SENATE COMMITTEE ON HOUSING
Senator Scott Wiener, Chair
2023 - 2024 Regular

Bill No:	SB 745	**Hearing Date:**	4/18/2023
Author:	Cortese		
Version:	2/17/2023 Introduced		
Urgency:	No	**Fiscal:**	Yes
Consultant:	Aiyana Cortez		

SUBJECT: The Drought-Resistant Buildings Act

DIGEST: This bill requires the California Building Standards Commission (CBSC) to develop and propose new mandatory building standards related to water efficiency and to create a model local ordinance and guidance documents for the adoption of regulations related to onsite nonpotable water treatment systems.

ANALYSIS:

Existing law:

1) Defines "graywater" as untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. Graywater includes wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

2) Establishes California Building Standards Commission (CBSC) within the Department of General Services (DGS) and sets forth its powers and duties, including approval and adoption of building standards and codification of those standards into the California Building Standards Code.

3) Requires the CBSC to adopt specific building standards, including standards for graywater, and to publish editions of the California Building Standards Code in its entirety once every three years.

4) Requires any building standard adopted or proposed by state agencies to be submitted to, and approved or adopted by, the CBSC prior to codification.

5) Establishes the Building Standards Administration Special Revolving Fund, and makes the moneys in the fund available, upon appropriation, to state entities to carry out various related provisions, as specified.

6) Establishes, within the California Environmental Protection Agency (Cal-EPA), the State Water Resources Control Board (SWRCB) for the purposes of orderly and efficient administration of the state's water resources.

7) Requires CBSC, in consultation SWRCB, to adopt regulations for risk-based water quality standards for the onsite treatment and reuse of nonpotable water in multifamily residential, commercial, and mixed-use buildings, as specified.

8) Requires CBSC to adopt building standards for the construction, installation, and alteration of graywater systems for indoor and outdoor uses in nonresidential occupancies.

9) Requires the installation of an onsite treated nonpotable water system to be permitted pursuant to a regulatory program established by a local jurisdiction that, among other requirements, is adopted through a local ordinance that includes the risk-based water quality standards adopted by the SWRCB.

10) Establishes minimum requirements for the installation of graywater systems in occupancies regulated by the Department of Housing and Community Development (HCD).

This bill:

1) Defines "drought proofed" as designed to capture graywater and use alternative water sources for nonpotable building and landscaping water uses, including toilet and urinal flushing, floor trap priming, cooling towers, and air-conditioning devices.

2) Establishes the Drought-Resistant Buildings Act, which requires CBSC to:

   a) Develop and propose building standards to reduce the designed potable water demand of all new buildings by 25% from current mandatory design requirements and to minimize the use of potable water for nonpotable uses.
   b) Research, develop, adopt, approve, codify, and publish mandatory building standards to require new buildings to be drought proofed commencing with the next triennial edition of the California Building Standards Code.

c) Consider potential impacts on affordable housing when creating standards and allow for new standards to apply only to nonresidential, hotel and motel, and market-rate housing, or as otherwise determined appropriate.
d) Promote adoption of regulatory programs for onsite nonpotable water treatment systems by local jurisdictions in consultation with SWRCB by developing a guidance document and model local ordinance.

3) Authorizes the expenditure of funds from the Building Standards Administration Special Revolving Fund for the requisite activities.

COMMENTS:

1) *Author's statement*. "Hotter and drier weather conditions from climate change are projected to reduce California's water supplies by up to 10% by the year 2040. The California Building Standards Code sets forth standards for constructing buildings with dual plumbing to use graywater for landscape irrigation and to use recycled water or onsite treated graywater for non-potable water uses such as toilets and cooling towers. To address projected water shortages in California due to global climate change, SB 745 directs the California Building Standards Commission to develop mandatory building standards to reduce the designed potable water demand of new buildings by 25%. In addition, SB 745 requires adoption of model ordinance language and guidance to streamline local implementation of the onsite treated graywater local program requirements set forth in Water Code Section 13558. These actions would be funded by the existing Building Standards Administration Special Revolving Fund, which provides the California Building Standards Commission funds for development of green building standards."

2) *Climate change, drought, and water shortages*. Climate change is undeniable and models indicate it will drive temperatures higher in the future. Climate change will stress water resources and its management like no other time in recorded history. California's predominantly Mediterranean climate has always posed challenges for water management in the state. This climate is characterized by hot, dry summers and wet, moderately-cool winters. Annual precipitation varies greatly across the state with the majority of precipitation falling north of Sacramento. Year-to-year variability in precipitation is another hallmark of California's climate with swings between prolonged wet and dry periods.

   Evidence overwhelmingly reveals that the modern California climate is different today than the climate of a century ago when California's water law first developed. Since the beginning of the 21st century, average temperatures

have risen almost 3°F in California with the hottest six years on record occurring since 2014.[1] Likewise, California has experienced its two most severe dry periods on record since 2000 (2012–16 and 2020–present) and researchers now report that the state has, in fact, been experiencing a "megadrought" since the turn of the century. This "megadrought" appears to be the worst such drought since the year 800, and its severity is due, in large part, to climate change.[2]

3) *California's water supply strategy for building drought resiliency*. In August 2022, Governor Newsom released this strategy to address a projected 10% decrease in water supply by 2040 due to climate change. To address this shortfall, the strategy sets targets and outlines actions for increased water recycling, desalination, stormwater capture, and water conservation as well as an expansion of surface and underground storage. A 2022 report from the Public Policy Institute of California highlights the requirement for more than individual conservation efforts to protect Californians from the ongoing effects of climate change –continued investments in drought resilient infrastructure, including the diversification of water sources, capturing storm runoff, and water reuse and recycling projects.[3] Indoor urban water usage is only a small fraction of California's total water consumption. In fact, average water use is roughly 50% environmental (such as for habitats and wetland preservation), 40% agricultural, and 10% urban (such as for indoor and outdoor residential or commercial purposes). According to the Natural Resources Defense Council, about half of California's urban water usage is for outdoor uses such as landscaping, pools, and washing cars—and 70% of that is residential.

4) *Benefits of decentralized wastewater treatment and water conservation*. Since 2005, the US EPA has issued a series of MOUs and reports to Congress describing how decentralized wastewater treatment, including onsite treatment systems, can benefit communities and be cost effective, economical, sustainable, and safe.[4] A 2018 report by researchers at UC Davis outlined the water and energy savings and greenhouse gas emissions reductions—524,000 million gallons, 1830 gigawatt hours, and 521,000 metric tons of carbon dioxide, respectively—as a result of Governor Brown's 2015 mandated statewide reduction in water consumption by urban water suppliers.[5]

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[1] Frankson et al. California State Climate Summary 2022. NOAA Technical Reports. https://statesummaries.ncics.org/chapter/ca/
[2] Williams et al. Large contribution from anthropogenic warming to an emerging North American megadrought. 2020. DOI: 10.1126/science.aaz9600
[3] Mount et al. Priorities for California's Water. PPIC. 2022. https://www.ppic.org/publication/priorities-for-californias-water/
[4] Septic Systems Reports, Regulations, Guidance, and Manuals. US EPA. 2023. https://www.epa.gov/septic/septic-systems-reports-regulations-guidance-and-manuals
[5] Spang et al. The estimated impact of California's urban water conservation mandate on electricity consumption and greenhouse gas emissions

5) *How low can we go?* Over the past several decades, there have been significant efforts by the state to increase water use efficiency. In 2007, AB 32 established the California Green Building Standards Code (CalGreen) as part of the state's efforts to address climate change. Despite significant population growth, urban water usage has declined over the past several decades in part due to the plumbing fixture requirements already in place by CalGreen.[6]

   AB 1668 (Friedman, 2018), SB 606 (Hertzberg, 2018), and SB 1157 (Herzberg, 2022) established a new framework for long-term improvements in urban water use efficiency and drought planning in California. That legislation required long-term urban water use efficiency standards be set so that urban water use objectives would exceed the state water conservation targets.

   By requiring CBSC to develop and propose mandatory building standards that would reduce the designed potable water demand by 25% and capture graywater for nonpotable building and landscaping uses, this bill would further contribute to California's water consumption reduction goals by setting new standards for buildings that will be in use for the next 30-100 years, on average. However, additional decreases to indoor water usage may actually create unintended health and safety consequences. Lower flow rates, flush volumes, and liquid passing through sewers as a result of this decreased demand can lead to pathogen growth, drain blockages, and sewer spills.

6) *Establishing building standards.* The legislature typically offers guidelines, or directs agencies to consider specific standards, in order to provide flexibility. After the proposal of building standards by state agencies, the standards undergo a public vetting process. A code advisory committee, composed of experts in a particular scope of code, reviews the proposed standards, followed by public review. The proposing agency considers feedback and may then amend the standards and re-submit them to the CBSC for consideration. The codes are updated every three years with an intervening cycle every 18 months. The next code adoption cycle is currently underway and set to become effective in 2026.

7) *Is this bill premature?* SB 966 (Wiener, 2018) established state standards on how to permit on-site water reuse systems and give cities the tools they need to put water recycling programs in place. It required CBSC and SWRCB to issue comprehensive regulations, including health and safety standards, to help local jurisdictions implement these programs. It also required that oversight and management of onsite treatment of water for non-potable use developed under

[6] Welch. CalGreen Plumbing Fixture Requirements. CalGreen Energy Services. https://calgreenenergyservices.com/2019/11/30/calgreen-plumbing-fixture-requirements/

this framework would be risk-based and focused on protecting public health. The formal onsite reuse rulemaking process and adoption of regulations pursuant to SB 966 are not set to be completed until December 2023. As this process is not yet complete, it may be premature to instruct CBSC to establish new standards when SB 966 has not been fully implemented.

8) *Opposition.* According to a coalition of WateReuse and local water, sanitation, utility, and special district associations, SB 745 is premature and potentially counterproductive to state water efficiency goals. They make four main arguments against SB 745 as follows:

   a) Urban water use objectives as established by 2018 legislation already achieves the efficiency and water-use objectives and performance measures that SB 745 intends without requiring four sets of pipes to be constructed in each new residential, commercial and industrial building.
   b) SB 745 claims that existing law is overly prohibitive and insufficient, but the 2018 legislation is not set to be fully implemented until December of 2023. It is therefore too early to claim that there is a major issue until the new standards are adopted.
   c) Establishing a new term ("drought proofed") and standard for all buildings outside of the existing state framework is counterproductive to the standards the state has been developing for the past five years.
   d) WateReuse partnered with the US Water Alliance to develop a guidebook and model ordinance for onsite non-potable water programs that exists already.

9) *Author's Amendments.* **Due to time constraints, the committee has agreed to amend the bill on behalf of the author. These amendments are intended to address the opposition concerns and do the following:**

   a) Remove the definition of "drought proofed."
   b) Remove the requirement to propose mandatory building standards that reduce potable water demand in new buildings by 25%.
   c) Remove the requirement to adopt mandatory building standards that require new buildings to be drought proofed.
   d) Define "water reuse systems" to include, but not be limited to, systems designed to capture and use non-potable water sources
   e) Require HCD for new residential buildings and CBSC for new nonresidential buildings to:

      i) Research, develop, adopt, approve, codify, and publish voluntary and mandatory building standards to reduce potable water use

ii) Review and update voluntary and mandatory water efficiency and water reuse standards in the California Building Standards Code every three years
iii) Consider feasibility, cost, and other impacts as specified

RELATED LEGISLATION:

AB 2811 (Bennett, 2022) — would have required all newly constructed nonresidential buildings be constructed with dual plumbing to allow the use of nonpotable water sources. It would have also required SWRCB to establish a program for large onsite treated nonpotable water systems for local jurisdictions that did not have their own program. *This bill died in the Assembly Environmental Safety and Toxic Materials committee*.

SB 966 (Wiener, Chapter 809, Statues of 2018) — required CBSC and HCD to adopt regulations for risk-based water quality standards for the onsite treatment and reuse of nonpotable water.

AB 2282 (Gatto, Chapter 606, Statues of 2014) — required HCD to conduct research to assist in the development of, and to submit for adoption, mandatory building standards for the installation of recycled water systems for newly constructed single-family and multifamily residential buildings.

SB 849 (Gatto, Chapter 577, Statutes of 2011) — required a city, county, or other local agency to seek consultation with the local public health department prior to commencing the issuance of permits for indoor graywater systems, as specified.

SB 518 (Lowenthal, Chapter 622, Statutes of 2010) — required the CBSC to adopt building standards for the construction, installation, and alteration of graywater systems for indoor and outdoor uses in nonresidential occupancies, in accordance with prescribed requirements.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: No

POSITIONS: (Communicated to the committee before noon on Wednesday, April 12, 2023.)

SUPPORT:

Active San Gabriel Valley
California Climate Reality Coalition

California Environmental Voters (formerly Clcv)
Climate Action California
Elders Climate Action, NorCal and SoCal Chapters
Mono Lake Committee
Our City Forest
Plant-Based Advocates - Los Gatos
Sierra Club California
Silicon Valley Youth Climate Action
1 Individual

OPPOSITION:

Association of California Water Agencies (ACWA)
California Association of Sanitation Agencies
California Municipal Utilities Association
California Special Districts Association
Irvine Ranch Water District
Watereuse Association

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