DOCKETED	
Docket Number:	22-AAER-05
Project Title:	Appliance Efficiency Regulations for Water Closets
TN #:	261566
Document Title:	Bob Raymer (CBIA, CAA, CBPA, and BOMA) Comments - Industry Coalition Comments on Low-Flow Toilet Proposal
Description:	N/A
Filer:	System
Organization:	Bob Raymer (CBIA, CAA, CBPA, and BOMA)
Submitter Role:	Public
Submission Date:	2/5/2025 4:57:06 PM
Docketed Date:	2/5/2025

Comment Received From: Bob Raymer (CBIA, CAA, CBPA, and BOMA)
Submitted On: 2/5/2025
Docket Number: 22-AAER-05

Industry Coalition Comments on Low-Flow Toilet Proposal

Additional submitted attachment is included below.

Date: February 5, 2025

To: California Energy Commission

From: California Building Industry Association
California Apartment Association
California Business Properties Association
Building Owners & Managers Association of California

RE: **CEC Docket No. 22-AAER-05**:
Industry Coalition Comments on Proposed Efficiency Standards for Water Closets

Commissioners and Staff,

The Industry Coalition cited above appreciates the opportunity to submit comments on the CEC's proposed efficiency standards for water closets, specifically those proposed for single-flush toilets. Again, we apologize for the lateness of these comments, as we have been very preoccupied with other time-intensive rulemakings being conducted by the CEC and the Office of the State Fire Marshal.

First, the coalition would like to echo the comments submitted by the Plumbing Manufacturers Institute (PMI) dated March 29, 2023, and February 5, 2025. PMI has been a longstanding and productive source of data and advice on issues related to plumbing systems and plumbing fixtures for decades. PMI has been instrumental in providing much-needed field data used by the Department of Housing and Community Development (HCD) in developing water conservation measures contained in the California Green Building Standards (Title 24, Part 11) over the past 17 years.

Background on Maximum Toilet Flow Rates in California and Industry's Concerns

From a historical perspective, the maximum flow rate allowed for toilets has changed significantly over the years:

- 1975 5.00 gallons/flush
- 1980 3.50 gallons/flush
- 1992 1.60 gallons/flush
- 2011 1.28 gallons/flush

The 1992 mandate for 1.60 gpf was met with consumer resistance, as many manufacturers reduced the water volume going into the bowl without redesigning it. This consumer backlash quickly led to a redesign of the bowl, which could successfully do the job intended. This, in turn, led to HCD's adoption of the current 1.28 gpf as part of the Green Building Standards that took effect in 2011.

However, in 2016-17, when HCD and other interested parties began considering a possible reduction in the 1.28 gpf. PMI and others voiced serious health and safety concerns. Perhaps the most significant concern raised related to insufficient "water carry" in the drainage system connecting the toilet to the sewage system. In single-family and multifamily construction, the water closet must provide adequate water **speed** and **volume** to transport solid matter from the toilet's connection to the drainpipe to the sewage system. The toilet usually empties into a horizontal drain and waste pipe segment, often joined downstream with other plumbing connections (showers, sinks, etc.).

While the water from these other plumbing connections can provide additional water to move waste to the sewage system, adequate water volume and speed are still needed to move the solid waste across this horizontal member. Information provided by PMI to HCD indicated that a lower level of gallons per

flush could be problematic and result in numerous health safety, consumer satisfaction, and sewage infrastructure issues. See ***"The Drain Line Transport of Solid Waste in Buildings – Phase 2.0 Includes Supplemental Report on PERC Phase 2.1 Revised – March 2016," published by the Plumbing Efficiency Research Coalition.***

The coalition understands the CEC's goal of reducing indoor water consumption and the related energy consumption needed to transport that water throughout the state. Still, the proposal to reduce the single-flush toilet flow rate from 1.28 gpf to 1.10 gpf is concerning. There was, and continues to be, modest consumer resistance to the current 1.28 gpf flow rate required by HCD's Green Building Standards. Reducing that to 1.10 gpf will undoubtedly increase consumer resistance, which could lead to costly construction defect cases by angry homebuyers. Concerning the health and safety issues, please refer to the studies cited by PMI in their various submittals in this docket.

Alternative Efficiency Measures with Much Greater Benefit
At least two readily available courses of action could save significantly more water (and related energy) than the CEC currently proposes.

State and Local Enforcement of SB 407 (2009 statutes, Chapter 587)
In 2009, Senator Padilla authored legislation that set dates by which specified plumbing fixtures in all existing buildings (single-family, multifamily, and commercial) constructed before 1994 would have to be replaced with new, water-conserving fixtures. Regarding toilets, the mandated retrofit specified low-flow toilets using no more than 1.60 gpf. The deadline for existing single-family homes was 1/1/14. For multifamily and commercial buildings, the deadline was 1/1/19.

The Problem: SB 407 was a "soft mandate" without penalty for non-compliance. As a result, only those few jurisdictions that took aggressive action to enforce the law saw beneficial results. Given that 2/3 of California's 14 million existing homes and apartments were built before 1980, it's highly likely that very few of those dwellings comply with the 1.60 gpf toilet mandate.

The Solution: Add enforcement/penalty language to the statute or adopt green building standards that require compliance for additions and alterations when taking out a permit.

Promote Use of UPC Appendix M Adopted by HCD:
HCD recently adopted Appendix M in the 2024 Uniform Plumbing Code. Appendix M offers an alternative method for installing plumbing lines in residential dwellings using smaller-diameter pipes. It recognizes that new homes and apartments use water-conserving fixtures that do not need larger-diameter pipes for proper functioning.

The Solution: Provide compliance credit in Part 6 or compliance recognition in Part 11. Also, consider promoting Appendix M via the CALBO Training Institute and industry trade shows.