



California Energy Commission

DOCKETED

14-AAER-1

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California Energy Commission
Dockets Office, MS-4
Re: Docket No. 14-AAER-1
1516 Ninth Street
Sacramento, CA 95814-5512

RE: CEC DOCKET NO. 14-AAER-1, APPLIANCE EFFICIENCY PRE-RULEMAKING

Dear Commissioners:

Plumbing Manufacturers International (PMI) appreciates this opportunity to provide comments to the California Energy Commission (CEC) in its current rulemaking on water closets, urinals and faucets under Docket No. 14-AAER-1. PMI is an international, U.S.-based trade association representing 90% of U. S. plumbing products sold in the United States. It has made the promotion of water efficiency and safety a top priority and has included it in its mission statement¹. PMI's members are industry leaders in producing safe, reliable and innovative water efficient plumbing technologies and have supported water efficiency legislation and codes in California, as well as the voluntary US EPA WaterSense program.

PMI supports the recommendations of the CEC staff as outlined in their analysis, "Staff Analysis for Toilets, Urinals, and Faucets," as they are based on both CALGreen and AB 715; which are in turn based on EPA WaterSense Specifications. However, PMI strongly recommends the following revisions for both the "Staff Analysis for Toilets, Urinals, and Faucets," and CEC staff's recommended changes to specific text within Title 20, to be consistent with current California State Law (AB 715) and industry standards (ASME A112.18.1/CSA B125.1, ASME A112.19.2/CSA B45.1, and ASME A112.19.5/CSA B45.15). PMI is providing our edits to the specific proposed text for both the "Staff Analysis for Toilets, Urinals, and Faucets" and Title 20 using the following key:

KEY

CEC Staff underlines and ~~strike-outs~~

PMI underlines and ~~strike-outs~~

PMI substantiations

¹PMI's Mission: To promote the water efficiency, health, safety, quality and environmental sustainability of plumbing products while maximizing consumer choice and value in a fair and open marketplace. To provide a forum for the exchange of information and industry education. To represent openly the members' interests and advocate for sound environmental and public health policies in the regulatory/legislative processes. To enhance the plumbing industry's growth and expansion.

“Staff Analysis for Toilets, Urinals, and Faucets,” Page 16

Staff’s proposed standards for toilets, urinals, and faucets, which will take effect one year after adoption by the Energy Commission, are the following:

- All toilets, except those designed for prisons or mental health facilities, shall not consume more than 1.28 gpf and shall ~~comply with the have a MAP score~~ Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013 requiring removal of no fewer than 350 grams.

Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.

“Staff Analysis for Toilets, Urinals, and Faucets,” Page 23

The U.S. Environmental Protection Agency (EPA) has adopted 350g of uncased MaP media (soy bean paste) as the minimum performance threshold for high-efficiency toilets in its WaterSense program. Many water utilities with toilet replacement rebate and installation programs also apply a MaP of 350g. In addition, the ASME A112.19.2/CSA B45.1-2013 edition, Section 7.10, also includes the same measure of performance under the title Waste extraction test.

Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.

“Staff Analysis for Toilets, Urinals, and Faucets,” Page 23

~~Potential Clogging Issue with Incompatible Toilet Paper Media~~

~~Consumers’ improper use of an appliance can cause potential clogging of toilets and sewage system. In this case, the fibrous bathroom wipes, because of their high tensile strength, would not break down after being flushed to the sewer system. This can create sewage blockage in the house or main sewage collection system. For this problem, staff suggests that toilet manufacturers voluntarily imprint a label on the product or its installation manual, or to publish consumer education materials in its website to remind consumer not to put anything but urine, feces, and toilet paper into toilets.~~

Why? Toilet manufacturers cannot control how consumers use their products. Furthermore, there are several websites (refer to below) that provide education without putting a financial burden on toilet manufacturers.

http://www.kimberly-clark.com/newsroom/media_resources/safetoflush.aspx

<http://www.mwra.com/03sewer/html/toiletnottrashcan.html>

<http://www.cfpua.org/DocumentCenter/Home/View/781>

Proposed Changes to Title 20

Staff also moves the standard for wash fountain in **Table H-1 A-1 Standards for Plumbing Fittings** to **Table G-1 A-2 Standards for Plumbing Fixtures** because a wash fountain by itself is a plumbing fitting. This is a general housekeeping move and does not change the effectiveness of the current standards for wash fountains.

Why? There are no such tables as H-1 and G-1.

Section 1601. Scope.

(i) Plumbing fixtures, which are water closets, and urinals, and wash fountains, ~~and replacement valves for water closets and urinals.~~

Why? Flush valves are not considered “plumbing fixtures” in accordance with ASME A112.18.1/CSA B125.1 and ASME A112.19.5/CSA B45.15. What are wash fountains? There is no definition. They are not regulated by EPAct or AB 715.

Section 1602. Definitions.

(a) General.

~~“Map” means maximum flushing performance.~~

Why? Water closet testing is addressed in Section 7 of ASME A112.19.2/CSA B45.1-2013.

(h) Plumbing Fittings.

“Replacement accessory” means a component that can, at the discretion of the user, be readily added, removed, or replaced at that, when removed, will not prevent the fitting from fulfilling its primary function. Examples include, but not limited to, aerators, hand-held shower assemblies, showerheads, and in-line flow controls. device designed to regulate water flow, including but not limited to pressure compensating device, restricting device, aerator, laminar device, or spray device that is sold separately from the lavatory or kitchen faucet to which it is intended to be attached.

Why? The revision will correlate with the definition for “accessory” found in ASME A112.18.1/CSA B125.1-2012.

“Plumbing fitting” means a fitting that controls and guides the flow of water in a supply system. showerhead, lavatory faucet, kitchen faucet, metering faucet, replacement accessory, commercial pre-rinse spray valves, or tub spout diverter.

Why? The revision will correlate with the definition for “supply fitting” found in ASME A112.18.1/CSA B125.1-2012.

“Public lavatory faucet” means a fitting intended to be installed in non-residential bathrooms that are exposed to walk-in traffic. lavatory faucet that is designed and marketed expressly for use at a restroom available to the public.

Why? The revision will correlate with the definition for “public lavatory fitting” found in ASME A112.18.1/CSA B125.1-2012.

(i) Plumbing Fixtures.

“Blowout type bowl” means a nonsiphonic type water closet bowl with that is designed for a blowout action, and that has an integral flushing rim, a trapway at the rear of the bowl, and a visible or concealed jet that operates with a blowout action. , a wall outlet, and, if wall mounted, a three-bolt hole configuration.

Why? The revision will correlate with the definition for “blowout bowl” found in ASME A112.19.2/CSA B45.1-2013.

“Blowout urinal” means a urinal designed for heavy-duty commercial applications that work on a powerful nonsiphonic principle.

Why? This definition correlates with the same definition referenced in AB 715, and is consistent with PMI’s revision to Table A-2.

“Dual-flush average effective flush volume” ~~means the average of two small flushes and one large flush of a dual-flush water closet. is defined as the composite, average flush volume of two reduced flushes and one full flush.~~

Why? The revision will correlate with the definition for “effective flush volume” found in AB 715.

“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. ~~that allows a user to choose between two amounts of water to flush.~~

Why? The revision will correlate with the definition for “dual-flush water closet” found in ASME A112.19.2/CSA B45.1-2013.

“Electromechanical hydraulic water closet” means a water closet with a non-mechanical trap seal incorporating an electric motor and controller to facilitate flushing. ~~that uses electrically operated devices, such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet bowl.~~

Why? The revision will correlate with the definition for “electro-hydraulic water closet” found in ASME A112.19.2/CSA B45.1-2013.

“Flushometer valve” means a flushing device valve that is attached to a pressurized water supply pipe ~~and that, is designed so that~~ when actuated, ~~it~~ opens the line pipe for direct flow into the fixture at a rate and in a predetermined quantity that enables to properly operation of operate the fixture, ~~and The valve~~ then gradually closes ~~in order~~ to provide trap reseal in the fixture and ~~to~~ avoid water hammer. ~~The pipe to which the device is connected is, in itself, of sufficient size that when open shall allow the device to deliver water at a sufficient rate of flow for flushing.~~

Why? The revision will correlate with the definition for “flushometer valve” found in ASME A112.19.2/CSA B45.1-2013.

“Institutional water closet” means any water closet fixture with a design not typically found in residential or commercial applications or that is designed for a specialized application, including, but not limited to, wall-mounted floor-outlet water closets, water closets used in jails or prisons, water closets used in bariatric applications, and child water closets used in day care facilities.

Why? This definition correlates with the same definition referenced in AB 715, and is consistent with PMI’s change in Section 1605.1(i)(1).

“Plumbing fixture” means a device that receives water or waste matter, or both, and directs these substances into a drainage system. ~~an exchangeable device, which is connected to an existing plumbing system to deliver and drain away water and/or waste. For this section, plumbing fixture includes a water closet, or a urinal, wash fountain, or replacement valve.~~

Why? The revision will correlate with the definition for “fixture” found in ASME A112.18.1/CSA B125.1-2012 and ASME A112.19.2/CSA B45.1-2013.

“Replacement valve” means a valve that is clearly labeled for use ~~to replace the existing flushing valve of an existing toilet or urinal in buildings built on or before 1994.~~

Why? There is no such term as “replacement valve.” Marking them as “replacement” could be problematic, as they are not currently marked as such throughout the industry.

“Urinal” means a plumbing fixture that receives only liquid body waste and, ~~on demand,~~ conveys the waste through a trap seal into a gravity drainage system.

Why? The revision will correlate with the definition for “urinal” found in ASME A112.19.2/CSA B45.1-2013.

“Water closet” means a ~~plumbing~~ fixture ~~with having~~ a water-containing receptor that receives liquid and solid body waste ~~and on actuation conveys the waste~~ through an exposed integral trap into a ~~gravity~~ drainage system.

Why? The revision will correlate with the definition for “water closet” found in ASME A112.19.2/CSA B45.1-2013.

“Water use” means the quantity of water flowing through a water closet or urinal at point of use, determined in accordance with test procedures under Appendix T of subpart B of 10 C.F.R. part 430.

~~“Waterless urinal” means a urinal designed to be used without the application of water for flushing.~~

~~“Nonwater-supplied urinal” means a urinal that conveys liquid body waste through a trap seal into a gravity drainage system without the use of water.~~

Why? The change from “waterless urinal” to “nonwater-supplied urinal” is consistent with terminology used in AB 715. Furthermore, the revision will correlate with the definition for a “non-water-consuming urinal” found in ASME A112.19.2/CSA B45.1-2013.

Section 1604. Test Methods for Specific Appliances.

(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).

(2) ~~Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013. MaP Testing Toilet Fixture Performance Testing Protocol Version 5 March 2013.~~

Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.

The following documents are incorporated by reference in Section 1604.

~~**MAXIMUM PERFORMANCE (MaP) TESTING**~~

~~Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013 MaP Testing Toilet Fixture Performance Testing Protocol Version 5 — March 2013~~

Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.

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

(h) Plumbing Fittings.

(1) Showerheads, 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 ~~A-1 H-1~~. Showerheads shall also meet the requirements of ASME ~~A112.18.1/CSA B125.1-2012, 4.11.1 /ANSI Standard A112.18.1M-1996, 7.4.4(a).~~

Why? The latest version of the standard should be referenced.

(i) Plumbing Fixtures.

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

Why? Flush valves are not considered “plumbing fixtures” in accordance with ASME A112.18.1/CSA B45.1 and ASME A112.19.5/CSA B45.15. There is no such term as “replacement valve.” Marking them as “replacement” could be problematic, as they are not currently marked as such throughout the industry. Additionally, “stadiums” is consistent with terminology used throughout the staff analysis. Furthermore, “prisons or mental care facilities” should be referenced as “institutional facilities” to be consistent with terminology used throughout California Law including AB 715.

**Table A-2:
Standards for Plumbing Fixtures**

<i>Appliance</i>	<i>Maximum Gallons per Flush or Average Effective Flush for Dual Flush*</i>
Electromechanical hydraulic water closets Replacement valve for urinal <u>Blowout urinal</u> in building built on or before 1994	1.0 1.6
<u>Blowout water closets</u>	3.5

*A dual flush water closet with an effective flush volume that does not exceed 1.28 gallons, where effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush.

(PORTIONS OF TABLE NOT SHOWN REMAIN UNCHANGED)

Why? The term “blow-out urinal,” and the new footnote, is consistent with AB 715. Additionally, “blow-out water closets” are permitted in stadiums and institutional facilities.

(2) Water closets shall comply with the Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013 as pass or fail. ~~achieve a MaP score of no less than 350 grams.~~

Why? Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards.

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

**Table A-3:
Data Submittal Requirements**

	Appliance	Required Information	Permissible
I	Plumbing Fixtures	*Type	Blowout water closet, gravity tank type water closet, dual-flush water closet, electromechanical hydraulic water closet, flushometer tank water closet, urinal, prison-type urinal, prison-type water closet, flushometer valve water closet, trough-type urinal, <u>non-water supplied urinal</u> waterless urinal , vacuum type urinal, vacuum type water closet, replacement urinal valve, replacement water closet valve , wash fountain.
		Water Consumption (dual-	

		flush average effective flush volume for dual-flush water closet)	
		MaP Score (for water closet only) <u>Water closets shall comply with the Waste Extraction Test (Section 7.10) of ASME A112.19.2/CSA B45.1-2013 as pass or fail</u>	

(PORTIONS OF TABLE NOT SHOWN REMAIN UNCHANGED)

Why? The revision to “dual-flush average flush volume” will correlate with the definition for “effective flush volume” found in AB 715. Water closet extraction testing is addressed in Section 7.10 of ASME A112.19.2/CSA B45.1-2013. Also, it is more appropriate to reference industry consensus standards. The other changes are consistent with other recommendations made throughout the document. There are no such terms as “replacement urinal valve” and “replacement water closet valve.” Marking them as “replacement” could be problematic, as they are not currently marked as such throughout the industry.

In closing, PMI would strongly recommend that the commission adopt our proposed revisions to the “Staff Analysis for Toilets, Urinals, and Faucets” and Title 20. Furthermore, PMI would like to thank the California Energy Commission for the opportunity to provide comments for the rulemaking being promulgated for Title 20 through Docket No. 14-AAER-1 on appliance efficiency. Our partnership with the regulatory and stakeholder communities in the State of California will continue to promote water efficiency that will produce safe, sanitary, efficient and reliable products.

Sincerely,



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PMI MEMBERS INCLUDE:

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