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California Energy Commission

PROPOSED AMENDMENTS TO APPLIANCE EFFICIENCY REGULATIONS

**CALIFORNIA CODE OF REGULATIONS TITLE 20, SECTIONS 1601
THROUGH 1609**

**2015 APPLIANCE EFFICIENCY RULEMAKING FOR RESIDENTIAL
LAVATORY FAUCETS AND SHOWERHEADS**

Docket Number: 15-AAER-5



CALIFORNIA
ENERGY COMMISSION

Edmund G. Brown Jr., Governor

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Proposed 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 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, public lavatory faucet, or tub spout diverter.

“Showerhead” means a device through which water is discharged for a shower bath: and includes a body sprayer and handheld showerhead but does not include Showerhead means any showerhead (including a body sprayer or hand held showerhead), except a safety showerhead.

~~“Showerhead” means a device through which water is discharged for a shower bath.~~

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“Water use” means the quantity of water flowing through a showerhead or faucet, at point of use, as determined in accordance with using the test method in procedures under Appendix S of subpart B of 10 C.F.R. part 430 section 1604(h).

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Note: Authority cited: Sections 25213, 25218(e), 25402(a)-25402(c) and 25960, Public Resources Code; and 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), 25402.5.4 and 25960, Public Resources Code; and section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).

Section 1604. Test Methods for Specific Appliances.

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(h) Plumbing Fittings.

- (1) The test method for commercial pre-rinse spray valves is 10 C.F.R. sections 431.263 and 431.264,
- (2) The test methods for showerheads are:
 - (A) **Maximum flow rate test.** The test method for determining maximum flow rate of a showerhead is 10 C.F.R. section 430.23(t) (Appendix S to Subpart B of Part 430).
 - (B) **Minimum flow rate test.** The test method for determining minimum flow rates of a showerhead is ASME A112.18.1-2012 / CSA B125.1-2012, Section 5.12.
 - (C) **Showerheads with multiple nozzles.** Showerheads with multiple nozzles shall be tested with all nozzles in use at the same time.
- (2) (3) The test method for other plumbing fittings is 10 C.F.R. section 430.23(s) (Appendix S to Subpart B of part 430).
- (3) (4) Showerhead-tub spout diverter combinations shall have both the showerhead and tub spout diverter tested individually.

(i) Plumbing Fixtures.

The test methods for plumbing fixtures are:

- (1) ~~10 C.F.R. section 430.23(t) (Appendix T to Subpart B of part 430).~~ **Water Closets.** The test method for testing gallons per flush of water closets is 10 C.F.R. section 430.23 (u) (Appendix T to Subpart B of part 430). See Section 1604(i)(3) for the required waste extraction test.
- (2) **Urinals.** The test method for testing gallons per flush of urinals is 10 C.F.R. section 430.23(v) (Appendix T to Subpart B of part 430).
- (23) Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013.

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The following documents are incorporated by reference in Section 1604.

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The American Society for Mechanical Engineers (ASME)

ASME A112.19.2/CSA B45.1-2013

Ceramic Plumbing Fixtures

ASME A112.18.1-2012/CSA B125.1-2012

Plumbing Supply Fittings

Copies available from:

ASME Headquarters Two Park Avenue
New York, NY 10016-5990 www.asme.org
Phone: 800-843-2763 (U.S./Canada) 001-800-
843-2763 (Mexico) 973-882-1170 (outside
North America) Email:
CustomerCare@asme.org

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Note: Authority cited: Sections 25213, 25218(e), 25402(a)-25402(c) and 25960, Public Resources Code; and 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; and section 16, Governor's Exec. 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, and Wash Fountains.~~ The flow rate of ~~showerheads,~~ wash fountains, and metering faucets shall not be greater than the applicable values shown in Table H-1. ~~Showerheads shall also meet the requirements of ASME/ANSI Standard A112.18.1-2012.~~

Table H-1: Standards for Plumbing Fittings

<i>Appliance</i>	<i>Maximum Flow Rate</i>
Showerheads	2.5 gpm at 80 psi
Wash fountains	$2.2 \times \frac{\text{rim space (inches)}}{20}$ gpm at 60 psi
Metering faucets	0.25 gallons/cycle ^{1,2}
Metering faucets for wash fountains	$0.25 \times \frac{\text{rim space (inches)}}{20}$ gpm at 60 psi ^{1,2}

¹**Sprayheads with independently controlled orifices and metered controls.** The maximum flow rate of each orifice that delivers a preset volume of water before gradually shutting itself off shall not exceed the maximum flow rate for a metering faucet.

²**Sprayheads with collectively-controlled orifices and metered controls.** The maximum flow rate of a sprayhead that delivers a preset 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]).

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(5) Showerheads, Lavatory faucets, kitchen faucets, aerators, and public lavatory faucets.

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

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The following documents are incorporated by reference in Section 1605.1.

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~~The American Society for Mechanical Engineers (ASME)~~

~~ASME/ANSI A112.18.1M-1996~~

~~Copies available from:~~

~~Plumbing Supply Fittings~~

~~ASME International~~

~~Three Park Avenue~~

~~New York, NY 10016-5990~~

~~www.asme.org~~

~~Phone: 800-THE-ASME (U.S./Canada)~~

~~95-800-843-2763 (Mexico)~~

~~(973) 882-1170 (Outside North America)~~

Note: Authority cited: Sections 25213, 25218(e), 25402(a)-25402(c) and 25960, Public Resources Code; and 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; and section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).

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

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(h) Plumbing Fittings.

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- (2) Lavatory Faucets and Aerators. The flow rate of lavatory faucets, ~~kitchen faucets, replacement accessories, and 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~~ Lavatory Faucets and Aerators

<i>Appliance</i>	<i>Maximum Flow Rate</i>		
	<u>Manufactured prior to September 1, 2015</u> Sold or offered for sale prior to January 1, 2016	<u>Manufactured on or after September 1, 2015, and prior to July 1, 2016</u>	Sold or offered for sale <u>Manufactured on or after January 1, 2016¹</u>
Lavatory faucets and aerators	2.2 gpm at 60 psi ^{1,2,3}	<u>1.5 gpm at 60 psi ^{1,2}</u>	1.2 gpm at 60 psi ^{1,2,3}
Kitchen faucets and aerators	2.2 gpm at 60 psi		1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi
Public lavatory faucets	2.2 gpm at 60 psi		0.5 gpm at 60 psi
¹ For the items identified in Table H-3, noncompliance products may not be sold or offered for sale on or after January 1, 2016, regardless of manufacture 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. ^{2,3} 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)).			

- (3) Kitchen Faucets and Aerators and Public Lavatory Faucets and Aerators. The flow rate of kitchen faucets, kitchen replacement aerators, public lavatory faucets, and public lavatory replacement aerators shall be not greater than the applicable values shown in Table H-4.

- (a) For the plumbing fittings identified in Table H-4, noncompliant products may not be sold or offered for sale on or after January 1, 2016, regardless of manufacture date.

Table H-4: Standards for Kitchen Faucets and Aerators and Public Lavatory Faucets and Aerators

<i>Appliance</i>	<i>Maximum Flow Rate</i>	
	<u>Sold or offered for sale prior to January 1, 2016</u>	<u>Sold or offered for sale on or after January 1, 2016</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 and aerators</u>	<u>2.2 gpm at 60 psi</u>	<u>0.5 gpm at 60 psi</u>

- (3) (4) Commercial Pre-rinse Spray Valves.

(A) Commercial pre-rinse spray valves manufactured on or after January 1, 2006, shall be capable of cleaning 60 plates in an average time of not more than 30 seconds per plate.

(B) See Section 1605.1(h) for water consumption standards for commercial pre-rinse spray valves.

(5) **Showerheads.** The flow rate of showerheads shall be not greater than the applicable values shown in Table H-5.

Table H-5: Standards for Showerheads

<u>Appliance</u>	<u>Maximum Flow Rate</u>		
	<u>Manufactured on or after January 1, 1994 and prior to July 1, 2016</u>	<u>Manufactured on or after July 1, 2016 and prior to July 1, 2018</u>	<u>Manufactured on or after July 1, 2018</u>
Showerheads	2.5 gpm at 80 psi	2.0 gpm at 80 psi ^{1,2,3}	1.8 gpm at 80 psi ^{1,2,3}
¹ The maximum flow rate shall be the highest value obtained through testing at a flowing pressure of 80 ± 1 psi and shall not exceed the maximum flow rate in Table H-5.			
² Minimum flow rate. The minimum flow rate, determined through testing at a flowing pressure of 20 ± 1 psi, shall not be less than 60 percent of the maximum flow rate in Table H-5. The minimum flow rate determined through testing at flowing pressures of 45 and 80 ± 1 psi shall not be less than 75 percent of the maximum flow rate in Table H-5.			
³ Showerheads with multiple nozzles. The total flow rate of showerheads with multiple nozzles must be less than or equal to the maximum flow rate in Table H-5 when any or all nozzles are in use at the same time.			

(4) (6) **Other Plumbing Fittings.** See Section 1605.1(h) for ~~energy~~ water efficiency standards for plumbing fittings that are federally-regulated consumer products.

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Note: Authority cited: Sections 25213, 25218(e), 25402(a)-25402(c) and 25960, Public Resources Code; and 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), 25402.5.4 and 25960, Public Resources Code; and section 16, Governor's Exec. 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

	<i>Appliance</i>	<i>Required Information</i>	<i>Permissible Answers</i>
H	Plumbing Fittings	*Type	Showerhead, lavatory faucet (independent or collective), public lavatory faucet, 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
		<u>Minimum Flow Rate at 45 psi and 80 psi (for showerheads manufactured on or after July 1, 2016)</u>	
		<u>Minimum Flow Rate at 20 psi (for showerheads manufactured on or after July 1, 2016)</u>	
		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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Note: Authority cited: Sections 25213, 25218(e), 25402(a)-25402(c) and 25960, Public Resources Code; and 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), 25402.5.4 and 25960, Public Resources Code; and section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).