



Making Conservation a California Way of Life

STANDARDS CHEAT SHEET

Indoor Residential Water Budget

$$\text{Indoor Residential Water Budget (gal/yr)} = \text{Indoor Residential Standard} \times \text{Population} \times 365 \text{ days}$$

The **Indoor Residential Standard** is the maximum allowed indoor water use measured in gallons per capita per day (GPCD). It is intended to represent efficient use. The Indoor Residential Standard will decrease over time.

Indoor Residential Standard by year

Compliance Year	Allowable GPCD
2020-2024	55
2025-2029	47
2030 onward	42

Outdoor Residential Water Budget

In the most general terms, the outdoor water budget consists of a suppliers landscape area, multiplied by a climate factor in order to account for various climates across California, and an efficiency standard.

The annual outdoor water budget is calculated as follows:

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$$\text{Outdoor Residential Water Budget (gal/yr)} = \text{LAM} \times \text{LEF} \times (\text{ETo} - \text{Peff}) \times 0.62$$

Factor	Definition
LAM	<p>Landscape Area Measurement includes the following landscape types:</p> <ul style="list-style-type: none"> ◦ Irrigable-Irrigated (II), ◦ Irrigable-Not-Irrigated (INI) – up to 20% until June 30, 2027, ◦ Special Landscape Areas (SLA), and ◦ New Construction <p>Aggregate data provided by DWR for all designations except for new landscapes installed beginning 1/1/2019.</p>
LEF	Outdoor Residential Standard or landscape efficiency factor (unitless).
ETo	Reference Evapotranspiration (inches per year). Provided annually by DWR.
Peff	Effective Precipitation (inches per year). Capped at 25% of total precipitation and provided annually by DWR.
0.62	Conversion Factor to generate units in gallons per year.



Outdoor Residential Water Budget (cont.)

The LEF is an efficiency factor determined by the State Water Board. It is proposed to decrease overtime as seen below.

Compliance Date	Irrigable-Irrigated (II)	Irrigable-Not - Irrigated (INI)	Special Landscape Areas (SLA)	New Construction (post 1/1/2019)*
July 1, 2023	0.80	0.80	1.0	0.55
July 1, 2030	0.63	0.63 until 6/30/2027 then N/A	1.0	0.55
July 1, 2035	0.55	N/A	1.0	0.55

*For new homes built after the DWR Landscape Area Measurement (LAM) data was generated, the water budgets should be calculated with an LEF of 0.55.

Examples of types of landscapes a range of LEFs would support:



Source: Adapted from State Water Resources Control Board Public Workshop October 4, 2023

Outdoor Commercial, Industrial, and Institutional Water Budget

$$\text{CII Residential Water Budget (gal/yr)} = ((\text{DIM LA} - \text{DIM SLA}) \times \text{LEF}) + (\text{DIM SLA} \times 1.0) \times (\text{ETo-Peff}) \times 0.62$$

Factor	Definition
DIM LA	Landscape Area Measurement includes the following landscape types: <ul style="list-style-type: none"> Irrigable-Irrigated (II) of parcels served by dedicated irrigation meters
DIM SLA	Landscape Area Measurement for CII Special Landscape Area includes the following landscape: <ul style="list-style-type: none"> Public pools Recycled water Engineered slopes
	<ul style="list-style-type: none"> Active - passive recreation Edible plants Supplemental water Cemeteries

Outdoor Commercial, Industrial, and Institutional Water Budget (cont.)

Factor	Definition
LEF	Outdoor CII Standard or landscape efficiency factor (unitless).
ET _o	Reference Evapotranspiration (inches per year). Provided annually by DWR.
Pe _{eff}	Effective Precipitation (inches per year). Capped at 25% of total precipitation and provided annually by DWR.
0.62	Conversion Factor to generate units in gallons per year.

DWR is currently mapping water agencies CII landscape area. This project is expected to be completed in the next couple years. **Once that data is delivered to each agency, the agency is responsible for mapping the DIMs based on their records. As such, through June 30, 2028, suppliers shall use actual deliveries associated with landscape irrigation from their Electronic Annual Report.** Starting July 1st 2028, suppliers will use total Irrigated Irrigable (II) square footage for all DIMs.

Compliance Date	Irrigable-Irrigated (II)	Special Landscape Areas (SLA)	New Construction (post 1/1/2019)*
July 1, 2023	0.80	1.0	0.45
July 1, 2030	0.63	1.0	0.45
July 1, 2035	0.45	1.0	0.45

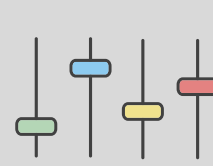
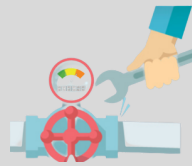
**Applies to CII-DIM accounts subject to MWELo. See 23 CCR Section 495 (b)(6)*

Water Loss Budget

The Water Loss Standard is the maximum allowable “real” water loss measured in gallons per connection per day for each supply system in an urban water supplier’s service area. Therefore, a supplier could have multiple water loss standards. The standards are intended to represent cost effective real water loss. Real losses can be defined as the volume of annual leakage due to physical water leakage in a supplier’s distribution system.

The water loss standard is the product of entering a supplier’s system specific validated baseline water loss audit data (average of 2017-2020 data previously submitted to DWR) into the State Water Board developed Water Loss Economic Model. The model calculates the water loss standard based on water loss and economic cost data. The State Water Board provides initial water loss standards for each applicable supplier’s systems on their water loss website. For about half of the state’s urban water suppliers’ systems, the economic model cannot calculate a cost-effective water loss standard. In these cases, a supplier’s impacted systems’ water loss standard will revert back to baseline loss (average of 2017-2020 water loss audit real loss).

The water loss standard is unique in that it was originally regulated under prior and independent 2015 legislation – Senate Bill 555 (Wolk). **Therefore, urban retail water suppliers can be enforced on noncompliance of the water loss standard separately through Senate Bill 555** but may also be enforced through Senate Bill 606/Assembly Bill 1668 for not meeting their overall objective compliance (for which the water loss standard is a part of). **However, suppliers cannot be enforced under both pieces of legislation at the same time as outlined in subsequent Senate Bill 134 (Hertzberg) passed in 2019.**



Water Loss Budget (cont.)



Use this QR code to check out the Water Loss Control page where you can download the most up to date list of the water loss standard for each urban water supplier.

While the State Water Board does provide initial calculated water loss standards, a supplier can choose to modify some of the economic model inputs with more system specific data and rerun the modified input data through the model to calculate a revised water loss standard at any time by contacting the State Water Board staff.

Commercial, Industrial, and Institutional (CII) Performance Measures

All urban water suppliers will also be required to meet a list of performance measures. These PMs are meant to capture water used indoor at CII sites, and for outdoor CII landscapes that do not have dedicated irrigation meters. The Performance Measures are as follows:

Year	2025	2026	2028	2030	Beyond 2030
DIM installation or in-lieu technologies (at least 2) on large landscapes (threshold = 500,000 gallons of water use)		20%	60%	100%	Maintain 95%, assessed on annual basis
Provide information to all building owners that meet "disclosable buildings" threshold	Identify 100%	20%	60%	100%	
Classification of CII properties with ENERGY STAR ++++		20%	60%	100%	Maintain 95%, assessed on annual basis
At least 1 program from each BMP category for top 20% of users in each classification category	Design and implement	20%	60%	100%	Maintain 95%, assessed on annual basis
At least 2 programs from each BMP category for top 2.5% of overall water CII users	Design and implement	20%	60%	100%	Maintain 95%, assessed on annual basis
Ban non-functional turf with potable water for all CII landscapes	Ban by 2025				