

California Energy Commission

APPLIANCE EFFICIENCY REGULATIONS

California Code of Regulations Title 20, Sections 1601 Through 1608

Toilets, Urinals, and Faucets Regulations Effective January 1, 2016



CALIFORNIA
ENERGY COMMISSION

Edmund G. Brown Jr., Governor

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Proposed State Regulations

Proposed new language appears as underline (example) and proposed deletions appear as strikeout (~~example~~). Existing language appears as plain text. Three dots or "... " represents the substance of the regulations that exists between the proposed language and current language.

Section 1601. Scope.

This Article applies to the following types of new appliances, if they are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles, or other mobile equipment. Unless otherwise specified, E each provision applies only to units manufactured on or after the effective date of the provision.

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(h) Plumbing fittings, which are showerheads, lavatory faucets, kitchen faucets, metering faucets, replacement aerators, wash fountains, tub spout diverters, public lavatory faucets, and commercial pre-rinse spray valves.

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Note: Authority cited: Sections 25213, 25218(e), 25402(a)-(c) and 25960, Public Resources Code. Sections 16, 26 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25402(a)-(c) and 25960, Public Resources Code. Section 16, Governor's Executive Order No. B-29-15 (April 1, 2015).

Section 1602. Definitions.

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(h) Plumbing Fittings.

“Plumbing fitting” means a device that controls and guides the flow of water in a supply system. Examples include showerhead, lavatory faucet, kitchen faucet, metering faucet, lavatory replacement aerator, kitchen replacement aerator, wash fountain, commercial pre-rinse spray valve, or tub spout diverter.

“Public lavatory faucet” means a fitting-intended to be installed in non-residential bathrooms that are exposed to walk-in traffic.

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(i) Plumbing Fixtures.

“Dual-flush effective flush volume” means the average flush volume of two reduced flushes and one full flush.

“Dual-flush water closet” is a water closet incorporating a feature that allows the user to flush the water closet with either a reduced or a full volume of water.

“Plumbing fixture” means an exchangeable device, which connects to a plumbing system to deliver and drain away water and waste. A plumbing fixture includes a water closet or a urinal.

Note: Authority cited: Sections 25213, 25218(e), 25402(a)-(c) and 25960, Public Resources Code. Sections 16, 26 and 30, Governor’s Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25402(a)-(c) and 25960, Public Resources Code. Section 16, Governor’s Executive Order No. B-29-15 (April 1, 2015).

Section 1604. Test Methods for Specific Appliances.

(i) Plumbing Fixtures.

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The test methods for plumbing fixtures ~~is~~ are:

(1) 10 C.F.R. section 430.23(t) (Appendix T to Subpart B of part 430).

(2) Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013.

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The American Society for Mechanical Engineers (ASME)

ASME A112.19.2/CSA B45.1-2013

Ceramic Plumbing Fixtures

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Note: Authority cited: Sections 25213, 25218(e), 25402(a)-(c) and 25960, Public Resources Code. Sections 16, 26 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25402(a)-(c) and 25960, Public Resources Code. Section 16, Governor's Executive Order No. B-29-15 (April 1, 2015).

Section 1605.1. Federal and State Standards for Federally-Regulated Appliances.

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(h) Plumbing Fittings.

- (1) **Showerheads, Metering Faucets, Aerators, and Wash Fountains.** The flow rate of showerheads, lavatory faucets, kitchen faucets, lavatory replacement aerators, kitchen replacement aerators, wash fountains, and metering faucets shall be not greater than the applicable values shown in Table H-1. Showerheads shall also meet the requirements of ASME/ANSI Standard A112.18.1M-1996, 7.4.4(a) A112.18.1-2012.

Table H-1 Standards for Plumbing Fittings

Appliance	Maximum Flow Rate
Showerheads	2.5 gpm at 80 psi
Lavatory faucets	2.2 gpm at 60 psi ^{1,2}
Kitchen faucets	2.2 gpm at 60 psi
Replacement aerators	2.2 gpm at 60 psi
Wash fountains	2.2 · $\frac{\text{rim space (inches)}}{20}$ gpm at 60 psi
Metering faucets	0.25 gallons/cycle ^{1,2}
Metering faucets for wash fountains	0.25 · $\frac{\text{rim space (inches)}}{20}$ gpm at 60 psi ^{1,2,3,4}

¹~~Sprayheads with independently-controlled orifices and manual controls.~~ The maximum flow rate of each orifice that manually turns on or off shall not exceed the maximum flow rate for a lavatory faucet.

²~~Sprayheads with collectively-controlled orifices and manual controls.~~ The maximum flow rate of a sprayhead that manually turns on or off shall be the product of (a) the maximum flow rate for a lavatory faucet and (b) the number of component lavatories (rim space of the lavatory in inches (millimeters) divided by 20 inches (508 millimeters)).

¹³~~Sprayheads with independently-controlled orifices and metered controls.~~ The maximum flow rate of each orifice that delivers a pre-set volume of water before gradually shutting itself off shall not exceed the maximum flow rate for a metering faucet.

²⁴~~Sprayheads with collectively-controlled orifices and metered controls.~~ The maximum flow rate of a sprayhead that delivers a pre-set volume of water before gradually shutting itself off shall be the product of (a) the maximum flow rate for a metering faucet and (b) the number of component lavatories (rim space of the lavatory in inches (millimeters) divided by 20 inches (508 millimeters)).

- (5) Lavatory faucets, kitchen faucets, aerators, and public lavatory faucets. See Section 1605.3 (h)(2) for standards for all lavatory faucets, kitchen faucets, aerators, and public lavatory faucets sold or offered for sale in California.

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(I) Plumbing Fixtures.

The water consumption of water closets and urinals shall be not greater than the values shown in Table I.

**Table I
Standards for Plumbing Fixtures**

Appliance	Maximum Gallons per Flush
Gravity tank type water closets	1.6
Flushometer tank water closets	1.6
Electromechanical hydraulic water closets	1.6
Blowout water closets	3.5
Trough type urinals	trough length (inches)16
Other urinals	1.0

See Section 1605.3(i) for water efficiency standards for plumbing fixtures

Note: Authority cited: Sections 25213, 25218(e), 25402(a)-(c) and 25960, Public Resources Code. Sections 16, 26 and 30, Governor’s Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25402(a)-(c) and 25960, Public Resources Code. Section 16, Governor’s Executive Order No. B-29-15 (April 1, 2015).

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Section 1605.2. State Standards for Non-Federally-Regulated Appliances.

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(i) Plumbing Fixtures.

See Section 1605.13(i) for water efficiency standards for plumbing fixtures ~~that are federally regulated consumer products.~~

Note: Authority cited: Sections 25213, 25218(e), 25402(a)-25402(c) and 25960, Public Resources Code. Sections 16, 26 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25402(a)-25402(c) and 25960, Public Resources Code. Section 16, Governor's Executive Order No. B-29-15 (April 1, 2015).

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Section 1605.3. State Standards for Non-Federally-Regulated Appliances.

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(h) Plumbing Fittings.

(1) **Tub Spout Diverters and Showerhead Tub Spout Diverter Combinations.** The leakage rate of tub spout diverters manufactured on or after March 1, 2003 shall be not greater than the applicable values shown in Table H-2. Showerhead tub spout diverter combinations shall meet both the standard for showerheads and the standard for tub spout diverters.

~~(2) Showerhead Tub Spout Diverter Combinations. Showerhead tub spout diverter combinations shall meet both the standard for shower heads and the standard for tub spout diverters.~~

(2) **Faucets and Aerators.** The flow rate of lavatory faucets, kitchen faucets, replacement accessories, lavatory replacement aerators, kitchen replacement aerators, wash fountains, and metering faucets shall be not greater than the applicable values shown in Table H-3.

Table H-3: Standards for Plumbing Fittings

<u>Appliance</u>	<u>Maximum Flow Rate</u>	
	<u>Sold or offered for sale prior to January 1, 2016</u>	<u>Sold or offered for sale on or after January 1, 2016¹</u>
<u>Lavatory faucets and aerators</u>	<u>2.2 gpm at 60 psi^{2,3}</u>	<u>1.2 gpm at 60 psi^{2,3}</u>
<u>Kitchen faucets and aerators</u>	<u>2.2 gpm at 60 psi</u>	<u>1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi</u>
<u>Public lavatory faucets</u>	<u>2.2 gpm at 60 psi</u>	<u>0.5 gpm at 60 psi</u>
¹ For the items identified in Table H-3, noncompliant products may not be sold or offered for sale on or after January 1, 2016, regardless of manufactured date. ² Sprayheads with independently-controlled orifices and manual controls. The maximum flow rate of each orifice that manually turns on or off shall not exceed the maximum flow rate for a lavatory faucet. ³ Sprayheads with collectively-controlled orifices and manual controls. The maximum flow rate of a sprayhead that manually turns on or off shall be the product of (a) the maximum flow rate for a lavatory faucet and (b) the number of component lavatories (rim space of the lavatory in inches (millimeters) divided by 20 inches (508 millimeters)).		

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(i) Plumbing Fixtures.

(1) The water consumption of water closets, and urinals, other than those designed and marketed exclusively for use at prisons or mental health care facilities, shall be no greater than the values shown in Table I-2.

See Section 1605.1(i) for water efficiency standards for plumbing fixtures that are federally-regulated consumer products.

Table I-2 Standards for Plumbing Fixtures

<u>Appliance</u>	<u>Maximum Gallons per Flush or Dual-flush effective flush volume</u>	
	<u>Sold or offered for sale on or after January 1, 2014¹</u>	<u>Sold or offered for sale on or after January 1, 2016¹</u>
<u>All water closets</u>	<u>1.28</u>	<u>1.28</u>
<u>Trough-type urinals</u>	<u>trough length (inches) 16</u>	<u>trough length (inches) 16</u>
<u>Wall mounted urinals</u>	<u>0.5</u>	<u>0.125</u>
<u>Other urinals</u>	<u>0.5</u>	<u>0.5</u>
¹ For the items identified in Table I-2, noncompliant products may not be sold or offered for sale on or after the designated date, regardless of manufactured date.		

(2) Water closets sold or offered for sale or after January 1, 2016 shall pass the Waste Extraction Test (Section 7.10) of ASME A112.19.2.

Note: Authority cited: Sections 25213, 25218(e), 25402(a)-(c) and 25960, Public Resources Code. Sections 16, 26 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25402(a)-(c) and 25960, Public Resources Code. Section 16, Governor's Executive Order No. B-29-15 (April 1, 2015).

Section 1606. Filing by Manufacturers; Listing of Appliances in Database.

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Table X Continued – Data Submittal Requirements

	Appliance	Required Information	Permissible
H	Plumbing Fittings	*Type	Showerhead, lavatory faucet (independent or collective), <u>public lavatory faucet</u> , kitchen faucet, metering faucet (independent or collective), lavatory replacement aerator, kitchen replacement aerator, wash fountain, lift-type tub spout diverter, turn-type tub spout diverter, pull-type tub spout diverter, push-type tub spout diverter
		Flow Rate	
		Pulsating (for showerheads only)	Yes, no
		Rim Space (for wash fountains only)	
		Tub Spout Leakage Rate When New	
		Tub Spout Leakage Rate After 15,000 Cycles	
		Commercial Prerinse Spray Valves	Flow Rate (gpm)
	Cleaning ability test	Pass, fail	

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Table X Continued – Data Submittal Requirements

	Appliance	Required Information	Permissible
I	Plumbing Fixtures	*Type	Blowout water closet, gravity tank type water closet, <u>dual-flush water closet</u> , electromechanical hydraulic water closet, flushometer tank water closet, urinal , prison-type urinal, prison-type water closet, flushometer valve water closet, trough-type urinal, <u>wall-mounted urinal</u> , waterless urinal, vacuum <u>other</u> type urinal, vacuum type water closet
		Water Consumption (<u>dual-flush effective flush volume for dual-flush water closet</u>)	
		<u>Passes waste extraction test</u>	<u>Yes, No</u>
		<u>Waste extraction value</u>	<u>grams</u>
		Trough Length (trough-type urinals only)	

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(4) Declaration.

(A) Each statement shall include a declaration, executed under penalty of perjury of the laws of California, that

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4. the appliance was tested under the applicable test method specified in Section 1604, and, for the following appliances, was tested as follows:

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j. for kitchen faucets that utilize an optional and temporary higher flow rate than 1.8 gpm, the higher flow rate has been tested utilizing the test procedure identified for kitchen faucets in section 1604(h) at 60 psi and verified to have a flow rate less than or equal 2.2 gpm.

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Note: Authority cited: Sections 25213, 25218(e), 25402(a)-(c) and 25960, Public Resources Code. Sections 16, 26 and 30, Governor's Executive Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25402(a)-(c) and 25960, Public Resources Code. Section 16, Governor's Executive Order No. B-29-15 (April 1, 2015).