sized to meet the appropriate first hour rating as shown in the table.

³For replacement water heaters, see Section ((401-6)) 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 (9,102 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.

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 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.

~~((603.5.13 Prohibited Location. Backflow preventers shall not be located in any area containing fumes or aerosols that are toxic, poisonous, infectious, or corrosive.))~~

603.5.15 Protection from Fire Systems. Except as provided under Sections 603.5.15.1 and 603.5.15.2, 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.

~~((604.11 Lead Content. The maximum allowable lead content in pipes, pipe fittings, plumbing fittings and fixtures intended to convey or dispense water for human consumption shall be not more than a weighted average of 0.25 percent with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures. For solder and flux, the lead content shall be not more than 0.2 percent where used in piping systems that convey or dispense water for human consumption.~~

EXCEPTIONS: 1. Pipes, pipe fittings, plumbing fittings, fixtures or backflow preventers used for nonpotable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not used for human consumption.
2. Water closets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are two inches (50 mm) in diameter or larger.))

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 readily 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 Drains. Relief valves located inside a building shall be provided with a drain, not smaller than the relief valve outlet, of galvanized

ized steel, hard drawn copper piping and fittings, CPVC, PP, or listed relief valve drain tube with fittings which will not reduce the internal bore of the pipe or tubing (straight lengths as opposed to coils) and shall extend from the valve to the outside of the building, with the end of the pipe not more than two (2) feet (610 mm) nor less than six (6) inches (152 mm) above the ground or the flood level of the area receiving the discharge and pointing downward. Such drains may terminate at other approved locations. No part of such drain pipe shall be trapped or subject to freezing. The terminal end of the drain pipe shall not be threaded.

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.

~~((613.0 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.)) Sections 612.2 through 612.7.2 are not adopted.~~

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-0700 Chapter 7—Sanitary drainage.

~~((701.1))~~ **701.2 Drainage Piping.** Materials for drainage piping shall be in accordance with one of the referenced standards in Table 701.1 except that:

1. No galvanized wrought-iron or galvanized steel pipe shall be used underground and shall be kept 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.

3. No vitrified clay pipe or fittings shall be used above ground or where pressurized by a pump or ejector. They shall be kept not less than 12 inches (305 mm) below ground.

4. Copper tube for drainage and vent piping shall have a weight of not less than that of copper drainage tube type DWV.

5. Stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) above ground.

6. Cast-iron soil pipe and fittings shall be listed and tested in accordance with standards referenced in Table 1401.1. Such pipe and fittings shall be marked with country of origin and identification of the original manufacturer in addition to markings required by referenced standards.

Table 703.2

MAXIMUM UNIT LOADING AND MAXIMUM LENGTH OF DRAINAGE AND VENT PIPING

Notes:

1. Excluding trap arm.
2. Except sinks, urinals, and dishwashers - Exceeding 1 fixture unit.
3. Except six-unit traps or water closets.
4. Only four water closets or six-unit traps allowed on a vertical pipe or stack; and not to exceed three water closets or six-unit traps on a horizontal branch or drain.

EXCEPTION: In a single family dwelling addition or alteration where a 4 inch horizontal waste is not readily available four water closets not to exceed 1.6 gpf each may be allowed on a 3 inch horizontal waste when approved by the AHJ.

5. Based on one-fourth inch per foot (20.8 mm/m) slope. For one-eighths of an inch per foot (10.4 mm/m) slope, multiply horizontal fixture units by a factor of 0.8.

6. The diameter of an individual vent shall be not less than one and one-fourth inches (32 mm) nor less than one-half the diameter of the drain to which it is connected. Fixture unit load values for drainage and vent piping shall be computed from Table 702.1 and Table 702.2(b). Not to exceed one-third of the total permitted length of a vent shall be permitted to be installed in a horizontal position. Where vents are increased one pipe size for their entire length, the maximum length limitations specified in this table do not apply. This table is in accordance with the requirements of Section 901.2.

704.3 Commercial (~~Dishwashing Machines and~~) Sinks. Except where specifically required to be connected indirectly to the drainage system, or when first approved by the authority having jurisdiction, all plumbing fixtures, drains, appurtenances, and appliances shall be directly connected to the drainage system of the building or premises.

~~(705.4.2 Mechanical Joints.~~ Mechanical joints for cast iron pipe and fittings shall be of the compression or mechanical joint coupling type. Compression type joints with an elastomeric gasket for cast iron hub and spigot pipe shall comply with ASTM C 564. Hub and spigot shall be clean and free of dirt, mud, sand, and foreign materials. Cut pipe shall be free from sharp edges. Fold and insert gasket into hub. Lubricate the joint following manufacturer's instructions. Insert spigot into hub until the spigot end of the pipe bottom out in the hub. Use the same procedure for the installation of fittings.

A mechanical joint shielded coupling type for hubless cast iron pipe and fittings shall have a metallic shield and shall comply with ASTM A 1056, ASTM C 1277, ASTM C 1540, or CISPI 310. The elastomeric gasket shall comply with ASTM C 564. Hubless cast iron pipe and fittings shall be clean and free of dirt, mud, sand, and foreign materials. Cut pipe shall be free from sharp edges. Gasket shall be placed on the end of the pipe or fitting and the stainless steel shield and clamp assembly on the end of the other pipe or fitting. Pipe or fittings shall be seated against the center stop inside the elastomeric sleeve. Slide the stainless steel shield and clamp assembly into position centered over the gasket and tighten. Bands shall be tightened using an approved calibrated torque wrench specifically set by the manufacturer of the couplings.

710.3 Sewage Ejector and Pumps. The minimum size of any pump or any discharge pipe from a sump having a water closet connected thereto shall be not less than two (2) inches (52 mm).) **707.4 Location.** Each horizontal drainage pipe shall be provided with a cleanout at its upper terminal, and each run of piping, that is more than 100 feet (30,480 mm) in total developed length, shall be provided with a cleanout for each 100 feet (30,480 mm), or fraction thereof, in length of such piping. An additional cleanout shall be provided in a drainage line for each aggregate horizontal change of direction exceeding 135 degrees (2.36 rad).

EXCEPTIONS:

1. Cleanouts shall be permitted to be omitted on a horizontal drain line less than 5 feet (1,524 mm) in length unless such line is serving sinks or urinals.
2. Cleanouts shall be permitted to be omitted on a horizontal drainage pipe installed on a slope of 72 degrees (1.26 rad) or less from the vertical angle (one-fifth bend).
3. Except for the building drain, its horizontal branches, and urinals, a cleanout shall not be required on a pipe or piping that is above the floor level of the lowest floor of the building.
4. An approved type of two-way cleanout fitting, installed inside the building wall near the connection between the building drain and the building sewer or installed outside of a building at the lower end of a building drain and extended to grade, shall be permitted to be substituted for an upper terminal cleanout.

707.9 Clearance. Each cleanout in piping 2 inches (50 mm) or less in size shall be so installed that there is a clearance of not less than 12 inches (457 mm) in front of the cleanout. Cleanouts in piping exceeding 2 inches (50 mm) shall have a clearance of not less than 18 inches (610 mm) in front of the cleanout. Cleanouts in under-floor piping shall be extended to or above the finished floor or shall be extended outside the building where there is less than 18 inches (457 mm) vertical overall, allowing for obstructions such as ducts, beams, and piping, and 30 inches of (762 mm) horizontal clearance from the means of access to such cleanout. No under-floor cleanout shall be located exceeding 20 feet (1,524 mm) from an access door, trap door, or crawl hole.

CHAPTER 7, PART II—BUILDING SEWERS

Part II Building Sewers. Delete all of Part II (Sections 713 through 723, and Tables 717.1 and 721.1).

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

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 Horizontal Wet Venting for Bathroom Groups.** Water closets, bathtubs, showers, bidets, and floor drains within one or two bathroom groups located on the same floor level and for private use shall be permitted to be vented by a wet vent. The wet vent shall be considered the vent for the fixtures and shall extend from the connection of the dry vent along the direction of the flow in the drain pipe to the most downstream fixture drain or trap arm connection to the horizontal branch drain. Each wet-vented fixture drain or trap arm shall connect independently to the wet-vented horizontal branch drain. Each individual fixture drain or trap arm shall connect horizontally to the wet-vented horizontal branch drain or shall be provided with a dry vent. The trap to vent distance shall be in accordance with Table 1002.2. Only the fixtures within the bathroom groups shall connect to the wet-vented horizontal branch drain. The water closet fixture drain or trap arm connection to the wet vent shall be downstream of any fixture drain or trap arm connections. Any additional fixtures shall discharge downstream of the wet-vent system and be conventionally vented.))~~
908.2.4 Water Closet. This section is not adopted.

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-1000 Chapter 10—Traps and interceptors.

~~((1014.1.3 Food Waste Disposal Units and Dishwashers. Unless specifically required or permitted by the authority having jurisdiction, no food waste disposal unit or dishwasher shall be connected to or discharge into any hydromechanical grease interceptor. Commercial food waste disposers shall be permitted to discharge directly into the building's drainage system.))~~

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-1100 Chapter 11—Storm drainage.

~~((1101.3))~~ **1101.4 Material Uses.** ~~((Rainwater piping placed within the interior of a building or run within a vent or shaft shall be of cast iron, galvanized steel, wrought iron, brass, copper, lead, Schedule 40 ABS DWV, Schedule 40 PVC DWV, or other approved materials))~~ Pipe, tube, and fittings conveying rainwater shall be of such materials and design as to perform their intended function to the satisfaction of the authority having jurisdiction. Conductors within a vent or shaft shall be of cast iron, galvanized steel, wrought iron, copper, copper alloy, lead, Scheduled 40 ASB DWV, Scheduled 40 PVC DWV, stainless steel 304 or 316L (stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than six (6) inches (152 mm) aboveground), or other approved materials, and changes in direction shall conform to the requirements of Section 706.0. ABS and PVC DWV piping installations shall be installed in accordance with IS 5 and IS 9. 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.

~~((1101.12))~~ **1101.13 Cleanouts.** Cleanouts for building storm drains shall comply with the requirements of this section.

~~((1101.12.1))~~ **1101.13.1 Locations.** Rain leaders and conductors connected to a building storm sewer shall have a cleanout installed at the base of the outside leader or outside conductor before it connects to the horizontal drain. Cleanouts shall be placed inside the building near the connection between the building drain and the building sewer or installed outside the building at the lower end of the building drain and extended to grade.

~~((1101.12.2))~~ **1101.13.2 Cleaning.** Each cleanout shall be installed so that it opens to allow cleaning in the direction of flow of the soil or waste or at right angles thereto, and except in the case of wye branch and end-of-line cleanouts, shall be installed vertically above the flow line of the pipe.

~~((1101.12.3))~~ **1101.13.3 Access.** Cleanouts installed under concrete or asphalt paving shall be made accessible by yard boxes, or extending flush with paving with approved materials and be adequately protected.

~~((1101.12.4))~~ **1101.13.4 Manholes.** Approved manholes may be installed in lieu of cleanouts when first approved by the authority having jurisdiction. The maximum distance between manholes shall not exceed three hundred (300) feet (91.4 m).

The inlet and outlet connections shall be made by the use of a flexible compression joint no closer than twelve (12) inches (305 mm) to, and not farther than three (3) feet (914 mm) from the manhole. No flexible compression joints shall be embedded in the manhole base.

~~((1108.0))~~ **1105.0 Controlled-Flow Roof Drainage.** This section is not adopted.

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-1300 Chapter 13—Health care facilities and medical gas and vacuum systems.

Part II Medical Gas and Vacuum Systems

~~((1309.0 Scope.~~

~~1309.1 General.~~ The provisions herein shall apply to the design, installation, testing, and verification of medical gas, medical vacuum systems, and related permanent equipment in hospitals, clinics, veterinary clinics and other health care facilities.

~~1309.2 Purpose.~~ The purpose of this chapter is to provide minimum requirements for the design, installation, testing and verification of medical gas, medical vacuum systems, and related permanent equipment, from the central supply system to the station outlets or inlets.

~~1321.3))~~ **1303.8 Water Mains for Hospitals.** Hospitals shall be provided with not less than two approved potable water mains that are installed in such a manner as to prevent the interruption of water service.

1305.3 Minimum Station Outlets/Inlets. Station outlets and inlets for medical gas and medical vacuum systems for facilities licensed or certified by Washington state department of health (DOH) or Washington state department of social and health services (DSHS) shall be provided as listed in chapters 246-320 and 246-330 WAC as required by the applicable licensing rules as applied by DOH construction review services. All other medical gas and medical vacuum systems shall be provided as listed in Table ~~((1312.3))~~ 1305.3.

~~((1327.0 System Verification.~~

~~1327.1 Verification.~~ Prior to any medical gas system being placed in service, each and every system shall be verified as described in section ~~1328.2.~~

~~1327.1.1 Verification Tests.~~ Verification tests shall be performed only after all tests required in section ~~1326.0, Installer Performed Tests, have been completed.~~

~~Testing shall be conducted by a party technically competent and experienced in the field of medical gas and vacuum pipeline testing and meeting the requirements of ANSI/ASSE Standard 6030, Medical Gas Verifiers Professional Qualifications Standard.~~

~~Testing shall be performed by a party other than the installing contractor or material vendor.~~

~~When systems have been installed by in-house personnel, testing shall be permitted by personnel of that organization who meet the requirements of this section.)~~

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-1400 Chapter 14—(~~Referenced standards~~) Reserved.

~~((TABLE 1401.1~~

~~**Standards for Materials, Equipment, Joints and Connections**~~

~~Where more than one standard has been listed for the same material or method, the relevant portions of all such standards shall apply.~~

~~Add the following standard to those listed in Table 1401.1:~~

Standard Number	Standard Title	Application
WAC 246-290-490	Washington State Department of Health Cross- connection Control Requirements	Backflow Protection))

NEW SECTION

WAC 51-56-1500 Chapter 15—Alternate 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.

AMENDATORY SECTION (Amending WSR 13-23-094, filed 11/20/13, effective 4/1/14)

WAC 51-56-1600 Chapter 16—(~~Alternate water sources for nonpotable applications~~) Nonpotable rainwater catchment systems.

~~(1601.1.1 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. Gray water shall not be used for irrigation except as permitted by the department of health rules.~~

~~1601.2 System Design. Alternate water source systems in accordance with this chapter shall be designed by a person registered or licensed to perform plumbing design work. Components, piping, and fittings used in an alternate water source system shall be listed.~~

~~1601.3 Permit. It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered an alternate water source system in a building or on a premise without first obtaining a permit to do such work from the Authority Having Jurisdiction.~~

~~1601.5.2 Maintenance Log. A maintenance log for gray water, and on-site treated nonpotable water systems required to have a permit in accordance with Section 1601.3 shall be maintained by the property owner and be available for inspection. The property owner or designated appointee shall ensure that a record of testing, inspection and maintenance in accordance with Table 1601.5 is maintained in the log. The log will indicate the frequency of inspection and maintenance for each system.~~

~~1601.10 Abandonment. Where alternate water source systems for nonpotable use are abandoned, the procedure for abandonment shall be as required by the Authority Having Jurisdiction. 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 Gray Water Systems, is not adopted. Gray water shall not be used for irrigation except as permitted by the department of health rules.~~

~~1603.4 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.

1603.11.2.3 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 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.

1604.1 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.

1604.12.2.3 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) On site treated nonpotable water piping to the building shall be shutdown at the meter, and the on site treated 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.)

1601.11.1 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 catchments 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.

AMENDATORY SECTION (Amending WSR 13-23-094, filed 11/20/13, effective 4/1/14)

WAC 51-56-1700 Chapter 17—(~~Nonpotable rainwater catchment systems~~) Referenced standards.

~~(1702.0 Nonpotable Rainwater Catchment Systems.~~

~~1702.1 General.~~ The installation, construction, alteration, and repair of rainwater catchments 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.

~~1702.2 Permit.~~ It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered a non-potable rainwater catchment system in a building or on a premises without first obtaining a permit to do such work from the authority having jurisdiction.

EXCEPTIONS: 1. A permit is not required for exterior rainwater catchment systems used for outdoor drip and subsurface irrigation with a maximum storage capacity of 360 gallons (1363 L).
2. A plumbing permit is not required for rainwater catchment systems for single family dwellings where outlets, piping, and system components are located on the exterior of the building. This does not exempt the need for permits where required for electrical connections, tank supports, or enclosures.

~~1702.2.1 Plumbing Plan Submission.~~ No permit for a rainwater catchment system shall be issued until complete plumbing plans, with data satisfactory to the Authority Having Jurisdiction, have been submitted and approved.

~~1702.2.3 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.~~

~~1702.12 Abandonment.~~ Where nonpotable rainwater catchment systems are abandoned, the procedure for abandonment shall be as required by the Authority Having Jurisdiction. Components of the abandoned system including, but not limited to, pipe, tubing, fittings and valves shall not be used for potable water systems.)) **Referenced Standards.**

TABLE 1701.1
Standards for Materials, Equipment, Joints
and Connections

Where more than one standard has been listed for the same material or method, the relevant portions of all such standards shall apply.

Add the following standard to those listed in Table 1701.1:

<u>Standard Number</u>	<u>Standard Title</u>	<u>Application</u>
<u>WAC</u> <u>246-290-490</u>	<u>Washington State</u> <u>Department of</u> <u>Health Cross-</u> <u>connection Control</u> <u>Requirements</u>	<u>Backflow</u> <u>Protection</u>

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-90700 ((~~Installation Standard 7-03 Polyethylene cold water building supply and yard piping.~~)) **Reserved.**

((~~2.6.1 Location.~~ Polyethylene piping may terminate within a building or structure. The connection to the potable water distribution system shall be accessible, except that it may be buried underground outside of the building or structure in an accessible location. Barbed insert fittings with hose clamps are prohibited within a building.))

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-90800 ((Installation Standard 8-03 PVC cold water building supply and yard piping.)) Reserved.

~~((2.7.1 Location. PVC piping may terminate within a building or structure. The connection to the potable water distribution system shall be accessible, except that it may be buried underground outside of the building or structure in an accessible location.))~~

AMENDATORY SECTION (Amending WSR 13-04-054, filed 2/1/13, effective 7/1/13)

WAC 51-56-92000 ((Installation Standard 20-2010 CPVC solvent cemented hot and cold water distribution systems.)) Reserved.

~~((2.1.2 Primer. Listed primers shall be used that are compatible with the type of listed CPVC cement and pipe used. The primer shall be a true solvent for CPVC, containing no slow-drying ingredient. Cleaners shall not be allowed to be used as a substitute or equivalent for a listed primer.~~

EXCEPTION: Listed solvent cements that do not require the use of primer shall be permitted for use with CPVC pipe and fittings, manufactured in accordance with ASTM D2845, 1/2-inch through 2-inches in diameter.))