



October 17, 2023

Submitted via: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)

Attn: James Nachbaur  
Director Office of Research, Planning and Performance  
State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814

Re: Comment Letter — Proposed Regulation to Make Conservation a California Way of Life

Dear Mr. Nachbaur,

CalWEP appreciates this opportunity to provide comments on the State Water Resources Control Board's (State Water Board) proposed regulation (Regulation) to make conservation a California way of life as submitted August 18, 2023.

CalWEP is a membership-based, non-profit organization representing over 220 California water agencies, businesses, and other organizations with a mission to maximize urban water efficiency and conservation throughout California. We do this by supporting water agency staff with tools, program implementation and administration support, research, technical training, and collaborative learning opportunities. Collectively CalWEP water agency members provide services to over 6.6 million connections across the State. We are also a state chapter of the national Alliance for Water Efficiency (AWE).

The organization originated as the California Urban Water Conservation Council, which was tasked with implementing the historic 1991 Memorandum of Understanding Regarding Urban Water Conservation in California. CalWEP and its membership, while striving to maximize conservation and efficiency for more than three decades, have developed and maintain an extensive resource library and possess a wealth of institutional knowledge on effective operations and programs to achieve its mission.

Additionally, CalWEP's annual programming has provided forums for water agency staff, non-profits, and other industry professionals to develop and adapt conservation programs that help balance cost with the greatest savings potential. Our members have also addressed the affordability of their services and funded programs that support customers living within under-resourced and disadvantaged communities (DACs).

CalWEP, having reviewed the Regulation and consulted with our leadership, offers the following comments for the State Water Board’s consideration:

**1. CalWEP recommends that the State Water Board and the California Department of Water Resources work together to secure funding for agencies to successfully comply with the Regulation.**

Many urban retail water suppliers lack the resources to successfully meet the requirements of the Regulation and will need access to immediate and sustained funding from the State. Without financial assistance, direct expenses attributed to compliance will disproportionately impact smaller urban suppliers including a number that service DACs.

It is CalWEP’s assessment that the Regulation requirements in Table 1 will necessitate significant investments of supplier staff time and resources. Note that Table 1 does not reflect a comprehensive cost analysis of the Regulation and other requirements will likely have a high price tag associated with compliance.

*Table 1: Select provisions within the Regulation that are anticipated to have a high cost of implementation for suppliers*

<b>Regulation</b>	<b>Description</b>	<b>Investment</b>
<b>Section 967 (a)</b>	Indoor Residential Standard	In its 2021 analysis, CalWEP found that to meet an indoor residential standard of 42 GPCD, the collective cost of compliance could range between \$2.8 and \$4.6 billion <sup>1</sup> .
<b>Section 968 (a)(3)</b>	Outdoor Residential Standard	A landscape efficiency factor (LEF) of 0.55 is an MWELO design standard and not reflective or real-world water-use due to on-site irrigation management and mechanical failure of irrigation systems. Therefore, to meet a LEF of 0.55, significant turf and irrigation systems will need to be replaced across supplier service areas.
<b>Section 969 (b)(2)</b>	Measurement of CII-DIM landscape Area	For those suppliers with limited or no staffing, measurements of CII landscapes will require outsourcing to consultants to provide technical assistance and/or procurement of additional staff to perform manual field measurements or both as described in CalWEP’s report regarding CII-DIMs <sup>2</sup> .
<b>Section 969 (c)(2)</b>	Measurement of CII-DIM Special Landscape Area	
<b>Section 973 (b)(1)</b>	Measurement of MUM landscape Area	

<sup>1</sup> CalWEP’s Comment Letter to DWR regarding the Indoor Residential Water Use Study (June 4, 2021).

<sup>2</sup> [Lessons Learned: Dedicated Irrigation Meter Management for CII Accounts](#) (CalWEP, January 1, 2020)

<b>Section 974 (c)(d)</b>	Development and employment of CII Best Management Practices that target the top CII water users	Targeted CII BMPs require additional investments beyond standard rebate and incentive programs including specialized marketing and outreach. *See description below.
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### Indoor Residential Standard

Suppliers will need to design and launch various programs for residential customers to achieve an indoor standard of 42 GPCD by 2030. CalWEP conducted an assessment and determined that the following collective actions could help achieve the indoor standard: 1) replace 2.7 million legacy toilets with low water-use models; 2) incentivize 20% of future washing machines sales that are efficient models; and 3) install high-frequency flow monitoring devices at half of households. CalWEP also generated cost estimates for instituting programs to achieve each of the three actions and found that the cost for toilet replacement alone was \$945 million. The total collective cost to suppliers for all programs listed above was estimated to range between \$2.8 and \$4.6 billion. For additional context and details please reference CalWEP’s comment letter to DWR dated June 4, 2021, and appended to this comment letter.

### Outdoor Residential Standard

CalWEP members who manage outdoor conservation programs have observed that existing irrigation systems rarely deliver water efficiency. As a result, landscapes are often over-irrigated. Suppliers have attributed this to various issues including mechanical and electrical failures of the irrigation system as well as poor on-site irrigation management. Existing housing stock with landscapes installed prior to MWELO number in the millions. Therefore, most of these landscapes were never subject to a design evapotranspiration adjustment factor of 0.55. To meet the proposed 0.55 outdoor residential standard in the Regulation (beginning in 2035) a significant number of residential landscapes will need to be transformed. This will likely entail turf removal and replacement with climate-appropriate vegetation as well as irrigation system upgrades. While water suppliers continue to invest millions in turf replacement programs, with some of the largest dollar rebates per square foot of turf removed occurring during the most recent drought, current investments are not enough to transition landscapes to meet a standard of 0.55. Significant funding will need to be made available to suppliers if they are to meet their 2035 outdoor water budgets under this Regulation.

### CII Standard and Performance Measures

CII customers are notoriously difficult to motivate to participate in supplier sponsored conservation rebate-, incentive- and other programs. A number of these barriers to participation by CII accounts have been outlined by the Pacific Institute in its report: *Sustainable Landscapes on Commercial and Industrial Properties in the Santa Ana River Watershed*<sup>3</sup>. For example, often “concierge” treatment, where outreach and communication are tailored to the

<sup>3</sup> [Sustained Landscapes on Commercial and Industrial Properties in the Santa Ana River Watershed](#) (Pacific Institute, February 2019)

specific CII account holder and their operation, is necessary to help inspire participation in conservation programs. This work tends to be costly and typically entails any of the following: segmented market research and data analysis, tailored marketing tactics like Community Based Social Marketing<sup>4</sup>, enrollment in customer portals, enhanced rebates to improve return-on-investment, pre- and post- program inspections, and customized audits, amongst other tactics. Further, identifying CII decision-makers including property owners who would need to authorize enrollment or participation in conservation programs is often a tedious and time-intensive task.

While we understand and appreciate that the Regulation's intent is to provide flexibility for suppliers to meet their overall Urban Water Use Objective and not each standard individually, it is our analysis that the tight compliance timelines combined with each standard's ambitious targets in 2035 will necessitate increased costs required to launch programs rapidly and achieve water savings needed.

CalWEP has characterized suppliers' monetary investments to meet the requirements under the Regulation to be significant based on the observations labeled A to E as detailed in the paragraphs below. Therefore, CalWEP recommends that the State Water Board and the Department of Water Resources help to expeditiously secure funding to support these suppliers in meeting their UWUOs, especially considering design and implementation of programs are required as soon as 2025. Note that observations A to C are based on responses to a survey issued in September of 2023 to help CalWEP better assess suppliers' resources to support conservation work and compliance with the Regulation. While the survey data provided represents estimates, it offers a snapshot of suppliers' preparedness to achieve compliance.

- A. Of 28 urban water suppliers representing diverse geographic regions of the State with variable numbers of accounts, annual water efficiency budgets for 50% of respondents were \$150,000 or less, where 10% of respondents have budgets between \$10,000 and \$30,000, and 7% of respondents have \$0 reserved for conservation. (Source: CalWEP survey Sep. 2023)
- B. Further, 64% of respondents have 1.0 or less full-time equivalent (FTE) staff dedicated to conservation work. Noteworthy is that of these 18 suppliers, eight suppliers have either zero or between 0.25 and 0.5 FTE staff designated to assist with conservation. (Source: CalWEP survey Sep. 2023)
- C. A limited number of CalWEP members have generated cost estimates proving that additional investments needed to comply with the UWUO or meet select provisions required by the Regulation will be significant. For example, one member agency located in the South Coast Hydrologic Region with a service area population of nearly 27,000, has estimated costs to range between \$350,000 to \$500,000 to retain new technical staff and to cover the costs of data collection technology and management. Whereas another member agency located in the same region with a service area population of just over 100,000 will

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<sup>4</sup> [Community Based Social Marketing Vol. 1: Case Study Review](#) (CalWEP, September 1, 2018)

need to increase its budget by \$2.5 million to help scale its programming and outreach through 2035. (Source: CalWEP survey Sep. 2023)

- D. Considering 42% of suppliers in 2025, 74% of suppliers in 2030, and 82% of suppliers in 2035 will need to reduce their overall water usage to meet their UWUO, where 10%, 32% and 41% are projected to need to achieve savings of 20% or more over these respective compliance years (See Table 2 for metrics), suppliers will likely need to allocate significantly more funds to their conservation budgets than in previous years. For suppliers who have already made significant investments in conservation prior to the Regulation and have observed peak program uptake by customers, investments will likely need to be more substantial to target harder-to-reach customers. These suppliers will need to adapt and/or create new programs. At the opposite end of the spectrum are smaller suppliers with limited resources and staffing that will require 20% or more in water usage reductions to meet their UWUO. While an Alternative Compliance Pathway (ACP) has been proposed in the regulations to assist suppliers serving DACs, it does not offer contingencies for compliance years prior to 2035, thus, leaving these agencies on their own to come up with the necessary resources to comply through 2035 (See Comment #5).

<b>% Water Reductions</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
No Reduction	58%	26%	18%
<5%	10%	9%	9%
5-10%	9%	10%	11%
10-20%	13%	23%	21%
20-30%	7%	16%	20%
> 30%	3%	16%	21%

*Table 2: Estimated percent of urban retail water suppliers that will need to reduce usage by a specific percentage to meet their Urban Water Use Objective per compliance year (source: State Water Board provisional data version 2.0 released September 13, 2023)*

- E. CalWEP and the AWE have performed numerous studies that show that investing in conservation can keep rates lower. However, that is only true when conservation is avoiding other supply investments and where conservation investments are cheaper than those water supply investments would be. With the Regulation, it is our assessment that the water efficiency compliance that is mandated is beyond this threshold of cost effectiveness for many agencies, and without State assistance will negatively impact water affordability by increasing rates.

CalWEP is well positioned to help the state of California achieve its water efficiency goals where our organization is already helping members to train new staff, provide technical assistance and implement customer programs at a large scale (see Comment #2). Membership in CalWEP can be a more affordable option for suppliers than implementing all the requirements of the Regulation on their own. Additionally, for many small and/or under resourced agencies, applying

to and managing the administrative burdens of traditional grant programs is too resource intensive and not possible. Therefore, we recommend CalWEP receive direct funding to provide more assistance to help members and non-member suppliers achieve their water efficiency objectives under the Regulation.

2. **The State Water Board should recognize and promote programs offered by regional water wholesalers, energy utilities, and non-profits like CalWEP as a means for suppliers to comply with the regulations, this includes Best Management Practices listed under the CII Performance Measure and under a revised Alternative Compliance Pathway.**

CalWEP recommends that regional water wholesaler programs (such as those sponsored by the Metropolitan Water District of Southern California), energy utility programs, and non-profit programs (such as CalWEP's Direct Distribution and Qualified Water Efficient Landscaper Training programs) and referred herein as "umbrella programs", be added to the list of qualifying BMPs cited under Section 974 (c)(d) of the Regulations. Whereby umbrella programs offer an expeditious approach for suppliers to achieve CII water savings.

Umbrella programs are beneficial to suppliers because they help to: 1) alleviate burdensome administrative costs; 2) eliminate delays typically associated with internal budget and staffing constraints; and 3) eliminate the need for coordination between internal departments such as public outreach and communications. Additionally, CalWEP-administered umbrella programs help reduce the cost burden to individual suppliers by cost-sharing start-up and operational expenses through multi-member participation. Further, CalWEP's umbrella programs have been designed to integrate lessons learned and experience gained running programs over the decades to maximize participation and water savings. Therefore, participation in umbrella programs should also be considered a means of compliance under a redesigned Alternative Compliance Pathway (see Comment #5).

**Recommendation #2 - Suggested red-line edits are as follows for Section 974 (c)(4):**

*(4) Collaboration and coordination best management practices.*

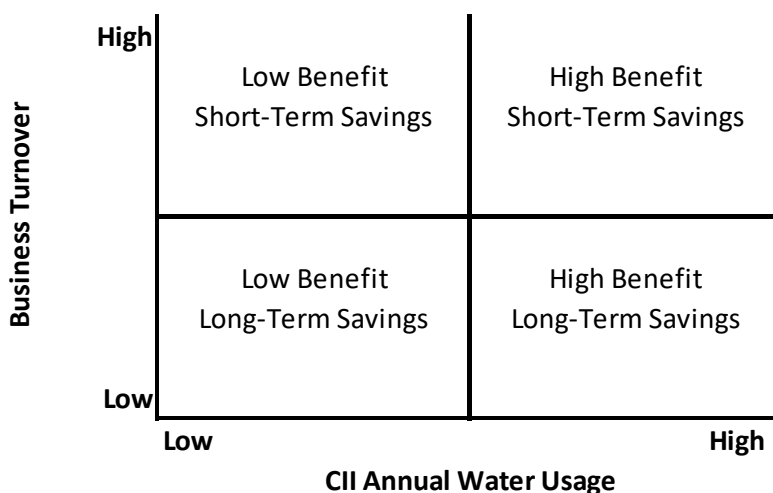
*(A) Coordination and participation in regionally sponsored water wholesaler and/or energy utility programs that target CII water savings*

*(B) Coordination and participation in non-profit sponsored programs that target CII water savings*

*(AC) Coordination with "green" building certification or recognition programs to promote water use efficiency*

3. **CII Performance Measures should apply to the top 20% of water users amongst all CII accounts rather than the top 2.5% of water users, and the requirement to target the top 20% of water users by sector should be eliminated from the Regulation. Additionally, suppliers with less than 10% CII potable water usage should be exempt from CII Performance Measures, based on an average that is re-evaluated every five years.**

Water use can vary dramatically between CII sectors within a supplier's service area. Devoting time and resources to target a sector that has relatively low water-use compared to other sectors, or to target customers that participated in water efficiency programs prior to this regulation, can diminish the impact and ultimately the cost-effectiveness of BMP implementation. Therefore, to ensure the greatest water savings amongst CII accounts, water suppliers should be required to target the top 20% of overall CII water users within their service areas with BMPs. Ideally, by revising the Regulation as suggested, suppliers could achieve the highest reduction in usage with variable short- and long-term water savings depending on the frequency of business turnover as illustrated in the image below. Under the Regulation, suppliers would be required to target all sectors, including those with marginal benefits, which are neither cost-effective nor impactful when it comes to water savings.



*Figure 1: Anticipated CII program benefits based on annual water use per CII sector and rate of business turnover (theoretical)*

Additionally, existing CII programs offered by suppliers currently serve as a catch-all to reach accounts with marginal to low water saving potential. Examples include CII water budgets, rebate and incentive, leak and audit programs. These programs will continue to save water independently of the targeted programs required by this Performance Measure.

We also recommend an exemption for suppliers from the CII Performance measures whose CII potable water use is less than 10%. This will allow those suppliers to focus efforts and resources on residential actions to maximize water savings.

**Recommendation #3 - Suggested red-line edits are as follows for Section 974 (c)(d):**

*(c) For those customers at or above the 80th percentile for water use ~~in each of the classification categories described in section 972~~, excluding process water, each supplier shall, by January 1, 2025, design and implement a conservation program that includes at least ~~two~~ ~~one~~ of the best management practices from each of paragraphs (1) through (5):*

*~~(d) For those commercial, industrial and institutional customers that are at or above the 97.5th percentile for water use, excluding process water, each supplier shall, by January 1, 2025, design and implement a conservation program that includes at least two of the best management practices from each of paragraphs (1) through (5) in subdivision (c).~~*

**4. Extend the compliance start-date for CII BMP implementation to 2030 to allow ample time for CII classification, landscape area measurement, and targeted BMP development.**

Time and resources are always the key ingredients to successful BMP implementation. In the most general terms the standard process for BMP program development, which often incorporate marketing and outreach campaigns, is as follows:



This process can extend longer than a year, and each step must occur in sequential order. In other words, BMP implementation cannot commence concurrently with planning, budgeting, or design. Example process milestones that have significant time investments include:

- **Strategic planning** requiring data collection and analysis. For example, planning to address the Regulation includes classifying accounts and conducting landscape area measurement.
- **Securing funds** by applying for grants and/or entering into regional cost-share agreements with other suppliers and organizations
- Establishing conservation **budgets** on a bi-annual cycle, as is common for many urban suppliers. Depending on when a supplier's current budget was adopted it could be two years until the new conservation budget would be in place to provide the funding for programs.
- Addressing different cost allocations folded into rates that require compliance with Proposition 218
- Conducting market research to inform **program design**.
- Issuing competitive bid, requests for proposals for consultants to **design** and/or manage the program which can take anywhere from 6 months to a year or longer.



- Program redesign or modifications that integrate lessons learned from **pilot** implementation.
- Timing of **program launch** based on seasons to maximize participation, for example: launching an outdoor program during the peak irrigation season.

The Regulation requires that BMP design and implementation begin in 2025 with 20% of top users engaged by 2026. CalWEP believes that this is an infeasible timeline for most agencies considering the time and resource investments outlined above. This is especially true for under-resourced suppliers who lack staffing and conservation budgets (See Comment #1), and for those suppliers who are on a bi-annual budget cycle and will lack immediate funds to implement programs. And while some existing conservation programs will meet the criteria to qualify as a BMP performance measure, a number will need to be adapted to target specific CII accounts per sector and thus follow the same design process outlined above.

CalWEP is also concerned that an expedited timeline, as required by the current CII Performance Measure compliance schedule, to launch programs could not only hinder successful implementation, but also result in missed opportunities to integrate multiple benefits into the program design. Therefore, CalWEP recommends that the tiered BMP implementation requirements (20% in 2026, 60% in 2028 and 100% in 2030) be struck from the regulations and suggests that the compliance start date be extended to 2030 following full classification and measurement of CII landscapes. Only by assessing the entire cohort of CII accounts and parsing out those with the highest usage can programs be tailored to be the most effective.

**Recommendation #4 - Suggested red-line edits are as follows for Section 972 (c):**

*(c) ~~Each supplier shall classify at least twenty percent of its CII customers by 2026, at least sixty percent by 2028, and one hundred percent by 2030.~~ After Each supplier shall classify its CII customers no later than 2030, and the supplier shall maintain at least a 95% classification rate, as measured on an annual basis.*

**Recommendation #4 - Suggested red-line edits are as follows for Section 974 (c):**

*(c) For those customers at or above the 80th percentile for water use ~~in each of the classification categories described in section 972,~~ excluding process water, each supplier shall, by January 1, ~~2025~~ 2030, design and implement a conservation program that includes at least one of the best management practices from each of paragraphs (1) through (5):*

**5. The Board should consider an Alternative Compliance Pathway that is less onerous and more streamlined than what is currently required under the proposed regulation and make it available to suppliers for the 2025 reporting year.**

CalWEP appreciates that the State Water Board has included an Alternative Compliance Pathway (ACP) for suppliers in the Regulation. This “good faith” approach acknowledges that while suppliers will continue to work hard to prioritize conservation and efficiency to achieve their UWUO, some may need extra time and resources or a modified approach altogether to demonstrate water savings. This is especially true for suppliers serving DACs.

However, as proposed the ACP criteria will make it difficult if not impossible for many suppliers to utilize the pathway. It would also exclude suppliers that could benefit from the approach. For example:

- A. According to the State Water Board’s provisional data, several suppliers from the Tulare Lake Hydrologic Region which serve primarily DACs are estimated to need to reduce their water usage by 20% or more beginning in 2025. For example, 33% of suppliers (10 out of 30) within the Tulare Lake hydrologic unit will need to reduce usage by more than 20% beginning in 2025. In 2030, an additional thirteen suppliers will need to reduce usage by at least 20% in 2030. This brings the total number of suppliers needing to reduce usage by 20% in 2030 to 23, which comprises 77% of all suppliers within the Tulare Lake hydrologic region<sup>5</sup>. Similar metrics were also found for the San Joaquin River Hydrologic Region. Most of these suppliers are relatively small, serving between 10,000 to 30,000 customers, within both hydrologic regions. Therefore, the ACP should include provisions for the 2025 and 2030 compliance years for suppliers serving DACs.
- B. According to the State Water Board’s provisional data a number of relatively small suppliers serving DACs will fall below or just below the 20% water-use reduction threshold to meet their UWUO in all compliance years (2025, 2030, and 2035). For example, nearly a quarter (23%), or 7 out of 30 suppliers within the Tulare Lake Hydrologic Region will need to reduce usage between 10% to 19% in 2025, and an additional two suppliers will need to reduce usage within this range in 2030. These same suppliers could benefit from an ACP but would not meet the criteria to utilize the pathway. Therefore, eliminate the 20% threshold for water use reduction in order to qualify for the ACP and establish a more equitable metric or qualifying criteria.
- C. According to the State Water Board’s provisional data, 83%, or 25 out of 30 suppliers, within the Tulare Lake Hydrologic Region will need to reduce water usage by 16% or more in 2030. Suppliers in the Tulare Lake Hydrologic Region comprise only 8% of urban water suppliers in the entire data set. These metrics reveal how suppliers in the Tulare Hydrologic Region are disproportionately impacted by the legislation compared to other regions across the State.

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<sup>5</sup> Data Source: State Water Resources Control Board’s provisional data version 2.0 released September 13, 2023. Analysis is from the “Reductions needed to meet the objective based on (2025 and 2030) standards, relative to the subset of urban uses subject to standards” columns “T” and “V” of the Excel workbook.

Similar metrics are observed for suppliers in the San Joaquin River Hydrologic Region, as well. Therefore, an assessment of disproportionate impacts to suppliers services DACs should be conducted and addressed within a revised ACP.

- D. The qualifying criteria for suppliers serving DACs to utilize a higher LEF in 2035 (0.63 instead of 0.55 and 0.45) only applies to those who do not meet their objective due to the outdoor standards (outdoor residential and CII-DIM). However, suppliers have observed that residents within DACs often do not have irrigated landscapes. Therefore, the State Water Board should consider offering alternative provision(s) to the adjustment LEF factor, since by doing so could exclude those suppliers that the ACP intended to target.
- E. The following ACP criteria are considered onerous due to the high costs to implement and infeasible due to eligibility and/or legal requirements for a number of suppliers and should be eliminated and replaced with criteria that is both cost-effective and attainable:
  - a. Tree City USA Recognition; only cities are eligible which excludes water districts, municipalities and investor-owned utilities.
  - b. Dedicating 1 FTE to support the creation and maintenance of climate-ready landscape programs; which require recruiting skilled dedicated resource or reallocating existing resources; and
  - c. Dedicating 40% of funding to low-income households and DACs for the creation and maintenance of climate-ready landscapes; inequitably allocating rate payer funds or limiting program participation to specific customers may be prohibited by Proposition 218 and/or other legal regulations related to rate setting.
- F. Urban suppliers across the State have made significant gains in water savings over the latest drought cycles, with little to minimum “rebound”. They also continue to offer a host of conservation and efficiency programs for their customers. Therefore, for suppliers serving DACs and non-DACs alike, the ACP should include provisions for those suppliers who do not meet their UWUO but have made significant investments in conservation and have demonstrated measurable savings, such as those cited by PPIC (see: <https://www.ppic.org/blog/how-are-californias-cities-managing-the-drought/>)

Given our concerns listed above, CalWEP believes that the ACP could be reworked to be more equitable, less onerous, and more streamlined for suppliers while still making conservation a California way of life. Therefore, CalWEP requests that the State Water Board continue to work with stakeholders including CalWEP to derive an ACP that better aligns with the needs of suppliers it seeks to target. This includes hosting workshops jointly with CalWEP and our membership, including those suppliers serving DACs, in order to receive feedback that will inform a revised pathway.

CalWEP is comprised of experts in California urban water conservation and efficiency. This is the result of its historical and ongoing work assessing and researching the impacts of various best management practices, program design and marketing, funding mechanisms, and collaboration opportunities with industry and academia. Nearly half of California urban water suppliers are members of CalWEP. Our work yields numerous benefits for our members by provide access to technical resources and enables suppliers to either adapt their conservation programs and services or utilize CalWEP's program platforms to optimize cost-effective water savings. Therefore, CalWEP requests that the State Water Board continue to seek out CalWEP's expertise throughout the final rulemaking process to ensure that the Regulation will serve to maximize conservation and efficiency while balancing cost effectiveness for urban water suppliers.

Finally, CalWEP staff, along with many of our members, have been engaged in the Association of California Water Agencies' technical workgroups to help inform many of their comments and redline edits to the Regulation. We look forward to collaboration with the State Water Board, ACWA, and other interested parties as we move forward to ensure agencies succeed in making water conservation a way of life. Let's work together to strike the balance between the urgency of the moment with drought, climate change, and realities on the ground at local agencies in order to create a more resilient California.

Please contact me if you have any questions regarding this information ([tia@calwep.org](mailto:tia@calwep.org)).

Sincerely,



Tia Fleming, Co-Executive Director  
California Water Efficiency Partnership

Attachment: CalWEP's Comment Letter to DWR regarding the Indoor Residential Water Use Study (June 4, 2021)



June 4, 2021

California Department of Water Resources  
Water Use Efficiency Branch  
P.O. Box 942836  
1416 9th St.  
Sacramento, CA 95814

Re: IRWUS REPORT COMMENT LETTER

To Whom it May Concern:

The California Water Efficiency Partnership is a statewide non-profit member-based organization representing over 220 California water agencies, businesses, and other organizations. Collectively our water agency members provide services to over 6.6 million connections across the state. With a mission and commitment to maximize water efficiency, CalWEP has a deep history working on customer side conservation and efficiency programs. We believe that data-driven conservation and efficiency are paramount to ensuring that California has a reliable and resilient water future.

CalWEP appreciates the opportunity to review and comment on the Indoor Residential Water Use Study (Study). We believe the Study provides a helpful snapshot of indoor residential water use in California, along with useful information that can inform how the indoor residential water standard is set. The Study also clearly indicates where there are still big gaps in our understanding of household water use and what it will take to achieve various levels of water use efficiency on a per capita basis across the state.

As noted, CalWEP supports maximizing urban water efficiency and conservation and thus appreciates how the Study summarizes the findings of several technical studies which contain water use data and information to evaluate where we are with regard to indoor water use, and what it may take to lower our statewide average indoor water use substantially in coming years. The Study is expected to include the "information necessary to support a lower indoor residential water use standard that appropriately reflects best practices" (Water Code §10609.4(b)(1)). This focus on an evidence-based approach includes information on the ways the best practices implemented by water suppliers (such as fixture and appliance rebate programs, conservation education, and leak detection programs) -- combined with changes in customer behavior -- has resulted in reduced indoor water use statewide.

But it is also clear from this study that actual indoor water use continues to vary across the state geographically, by residence type and age, due to other factors that this report was not able to identify. This results in significant variation in the average indoor gallons per capita per day (GPCD) of water suppliers statewide.

CalWEP is concerned that the issues of technical feasibility and local cost effectiveness have not been adequately addressed in this study. We believe that the study does clearly lead to a conclusion that achieving an average indoor use of 42 GPCD at a utility scale by 2030 will require the vast majority of residences in the state to be equipped with a 1.28 gallon per flush toilet or better, and high-efficiency clothes washers. In addition, residential leaks will need to be substantially reduced, requiring almost universal use of high-frequency flow monitoring technologies (and/or advanced metering infrastructure) by water suppliers by 2030, and the subsequent action by customers to address the leaks identified.

Further, we have examined the cost for implementing a revised indoor standard. **The total anticipated cost range for reasonably complying with a 2030 standard in which all providers achieve a residential indoor per capita volume of 42 GPCD by 2030 is likely between \$2.8 and \$4.6 billion.** See the attachment for further information on how we calculated this.

**Thus, we request that the Study be submitted to the Legislature without a recommendation for a reduced indoor residential standard at this time.** We believe that a more complete analysis of the cost and benefits of a reduced standard is needed, along with more study of other factors causing higher indoor use in some areas. Also needed to be examined carefully are the necessary stakeholder contributions regarding technical and local cost-effectiveness and rate affordability. After this work is done, a recommendation to reduce the indoor standard -- along with needed funding assistance for implementation -- may well be justified.

Thank you for the opportunity to comment. This is an important and potentially costly decision for the State of California if not done carefully. CalWEP looks forward to partnering with the State to ensure that we establish data-driven standards that maximize urban water use efficiency in a manner that also takes into consideration cost for local suppliers and ultimately ratepayers. Please contact Tia Leberz, Executive Director External Affairs, if you have any questions regarding this information ([tia@calwep.org](mailto:tia@calwep.org)).

Sincerely,



Justin Finch, Chair  
California Water Efficiency Partnership  
Moulton Niguel Water District

cc: Charlotte Ely, California State Water Resources Control Board

## DETAILED COMMENTS FROM THE CALIFORNIA WATER EFFICIENCY PARTNERSHIP

The Indoor Residential Water Use Study does not attempt to evaluate feasibility and cost associated with fixture replacement and leak repair or examine other potential reasons for variable indoor water use. We have examined the question of feasibility and cost, and offer the following points:

- About 5 million inefficient residential toilets are estimated to still be in use in the state<sup>1</sup> and with a natural replacement rate of 4% per year, 2.7 million toilets will still need to be replaced by 2030. Those inefficient toilets are likely to be in older, rural and/or disadvantaged communities, multifamily housing, and other traditionally hard to reach areas. Increased incentives and direct install programs will be required to reach these customers, however significant challenges will still exist to achieve the high levels of customer participation needed. Current program models show that with an average cost of \$350 per toilet this would cost an estimated **\$945 million dollars between now and 2030.** (Table 1)
- There are an unknown number of older style top-loading clothes washers in residences that use an average of about 40 gallons per load<sup>2</sup>, and since these are significantly less expensive than efficient models there will continue to be a mix of both efficient and inefficient machines installed. But given a useful life of only about 13 years, almost 1 million washers are replaced annually. If 20% of future clothes washer sales are substantially incentivized between now and 2030 the result could meet the residential water use reduction needed to achieve the 42 GPCD standard. At an incentive cost in the range of \$300-\$500 per washer sold (note that this is significantly higher than many current programs), **this would cost between \$500-834 million dollars between now and 2030.** (Table. 2)
- Residential leakage (after the meter) accounted for 7.9 GPCD and 14% of indoor use in the 2016 Residential End Uses of Water Study.<sup>3</sup> In general, most residential leakage is associated with a relatively few homes having significant leakage. The only proven approach to address household leakage at the utility scale is to implement high-frequency flow monitoring through the water meter and to alert customers when they have a leak. The cost of high-frequency flow monitoring for leak detection is at least \$200 per customer with potentially ongoing fees using advanced metering infrastructure (AMI) or any other product or method currently available. Assuming only half of California households are served by suppliers that have AMI, **the cost for such leak detection capabilities to serve the remaining residences would be between \$1.4 and \$2.8 billion between now and 2030.** (Table 3)
- **The total anticipated cost range for reasonably complying with a 2030 standard in which all providers achieve a residential indoor per capita volume of 42 GPCD by 2030 is likely between \$2.8 and \$4.6 billion.** (Table 4)

The Study provides strong evidence that most California communities are generally on track to meet the existing indoor residential standard of 50 GPCD by 2030. But if the standard is lowered to the proposed

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<sup>1</sup> Koeller, J. 2017. A Saturation Study of Non-Efficient Water Closets in Key States. Alliance for Water Efficiency and Plumbing Manufacturers International

<sup>2</sup> Mayer, P. et. al. 1999. Residential End Uses of Water. American Water Works Association Research Foundation. Denver, Colorado.

<sup>3</sup> DeOreo, W., P.Mayer, et. al. 2016. Residential End Uses of Water, Version 2. Water Research Foundation. Denver, Colorado

level of 42 GPCD by 2030, the result would be an annual reduction of water use statewide of about 354,000 AF per year at a significant cost.

Conservation and efficiency are a critical strategy to ensuring communities have long-term, reliable water supplies. CalWEP's mission is to maximize water efficiency through sound data-driven policy and cost-effective strategies. Numerous reports show that efficiency is often one of the most cost-effective ways to ensure adequate supply; however, as our estimates show, the 42 GPCD recommended standard by 2030 may prove to be cost-prohibitive at the local level.

We believe that many of the communities in which this effort will necessarily need to be targeted may find that it will not be affordable to meet the proposed standard. Water affordability is already a concern in many parts of the state. The communities which can least afford to meet this standard will have to rely on significant state and local funding to implement it, which must be included in the recommendation proposed by the Study. The Study cites Australia's recent experience achieving substantial indoor use savings during Australia's millennium drought. It should be noted that this achievement was made possible through billions of dollars in Australian federal funding.

See the attached Tables for our calculations.



*Table 1: Estimated cost of replacing inefficient toilets in California*

# of Inefficient Toilets	Incentive Per Toilet	Cost of Toilet Replacement (\$)
2,700,000	\$350	\$945,000,000

*Table 2: Estimated cost of clothes washer incentives required to meet California indoor efficiency goals, 2021 - 2030*

Category	Value	Reference
<b>Housing Units in California</b>	14,180,000	2019 US Census data
<b>% of home with a clothes washer</b>	85%	<a href="https://www.prnewswire.com/news-releases/us-census-bureau-daily-feature-for-october-26-washing-machines-300343533.html">https://www.prnewswire.com/news-releases/us-census-bureau-daily-feature-for-october-26-washing-machines-300343533.html</a>
<b>~ # of Clothes Washers installed in CA</b>	12,053,000	
<b>% of CW sales that must be incentivized</b>	20%	
<b>Cost of Incentive per washer</b>	\$300 - \$500	Estimated range based on existing washer programs.
<b>~ Clothes washer sales/year in California</b>	927,154	Assumes a 13-year useful life.
<b>~ Cost of Clothes Washer Incentives, 2021 – 2030.</b>	<b>\$500,663,077</b>	<b>Low</b>
	<b>\$834,438,462</b>	<b>High</b>

*Table 3: Estimated cost of household leak detection to meet California indoor efficiency goals*

Category	Value	Reference
<b>Housing Units in California</b>	14,180,000	2019 US Census data
<b>% of home leak detection</b>	25 - 50%	Estimate
<b>Cost of Incentive per Housing Unit</b>	\$200	Low-cost estimate based on current technology.
<b>~ Cost of Household Leak Detection.</b>	<b>\$1,418,000,000</b>	<b>Low</b>
	<b>\$2,836,000,000</b>	<b>High</b>

*Table 4: Estimated total cost of meeting proposed California indoor efficiency goals*

Category	Low Estimate	High Estimate
<b>Toilet incentives</b>	\$945,000,000	\$945,000,000
<b>Clothes washer incentives</b>	\$500,663,077	\$834,438,462
<b>Leak detection monitoring</b>	\$1,418,000,000	\$2,836,000,000
<b>Faucets and Showers</b>	\$0	\$0
<b>Total</b>	<b>\$2,863,663,077</b>	<b>\$4,615,438,462</b>