



# PROPOSED RULE MAKING

## CR-102 (December 2017) (Implements RCW 34.05.320)

Do NOT use for expedited rule making

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER  
STATE OF WASHINGTON  
FILED

DATE: August 11, 2020

TIME: 8:50 AM

WSR 20-17-049

**Agency:** Washington State Building Code Council

**Original Notice**

**Supplemental Notice to WSR** \_\_\_\_\_

**Continuance of WSR** \_\_\_\_\_

**Preproposal Statement of Inquiry was filed as WSR 20-13-080 ; or**

**Expedited Rule Making--Proposed notice was filed as WSR \_\_\_\_\_; or**

**Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or**

**Proposal is exempt under RCW \_\_\_\_\_.**

**Title of rule and other identifying information:** (describe subject) WAC 51-56, Adoption and amendment of the 2018 Uniform Plumbing Code.

**Hearing location(s):**

Date:	Time:	Location: (be specific)	Comment:
October 9, 2020	10:00 am	Department of Enterprise Services Presentation Room (1213) 1500 Jefferson Street Olympia, WA 98504	

**Date of intended adoption:** November 6, 2020 (Note: This is **NOT** the **effective** date)

**Submit written comments to:**

Name: Diane Glenn

Address: 1500 Jefferson St SE, Olympia, WA 98504

Email: SBCC@des.wa.gov

Fax:

Other:

By (date) October 16, 2020

**Assistance for persons with disabilities:**

Contact Shannon Pitts

Phone: 360-407-9255

Fax:

TTY:

Email: Shannon.pitts@des.wa.gov

Other:

By (date) October 2, 2020

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

The proposed rules adopt the 2018 edition of the Uniform Plumbing Code, published by the International Association of Plumbing and Mechanical Officials, with state amendments to incorporate proposed changes as adopted by the Washington State Building Code Council. The rules will provide increased clarity and life safety measures for building construction in Washington State.

**SUMMARY OF PROPOSED CHANGES**

**2018 UPC  
Amendments to WAC 51-56\***

	<b>WAC</b>	<b>Section</b>	<b>Changes in 2018</b>	<b>Discussion</b>
1	51-56-400	407.2	Water consumption (Faucets)	Legislative Modification
2	51-56-400	407.2.1	Maximum Water Flow	Legislative Modification
3	51-56-400	407.2.1.1	Residential Lavatory Faucets	Legislative Modification
4	51-56-400	407.2.1.2	Lavatory Faucets in Common and Public Use Areas	Legislative Modification
5	51-56-400	407.2.2	Metering Faucets	Legislative Modification
6	51-56-400	408.2	Water Consumption (Shower heads)	Legislative Modification
7	51-56-400	408.2.1	Multiple Showerheads Serving One Shower	Legislative Modification
8	51-56-400	408.2.5	Tub Spout Diverters and Showerhead Tub Spout Diverter Combinations	Legislative Modification
9	51-56-400	411.2	Water Consumption (Water Closets)	Legislative Modification
10	51-56-400	411.2.1	Dual Flush Water Closets	Legislative Modification
11	51-56-400	411.2.2	Performance	Legislative Modification
12	51-56-400	411.2.3	Flushometer Valve Activated Water Closets	Legislative Modification
13	51-56-400	412.1	Application	Legislative Modification
14	51-56-400	420.2.1	Kitchen faucets	Legislative Modification
15	51-56-400	420.3	Pre-rinse spray valve	Legislative Modification
16	51-56-400	423.0	Landscape Irrigation	Legislative Modification
17	51-56-400	423.1	Sprinkler body	Legislative Modification
18	51-56-500	501.1.2	Consumer electric storage water heater requirements	Legislative Modification
19	51-56-500	501.1.3	Mini-tank electric water heaters	Legislative Modification

\*Note: those not listed on the table above remain as adopted in 2015.

**Reasons supporting proposal:**

RCW 19.27.031 and RCW 19.27-074

**Statutory authority for adoption:** 19.27.031, 19.27.074

**Statute being implemented:** 19.27.031, 19.27.074

**Is rule necessary because of a:**

Federal Law?  Yes  No

Federal Court Decision?  Yes  No

State Court Decision?  Yes  No

If yes, CITATION:

**Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters:** None

**Name of proponent:** (person or organization) State Building Code Council  Private  Public  Governmental

**Name of agency personnel responsible for:**

	Name	Office Location	Phone
Drafting:	Richard Brown	1500 Jefferson St. SE, Olympia, WA 98504	360-407-9277
Implementation:	Richard Brown	1500 Jefferson St. SE, Olympia, WA 98504	360-407-9277
Enforcement:	Local Jurisdictions Having Authority		

**Is a school district fiscal impact statement required under RCW 28A.305.135?**  Yes  No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:  
Address:  
Phone:  
Fax:  
TTY:  
Email:  
Other:

**Is a cost-benefit analysis required under RCW 34.05.328?**

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

Name: Richard Brown  
Address: 1500 Jefferson St. SE, Olympia, WA 98504  
Phone: 360-407-9277  
Fax:  
TTY:  
Email: Richard.brown@des.wa.gov  
Other:

No: Please explain:

**Regulatory Fairness Act Cost Considerations for a Small Business Economic Impact Statement:**

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see chapter 19.85 RCW). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.061 because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.

Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by RCW 34.05.313 before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of RCW 15.65.570(2) because it was adopted by a referendum.

- This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(3). Check all that apply:
- |   |  |
|---|--|
| <input type="checkbox"/> RCW 34.05.310 (4)(b)<br>(Internal government operations) | <input type="checkbox"/> RCW 34.05.310 (4)(e)<br>(Dictated by statute)   |
| <input type="checkbox"/> RCW 34.05.310 (4)(c)<br>(Incorporation by reference)     | <input type="checkbox"/> RCW 34.05.310 (4)(f)<br>(Set or adjust fees)  |
| <input type="checkbox"/> RCW 34.05.310 (4)(d)<br>(Correct or clarify language)    | <input type="checkbox"/> RCW 34.05.310 (4)(g)<br>((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit) |
- This rule proposal, or portions of the proposal, is exempt under RCW \_\_\_\_\_.  
Explanation of exemptions, if necessary:

**COMPLETE THIS SECTION ONLY IF NO EXEMPTION APPLIES**

If the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

- No Briefly summarize the agency's analysis showing how costs were calculated. \_\_\_\_\_
- Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses, and a small business economic impact statement is required. Insert statement here:  
There are costs imposed by the proposed rules but the costs do not fall disproportionately on small businesses. These rules will not affect the distribution of impacted work, whether by small businesses or not, doing the work. The rules do not affect employment, reporting or record keeping.

**Small Business Economic Impact Statement (RCW 19.85.040)**

**Description**

The Washington State Building Code Council (SBCC) is filing a proposed rule to adopt the updated 2018 edition of Uniform Plumbing Code (UPC) (WAC 51-56). Since 1985 the state building code council has been responsible to update to new editions of the building code per RCW 19.27.074. The UPC is updated every three years by the International Association of Plumbing and Mechanical Officials (IAPMO). The code development process conducted by the model code organization is open to all interest groups within the design and construction industry and from governmental organizations. See the IAPMO web site for more information about the model code development process.

The administrative compliance requirements are under the authority of the local government. RCW19.27.050. Compliance activities including permit issuance, plan review and approval, and inspections occur at the local level. Requirements for construction document submittal and other reporting requirements are determined by the local jurisdiction and are consistent with previously established policies. The proposed amendments to WAC 51-56 include specific technical requirements for building construction to be consistent with national standards.

**Professional Services**

Washington has had a statewide building code in effect since 1974. The local enforcement authority having jurisdiction administers the codes through the building and/or fire departments. Administrative procedures for state building code compliance are established and will not be changed by the adoption of the update to the current building codes. Small businesses will employ the same types of professional services for the design and construction of buildings and systems to comply with the state building code.

The proposed rule updates the state building code and does not require additional equipment, supplies, labor or other services. Services needed to comply with the building code are existing within the construction industry as required by the local authority having jurisdiction.

**Costs of Compliance for Businesses**

The cost of compliance incurred by Washington businesses includes training and educational materials. The UPC 2018 model codes costs \$125 + tax shipping and handling. This publication is also available on the IAPMO web site. The IAPMO offers training for continuing education credits to architects, engineers and building inspectors.

The Plumbing Code technical advisory group (TAG) determined there is a cost for compliance on businesses for the following proposed state amendments.

1. Table 504.1 note 2: This revision will assure that the water heater will be able to provide the system with hot water when needed - the non-storage water heater cannot act as a restriction to flow during peak load operation per UPC section 610.2. There is a minor economic impact - Tankless water heater will have to be rated for higher flow to meet this requirement.

2. Sections 407.2, 408.2, 411.2, 412, 420, 423, 501.1.3, 501.1.3. These changes are in response to SSHB 1444 legislation from the 2019 legislative session. The changes update appliance standards. The change will increase construction costs but reduce energy consumption. Because these requirements are established by statute, a cost analysis not required here.

**Loss of Sales or Revenue**

The proposed rules make the state code for building construction consistent with national standards. Businesses with new products or updated test or design standards are recognized in the updated building code.

The update will result in some cost outlay for some small businesses for specific building projects, for a transition period. Other small businesses would see an increase in revenue. The amendments to the plumbing code affect over 25,000 (in 2012) small businesses in the state, where construction activity occurs. The primary intent of the amendments is to improve the safety features in buildings and provide consistency and fairness across the state, for a predictable business environment. The amendments should result in enhanced safety and value in buildings.

**Cost of Compliance for Small Businesses** (Determine whether the proposed rule will have a disproportionate cost impact on small businesses, compare the cost of compliance for small business with the cost of compliance for the ten percent of businesses that are the largest businesses.)

The majority of businesses affected by the updates to the plumbing code are small businesses; over 95 percent of those listed in the construction and related industries have under 50 employees. The costs per employee are comparable between the largest businesses and the majority of small businesses. The cost to comply with the updated codes is not a disproportionate impact on small business.

**Reducing the Costs of the Rule on Small Businesses**

The SBCC conducted a detailed review process, including participation at the national code development hearings, to document significant economic impacts of the proposed code amendments.

**Small Businesses Involved in the Development of the Rule**

For the UPC, the SBCC conducted five open public meetings of the building code technical advisory group, available via telephone conference bridge and over the internet, and allowed comment on every item on every agenda. For the UPC, the SBCC appointed 10 representatives of all segments of the business and construction community to serve on the technical advisory groups.

**List of Industries**

Below is a list of industries required to comply with the building code:

North American Industry Classification System (NAICS) Code	NAICS Code Definition	Number of Establishments in Washington State	TOTAL Annual Payroll	TOTAL Annual Revenue	AVG Annual Payroll	AVG Annual Revenue	1% of Avg Annual Payroll	0.3% of Avg Annual Revenue
236115	New single-family housing construction (except for-sale builders)	1261	\$186,272,000	---	\$147,718	---	\$1,477	---
236116	New multifamily housing construction (except for-sale builders)	45	\$54,622,000	---	\$1,213,822	---	\$12,138	---
236118	Residential remodelers	2777	\$318,180,000	\$1,536,217,000	\$114,577	\$553,193	\$1,146	\$1,660
236210	Industrial building construction	53 (s)	\$99,790,000	---	---	---	---	---
236220	Commercial and institutional building construction	862	\$772,473,000	\$6,925,925,000	\$896,140	\$8,034,716	\$8,961	\$24,104

	238110	Poured concrete foundation and structure contractors	511	\$144,643,000	\$479,256,000	\$283,059	\$937,879	\$2,831	\$2,814
	238120	Structural steel and precast concrete contractors	68	\$93,454,000	\$336,100,000	\$1,374,324	\$4,942,647	\$13,743	\$14,828
	238130	Framing contractors	417	\$79,196,000	\$279,226,000	\$189,918	\$669,607	\$1,899	\$2,009
	238140	Masonry contractors	293	\$74,067,000	\$215,274,000	\$252,788	\$734,724	\$2,528	\$2,204
	238150	Glass and glazing contractors	141	\$67,626,000	\$237,985,000	\$479,617	\$1,687,837	\$4,796	\$5,064
	238160	Roofing contractors	537	\$179,942,000	\$660,911,000	\$335,088	\$1,230,747	\$3,351	\$3,692
	238170	Siding contractors	327	\$58,557,000	\$286,471,000	\$179,073	\$876,058	\$1,791	\$2,628
	238190	Other foundation, structure, and building exterior contractors	113	\$37,585,000	\$123,771,000	\$332,611	\$1,095,319	\$3,326	\$3,286
	238210	Electrical contractors and other wiring installation contractors	1847	\$940,854,000	\$3,026,762,000	\$509,396	\$1,638,745	\$5,094	\$4,916
	238220	Plumbing, heating, and air-conditioning contractors	1664	\$959,976,000	\$3,169,548,000	\$576,909	\$1,904,776	\$5,769	\$5,714
	238290	Other building equipment contractors	81	\$117,696,000	---	\$1,453,037	---	\$14,530	---
	238310	Drywall and insulation contractors	653	\$282,929,000	\$723,945,000	\$433,276	\$1,108,644	\$4,333	\$3,325
	238990	All other specialty trade contractors	547	\$182,710,000	\$573,308,000	\$334,022	\$1,048,095	\$3,340	\$3,144
	321213	Engineered wood member (except truss) manufacturing	11	\$14,216,000	\$79,051,000	\$1,292,364	\$7,186,455	\$12,924	\$21,559
	321214	Truss manufacturing	22	---	---	---	---	---	---
	321219	Reconstituted wood product manufacturing	3	---	---	---	---	---	---
	321911	Wood window and door manufacturing	39	\$37,814,000	\$145,137,000	\$969,590	\$3,721,462	\$9,696	\$11,164

321992	Prefabricated wood building manufacturing	18	\$6,891,000	---	\$382,833	---	\$382,833	---
327310	Cement manufacturing	7	---	---	---	---	---	---
327320	Ready-mix concrete manufacturing	93	\$74,457,000	---	\$800,613	---	\$8,006	---
327331	Concrete block and brick manufacturing	18	\$11,218,000	---	\$623,222	---	\$6,232	---
332311	Prefabricated metal building and component manufacturing	9	\$3,564,000	---	\$396,000	---	\$3,960	---
332312	Fabricated structural metal manufacturing	94	\$125,755,000	---	\$1,337,819	---	\$13,378	---
332321	Metal window and door manufacturing	16	\$23,776,000	---	\$1,486,000	---	\$14,860	---
332322	Sheet metal work manufacturing	122	\$122,956,000	\$573,443,000	\$1,007,836	\$4,700,352	\$10,078	\$14,101
335121	Residential electric lighting fixture manufacturing	9	---	---	---	---	---	---
335122	Commercial, industrial, and institutional electric lighting fixture manufacturing	8	\$2,625,000	---	\$328,125	---	\$3,281	---
335129	Other lighting equipment manufacturing	4	---	---	---	---	---	---
423720	Plumbing and heating equipment and supplies (hydronics) merchant wholesalers	168	\$82,225,000	\$897,748,000	\$489,435	\$5,343,738	\$4,894	\$16,031
541310	Architectural services	635	\$326,798,000	\$921,033,000	\$514,643	\$1,450,446	\$5,146	\$4,351
541330	Engineering services	1599	\$1,758,825,000	\$3,946,553,000	\$1,099,953	\$2,468,138	\$11,000	\$7,404
541350	Building inspection services	154	\$9,724,000	\$28,297,000	\$63,143	\$183,747	\$631	\$551

	Security systems services (except locksmiths)								
561621		109	\$86,072,000	\$233,388,000	\$789,651	\$2,141,174	\$7,897	\$6,424	


Note: Data is blank in some fields to protect data source.  
Data Source: Economic Census of the United States

**Estimate of the Number of Jobs That Will Be Created or Lost**

The adoption of the latest code edition is not expected to significantly impact the number of jobs in the construction industry. These rules are likely to be job neutral overall, i.e., they will not result in any job gains or losses. The scheduled effective date of the new edition is July 1, 2020. Building permits issued prior to that date will be vested under the 2015 building code. Permits issued for projects under the 2018 code edition will generally start with the 2021 construction season.

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

Name: Richard Brown  
Address: 1500 Jefferson St. SE, Olympia, WA 98504  
Phone: 360-407-9277  
Fax:  
TTY:  
Email: Richard.brown@des.wa.gov  
Other:

<b>Date:</b> August 10, 2020	<b>Signature:</b>  
<b>Name:</b> Diane Glenn	
<b>Title:</b> Council Chair	



**Chapter 51-56 WAC**  
**STATE BUILDING CODE ADOPTION AND AMENDMENT OF THE ((2015)) 2018 EDI-**  
**TION 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.

**408.2.5 Tub Spout Diverters and Showerhead Tub Spout Diverter Combinations.** The tested leakage rate of tub spout diverters shall be not greater than 0.01 gallons per minute when new and no greater than 0.05 gallons per minute after 15,000 test cycles. Showerhead tub spout diverter combinations: Showerhead tub spout diverter combinations shall meet both the standard for showerheads and the standard for tub spout diverters.

**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 accord-~~

~~ance 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 1.6 gallons (6.0 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. 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))~~ consumption not to exceed 0.125 gallons (0.47 L) per flush. 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.

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 in March 16 2018.

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

**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.