

Framework for Setting Water Use Targets Based on Indoor Water Use, Outdoor Water Use, Commercial, Industrial, and Institutional (CII), and Water Loss Standards and Budgets

Water Use Targets:

Water use targets are calculated as the sum of budgeted volumes/GPCD established by standards set for indoor, outdoor, CII, and water loss. Each of these standard-based volumes is referred to as the “budget” component of the total water use target. Compliance will be measured on the total water use target, at the supplier scale, not on the individual “budgets.” A supplier’s water use target will be calculated as:

$$\begin{aligned} & \text{Water use (volume/GPCD) based on indoor residential standard (indoor budget)} \\ + & \text{Water use (volume/GPCD) based on outdoor standard (outdoor budget)} \\ + & \text{Water use (volume/GPCD) based on CII use (CII budget)} \\ + & \text{Water use (volume/GPCD) based on system water loss (water loss budget)} \\ = & \text{Water Supplier Water Use Target} \end{aligned}$$

1. Indoor Residential Water Use Standard

- The indoor residential water use standard is a volume of water used by each person per day. The standard is in units of gallons per capita per day (GPCD).
- The indoor residential standard will be used to calculate the *indoor residential budget* of a supplier’s water use target, as a function of the total service area population.
 - Example: Indoor residential budget = Service area population x Indoor standard x days/year
 - The initial standard is proposed as 55 GPCD beginning in 2021.
 - The standard will be revised downward to reflect increased usage of efficient fixtures and appliances in 2025 and 2030.
 - State will reevaluate standard every five years, beginning in 2025.

2. Outdoor Water Use Standard

- The outdoor water use standard is a fraction of reference evapotranspiration (ET_o), based on the age and irrigated/irrigable area of the parcels within a suppliers service area.
- Two options are being considered for the outdoor water use budget:
 1. Include all residential and dedicated irrigation account landscape area
 2. Include all landscapes within the supplier’s service area including landscape served by CII accounts. (This approach would require a separate budget for indoor CII water use.)
- Using the landscape area option selected by the state above, the outdoor water use budget is calculated as the sum of the individual budgets for all parcels within that landscape area, using an *Evapotranspiration Adjustment Factor (ETAF)* as follows:
 1. Landscape area for parcels developed pre 2010 x 0.8 ET_o
 2. Landscape area for parcels developed between 2010 and 2015 x 0.7 ET_o
 3. Landscape area for parcels developed post 2015 x 0.55 ET_o (0.45 for Commercial landscape)

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4. Special landscapes (parks, fields) area x 1.0 ETo
- The outdoor standard will be revised lower based on the results of DWR's review of existing budgets and a study of landscape irrigation use in a representative statewide sample of suppliers. Revised standards will be available from the state in 2018.
 - State will reevaluate every 5 years, beginning in 2025.

3. CII Water Use Standard

- The State is considering three approaches for the CII sector.
 1. Calculate the water budget based on total CII water use
 2. Using a water use estimate for CII landscape (see bullet 2, option 2 in the outdoor water use standard), estimate CII indoor water use. (Total CII - CII landscape use= CII indoor water use)
 3. Exclude CII water use from a volumetric water budget and instead require the implementation of performance measures which could include the following:
 - Classification of CII Water Use
 - Dedicated meters for landscapes over a certain area
 - Water audits and/or management plans for CII water users over a specified volume threshold.
- For approaches 1 and 2, two options are being considered for setting water budget standards:
 1. A Provisional Target for either all CII (approach 1) or CII indoor (approach 2)
 - Example: a percentage reduction from a 2013 baseline
 2. Develop a methodology by which a supplier could self-assess potential CII reductions within their service area and establish a CII standard unique to their service area.
- State will reevaluate standard every five years, beginning in 2025.

4. Water Loss Standard

- The standard for water system loss will be established through the SB 555 process, and will be expressed in terms of a volume per capita or, volume per connection, accounting for relevant factors such as infrastructure age and condition .
- The water system loss standard will be set by 2019, to be achieved by 2025.
- State will reevaluate standard every five years, beginning in 2025.