

WSR 21-01-125

PERMANENT RULES

BUILDING CODE COUNCIL

[Filed December 15, 2020, 2:09 p.m., effective January 15, 2021]

Effective Date of Rule: Thirty-one days after filing.

Purpose: Moving into permanent rule making CR-102, WSR 19-16-137 [20-17-049] as amended and adopted by the state building code council on November 6, 2020.

Citation of Rules Affected by this Order: Amending 2.

Statutory Authority for Adoption: RCW 19.27.035.

Other Authority: RCW 19.27.074.

Adopted under notice filed as WSR 20-17-049 on August 11, 2020.

Changes Other than Editing from Proposed to Adopted Version:

**408.2.5 Tub Spout and Showerhead Tub Spout Diverter Combinations.** -

Deleted.

**411.2.3 Flushometer Valve Activation Water Closet.** 1.6 Gallons replaced with 1.28 Gallons maximum flush volume.

**412.1 Application.** Standards ASME A112.19.19, or CSA B45.5/IAPMO Z124. - Added.

**501.1.2 Consumer Electric Storage Water Heater Requirements.** Ex-ception 2 - Added.

A final cost-benefit analysis is available by contacting Richard Brown, 1500 Jefferson Street S.E., Olympia, WA 98504, phone 360-407-9277, email Richard.Brown@DES.wa.gov, website SBCC.wa.gov.

Number of Sections Adopted in Order to Comply with Federal Statute: New 0, Amended 0, Repealed 0; Federal Rules or Standards: New 0, Amended 0, Repealed 0; or Recently Enacted State Statutes: New 0, Amended 2, Repealed 0.

Number of Sections Adopted at the Request of a Nongovernmental Entity: New 0, Amended 0, Repealed 0.

Number of Sections Adopted on the Agency's own Initiative: New 0, Amended 0, Repealed 0.

Number of Sections Adopted in Order to Clarify, Streamline, or Reform Agency Procedures: New 0, Amended 0, Repealed 0.

Number of Sections Adopted using Negotiated Rule Making: New 0, Amended 0, Repealed 0; Pilot Rule Making: New 0, Amended 0, Repealed 0; or Other Alternative Rule Making: New 0, Amended 0, Repealed 0.

Date Adopted: November 6, 2020.

Diane Glenn  
Chair

**OTS-2471.2**

**Chapter 51-56 WAC**

**STATE BUILDING CODE ADOPTION AND AMENDMENT OF THE ((2015)) 2018 EDITION OF THE UNIFORM PLUMBING CODE**

AMENDATORY SECTION (Amending WSR 20-02-072, filed 12/26/19, effective 7/1/20)

**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	2.2 gpm/9.5 lpm
Kitchen faucets	2.2 gpm/9.5 lpm
Replacement aerators	2.2 gpm/9.5 lpm
Public lavatory faucets other than metering	0.5 gpm/1.9 lpm))

flow rate of faucets shall comply with Section 407.2.1 through 407.2.2.

**407.2.1 Maximum Flow Rate.** The maximum flow rate for public lavatory faucets shall not exceed 0.5 gpm at 60 psi (1.9 L/m at 414 kPa).

**407.2.1.1 Residential Lavatory Faucets.** The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons (4.54 L) per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons (3.03 L) per minute at 20 psi.

**407.2.1.2 Lavatory Faucets in Common and Public Use Areas.** The maximum flow rate of lavatory faucets, installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings, shall not exceed 0.5 gallons (1.89 L) per minute at 60 psi.

**407.2.2 Metering Faucets.** Metered faucets shall deliver a maximum of 0.25 gallons (1.0 L) per metering cycle in accordance with ASME A112.18.1/CSA B125.1.

**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.))~~

meet the maximum flow rate of 1.8 gallons (6.81 L) per minute measured at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

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

**408.2.1 Multiple Showerheads Serving One Shower.** When a shower is served by more than one showerhead, including handheld showerheads, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons (6.81 L) per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

**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.))

The effective flush volume of all water closets shall not exceed 1.28 gallons (4.8 L) per flush when tested in accordance with ASME A112.19.2/CSA B45.1.

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.

**411.2.1 Dual Flush Water Closets.** Dual flush water closets shall comply with ASME A112.19.14. The effective flush volume for dual flush water closets shall be defined as the composite, average flush volume of two reduced flushes and one full flush.

**411.2.2 Performance.** Water closets installed shall meet or exceed the minimum performance criteria developed for certification of high-efficiency toilets under the WaterSense program sponsored by the U.S. Environmental Protection Agency (EPA).

**411.2.3 Flushometer Valve Activated Water Closets.** Flushometer valve activated water closets shall have a maximum flush volume of 1.28 gallons (4.8 Lpf) of water per flush in accordance with ASME A112.19.2/CSA B45.1.

**412.1 Application.** Urinals shall comply with ASME A112.19.2/CSA B45.1, ASME A112.19.19, or CSA B45.5/IAPMO Z124. Wall-mounted urinals shall have an average water consumption not to exceed ((1 gallon (3.8 L) of water)) 0.125 gallons (0.47 L) per flush. ((No urinal that operates on a continuous flow or continuous flush basis shall be permitted)) Other urinals shall have an average water consumption not to exceed 0.5 gallons (1.89 L) per flush.

**414.3 Drainage Connection.** Domestic dishwashing machines shall discharge indirectly through an air gap fitting in accordance with Section 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.

**420.2.1 Kitchen Faucets.** Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons (6.81 L) per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons (8.3 L) per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons (6.81 L) per minute at 60 psi.

EXCEPTION: Where faucets meeting the maximum flow rate of 1.8 gpm (6.81 L) are unavailable, aerators or other means may be used to achieve reduction.

**420.3 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) (6.0 L/m at 414 kPa) in accordance with ASME A112.18.1/CSA B125.1 and shall be equipped with an integral automatic shutoff.

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

**423.0 Landscape Irrigation.**

**423.1 Spray Sprinkler Body.** Spray sprinkler bodies must include an integral pressure regulator and must meet the water efficiency and performance criteria and other requirements of environmental protection agency water sense program product specification for spray sprinkler bodies.

EXCEPTION: Spray sprinkler bodies specifically excluded from the scope of the environmental protection agency water sense program product specification for spray sprinkler bodies.

Sections 422.1 through 422.5 and Table 422.1 are not adopted.

[Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 20-02-072, § 51-56-0400, filed 12/26/19, effective 7/1/20; WSR 17-10-074, § 51-56-0400, filed 5/3/17, effective 6/3/17; WSR 16-02-044, § 51-56-0400, filed 12/30/15, effective 7/1/16. Statutory Authority: RCW 19.27.074, 19.27.031 and chapters 19.27 and 34.05 RCW. WSR 13-04-054, § 51-56-0400, filed 2/1/13, effective 7/1/13; WSR 10-03-101, § 51-56-0400, filed 1/20/10, effective 7/1/10. Statutory Authority: RCW 19.27.190, 19.27.020 and chapters 19.27 and 34.05 RCW. WSR 07-01-094, § 51-56-0400, filed 12/19/06, effective 7/1/07. Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 04-01-110, § 51-56-0400, filed 12/17/03, effective 7/1/04; WSR 02-01-114, § 51-56-0400, filed 12/18/01, effective 7/1/02.]

AMENDATORY SECTION (Amending WSR 20-02-072, filed 12/26/19, effective 7/1/20)

**WAC 51-56-0500 Chapter 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)<sup>1,3</sup>

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	38	49	49	49	62	62	74	62	74	74	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 102.4.

**501.1.2 Consumer Electric Storage Water Heater Requirements.** Consumer electric storage water heaters must have a modular demand response communications port compliant with the March 2018 version of the ANSI/CTA-2045-A communication interface standard, or equivalent and the March 2018 version of the ANSI/CTA-2045-A application layer requirements. The interface standard and application layer requirements required in this subsection are the versions established on March 16, 2018.

EXCEPTIONS:

1. Water heaters manufactured prior to January 1, 2021.

2. Electric storage water heaters other than heat pump type water heaters manufactured prior to January 1, 2022.

**501.1.3 Mini-tank Electric Water Heaters.** The standby energy consumption of hot water dispensers and mini-tank electric water heaters manufactured on or after January 1, 2010, shall be not greater than 35 watts. Mini-tank electric water heaters shall be tested in accordance with the method specified in the California Code of 39 Regulations, Title 20, section 1604 in effect as of July 26, 2009.

**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.

[Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 20-02-072, § 51-56-0500, filed 12/26/19, effective 7/1/20; WSR 17-10-074, § 51-56-0500, filed 5/3/17, effective 6/3/17; WSR 16-02-044, § 51-56-0500, filed 12/30/15, effective 7/1/16. Statutory Authority: RCW 19.27.074, 19.27.031 and chapters 19.27 and 34.05 RCW. WSR 13-04-054, § 51-56-0500, filed 2/1/13, effective 7/1/13; WSR 11-05-037, § 51-56-0500, filed 2/8/11, effective 7/1/13; WSR 10-03-101, § 51-56-0500, filed 1/20/10, effective 7/1/10. Statutory Authority: RCW 19.27.190, 19.27.020 and chapters 19.27 and 34.05 RCW. WSR 07-01-094, § 51-56-0500, filed 12/19/06, effective 7/1/07. Statutory Authority: RCW 19.27.031 and 19.27.074. WSR 04-01-110, § 51-56-0500, filed 12/17/03, effective 7/1/04; WSR 02-01-114, § 51-56-0500, filed 12/18/01, effective 7/1/02.]