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ASAP NCLC Water Closet Standards Comments

Additional submitted attachment is included below.

Appliance Standards Awareness Project
National Consumer Law Center

February 5, 2025

California Energy Commission
Docket Unit
715 P Street, Sacramento, CA 95814

RE: Docket No. 22-AAER-05: Appliance Efficiency Regulations for Water Closets

Dear Commission Staff:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP) and the National Consumer Law Center (NCLC) on behalf of its low-income clients on the California Energy Commission (CEC) proposed standards for water closets (toilets). We appreciate the opportunity to provide input to the Commission.

We strongly support the Commission's proposed updates to the water closet standards in Title 20. The proposed standards would lower the full flush volume for single-flush toilets from 1.28 gallons per flush (gpf) to 1.1 gpf and update the requirements for dual-flush toilets from an effective flush volume[1] of 1.28 gpf to full and reduced flush volumes of 1.28 gpf and 0.8 gpf, respectively. The draft staff report estimates that the proposed standards would provide first-year (in 2026) savings of 643 million gallons of water and 4 GWh of embedded energy[2] and annual savings after full stock turnover (in 2050) of 15.9 billion gallons and 86 GWh of embedded energy; the water savings translate to first-year bill savings of $8 million and $191 million in annual bill savings after full stock turnover. There is no upfront cost increase associated with the proposed standards, and the Commission estimates that a typical household would save more than $100 over the lifetime of a toilet.[3] Toilets meeting the proposed standards are widely available, perform well, and are unlikely to have any meaningful impact on wastewater transportation and treatment. In addition to the significant cost savings for residents, reducing water waste improves California's drought resiliency and allows water resources to be used in areas that add value to the economy.

The Commission's proposed standards would result in large cost savings for California households. The toilets covered by the Commission's proposal are most commonly found in residential applications.[4] The draft staff report, consistent with a recent report from the California Investor-Owned Utilities,[5] did not find any incremental cost increase associated with toilets meeting the proposed standards. No upfront cost coupled with the utility bill saving associated with reduced water use would provide life-cycle cost savings of $103 and $183 for single- and dual-flush toilets, respectively. For a typical three-bathroom home, this would equate to total cost savings of about $310 to $550 over the product lifetime

[1]Effective flush volume is calculated as the average of two reduced flushes and one full flush.
[2]Embedded energy savings reflect the electricity saved from the reduction in water transport and treatment.
[3]The life-cycle cost savings for single- and dual-flush toilets at a 3% discount rate are $103 and $183, respectively. p. 74. efiling.energy.ca.gov/GetDocument.aspx?tn=259915&DocumentContentId=96120
[4]These toilets are also found in some light-duty commercial applications like restaurants, gas stations, etc.
[5]efiling.energy.ca.gov/GetDocument.aspx?tn=252134&DocumentContentId=87140

(25 years).[6] Statewide, the Commission estimates that bill savings for Californians would reach $191 million annually after full stock turnover in 2050.

Toilets meeting the proposed standards have proven performance and are widely available. Advances in bowl design and flushing mechanisms have enabled toilets to generate stronger water flow while using less water. Maximum Performance, an independent testing program for toilets, recognizes over 300 single-flush models as meeting their Premium requirements, which require that the model perform well while being water efficient; Maximum Performance Premium sets maximum full flush volumes consistent with CEC's proposal (i.e., 1.28 gpf for dual-flush and 1.1 gpf for single-flush),[7] while also requiring excellent flushing performance that exceeds that required by EPA's WaterSense program.[8] Further, some California municipalities and utilities, such as the Metropolitan Water District's SoCal Water$mart Program, offer rebates on high-efficiency toilets that meet the proposed standards,[9] and other programs, like the one from Liberty Utilities, require ultra-high efficiency toilets (e.g., 0.8 gpf) that exceed the proposed standards.[10]

The proposed standards ensure adequate drain line carry in residential applications. We are not aware of any studies that suggest that the proposed flush volumes would cause issues in residential applications. EPA testing showed that 1.0 gpf toilets provided sufficient drain line carry even under adverse testing conditions atypical of most residential installations.[11] Further, the Commission is proposing to require additional performance requirements from the ASME A112.19.2/CSA B45.1 industry standard, including a drain line transport characterization test, that are already required for WaterSense and Maximum Performance certifications and to meet the CALGreen/California Plumbing codes;[12] these additional tests ensure that toilets meeting the proposed standards would meet minimum drain line carry requirements. In certain light-duty commercial applications where solid waste drain line carry is a potential concern, purchasers would have the option of selecting dual-flush toilets, which have a proposed full-flush volume consistent with current single-flush volumes (1.28 gpf).[13]

We believe the proposed standards are unlikely to have a meaningful impact on wastewater conveyance or treatment infrastructure. Some stakeholders have raised concerns about potential impacts from reduced water demand and flush volumes on public water and wastewater transport and treatment systems. However, the proposed standards would likely have little impact on overall water and wastewater flow volumes in California that could impact wastewater transport and treatment facilities. The Commission estimates that the proposed standards would save about 600 million gallons of water in 2026, increasing to 16 billion gallons in 2050. These savings, while meaningful for water

[6]Based on multiplying the LCC savings of a single toilet (e.g., $103 for single-flush) by three.
[7]map-testing.com/map-premium/
[8]Toilets must meet a maximum flushing performance score of at least 600 grams, 170% greater than WaterSense.
[9]socalwatersmart.com/en/residential/rebates/available-rebates/toilets/
[10]california.libertyutilities.com/uploads/22-370-Downey%20Toilet%20Program%20-%20English.pdf
[11]www.epa.gov/sites/production/files/2017-02/documents/ws-background-toilets-comment-response.pdf
[12]p. 53. efiling.energy.ca.gov/GetDocument.aspx?tn=259915&DocumentContentId=96120
[13]If CEC determines that the option of selecting dual-flush toilets is not sufficient to address potential drain line carry concerns in commercial applications, the Commission could consider creating a separate product class with a higher allowable flush volume, wherein products must be clearly labeled as for "Commercial Use Only." This approach was adopted in EPAct 1992 for the first three years of federal standards implementation (from 1994 to 1997). See 42 U.S. Code § 6295(k)(1)(B). www.law.cornell.edu/uscode/text/42/6295

resource management, do not represent a large percentage of residential indoor water usage in California. Based on California's population (about 39 million) and estimated daily per-capita indoor water use (about 50 gallons),[14] we estimate that residential indoor water use in California is roughly 700 billion gallons per year. Thus, the proposed standards would represent less than a 0.1% decrease in residential indoor water use in 2026 and about a 2% decrease in 2050. These savings will increase water in storage from one year to the next, and improve the reliability of drinking water systems. However, it seems unlikely that such modest decreases in residential water use over the course of 25 years of population and economic growth would have a meaningful adverse impact on sewage transport systems or treatment facilities in California.

Thank you for considering these comments.

Sincerely,

Jeremy Dunklin, PhD
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Berneta Haynes
National Consumer Law Center
(On behalf of its low-income clients)

[14] pp. 32, 40. water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation/Performance-Measures/NEW_Results-of-the-Indoor-Residential-Water-Use-Study.pdf