

# Making Conservation a California Way of Life

## *Conservation Framework Standards Update*

Joe Berg, Director of Water Use Efficiency  
Planning and Operations Committee Meeting

December 6, 2021



# Presentation Content



## 01 Conservation Framework Overview (AB 606 & SB 1668)

## 02 Volumetric Framework Components and Standards

- Indoor Residential
- Outdoor Residential
- Outdoor Commercial
- Water Losses
- Variances
- Bonus Credit

## 03 Non-Volumetric Framework Components

Commercial, Industrial, and Institutional  
Performance Measures

## 04 Impacts to Orange County





## Making Conservation a CA Way of Life

- 💧 20x2020 Framework has expired; Conservation Framework is a next step
- 💧 The Conservation Framework is built on volumetric water budget-based objectives and non-volumetric performance measures
- 💧 Framework Goals:
  - 💧 Use water more wisely
  - 💧 Eliminate Water Waste
  - 💧 Strengthen Local Drought Resistance
  - 💧 Improve Agricultural Water Use Efficiency and Drought Planning



# Conservation Framework- Volumetric Water Budget Overview



## Urban Retail Suppliers Urban Water Use Objective (CWC §10609.20(c))

### Indoor Residential

Aggregate estimated efficient indoor residential water use.



### Outdoor Residential

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### Outdoor Dedicated Irrigation Meters

Aggregate estimated efficient irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.



### Water Losses

Aggregate estimated efficient water losses.



### Variances

Aggregate estimated water use for variances approved by the State Water Board.



## Allowable Bonus Incentive Adjustments (CWC §10609.20(D))

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**Urban Retail Supplier's Water Use Objective, adjusted for bonus incentive,** for annual reporting purposes and comparison to the actual water use in the previous year. **Due by January 1, 2024** (extended from November 1, 2023 by AB 1414 in 2019).

## Aggregate estimate efficient, residential indoor use

- 💧 Budget calculation considers:
  - 💧 Population – number of permanent residents
  - 💧 **Gallons per capita per day (GPCD) standard**
- 💧 DWR and SWRCB conducted an Indoor Residential Water Use Study released in May 2021 to determine GPCD standard
- 💧 DWR/SWRCB will propose joint recommendation for the GPCD standard to the legislature in October 2021 to be adopted by June 2022



# Indoor Residential Objective GPCD Standard



- 💧 The DWR/SWRCB Study estimated statewide current and future residential indoor water use
  - 🔥 Current median: **48 GPCD**
  - 🔥 2025 median: **47 GPCD**
  - 🔥 2030 median: **42 GPCD**
- 💧 MWD OC Staff submitted comments to DWR regarding the study and proposed standard
  - 🔥 Early adopters get penalized
  - 🔥 If you build it, they may not come
  - 🔥 MWD OC's pandemic data does not match
  - 🔥 Supply reliability conflicts and stranded assets
  - 🔥 More analysis on potential impacts is a must

## *Gallons Per Capita Per day (GPCD) Standards*

Starting Year	Current Statute	AB 1434	DWR/SWRCB Proposed Recommendation
<b>2023</b>	55	48	<b>55</b>
<b>2025</b>	52.5	44	<b>47</b>
<b>2030</b>	50	40	<b>42</b>

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# Outdoor Residential Objective Overview



## Aggregate efficient residential outdoor water use

- 💧 Budget calculation considers:
  - 💧 Local weather conditions, as rate of evapotranspiration (ET<sub>o</sub>) minus effective precipitation
  - 💧 An adjustment ET<sub>o</sub> factor (ETF) ← **ETF UPDATE**
  - 💧 Residential *irrigated and irrigable* area; measurements provided by DWR
    - 💧 *Irrigable* area to be included as a buffer: **20%** of *irrigable* area will be added to the *irrigated* area total
- 💧 DWR/SWRCB will propose joint recommendation to the legislature in October 2021 to be adopted by June 2022





# Outdoor Residential ETF Standard



- 💧 The Reference Evapotranspiration Factor (ETF) represents a percentage of reference evapotranspiration (ET<sub>o</sub>).
- 💧 DWR has assumed an irrigation efficiency of 80% when calculating the proposed ETF.

	PREVIOUS Recommendation		UPDATED Recommendation	
	2022—2029	2030—∞	2022—2029	2030+
Irrigated Area (II) ETF	70%	70%	<b>80%</b>	<b>65%</b>
II New Development ETF	55%	55%	55%	55%
Irrigable (INI) Landscape Area	20% Buffer	20% Buffer	20% Buffer	20% Buffer

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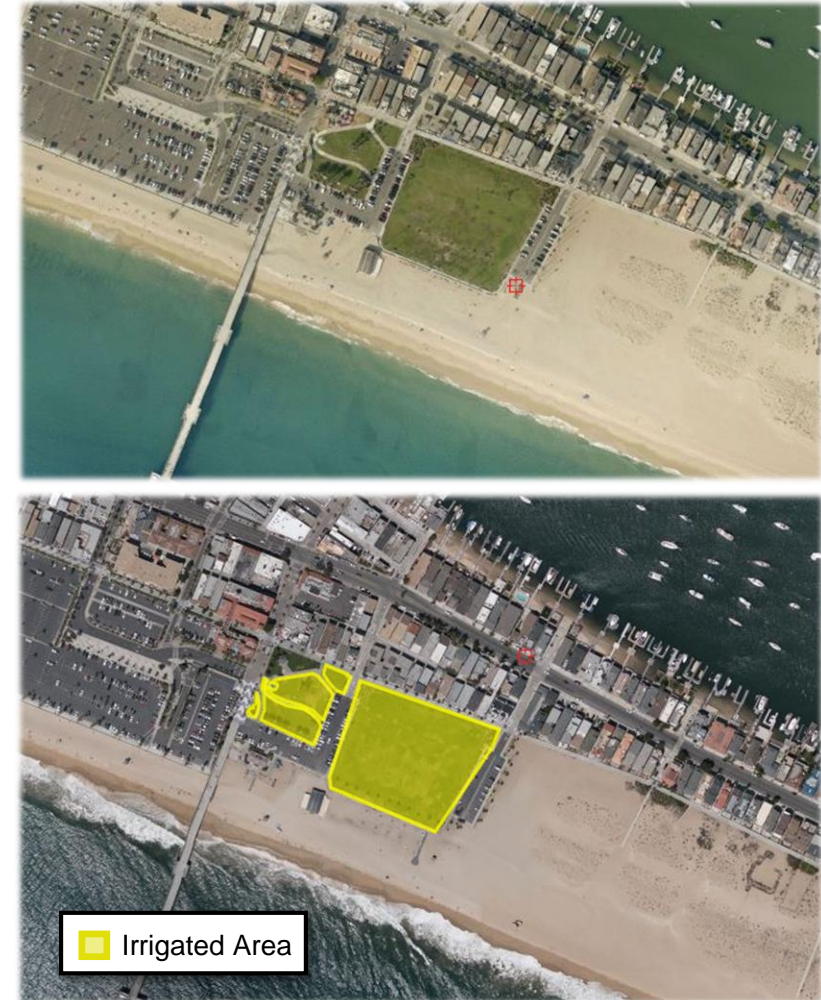
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# Dedicated Irrigation Meters (CII Outdoor) Objective



## Aggregate efficient water use for dedicated irrigation meters (DIM)

- 💧 Budget calculation considers:
  - 🔥 Local weather conditions, as rate of evapotranspiration (ET<sub>o</sub>) minus effective precipitation
  - 🔥 DIM irrigated area, **not provided by DWR**
    - 🌱 OC retailers can access consultant services through MWD OC
  - 🔥 ETF standard
- 💧 Water supplier must approve DIM landscape area measurements through a public process





# DIM Outdoor ETF Standard



- 💧 ETF standard
  - 🔥 Regular landscapes, same as residential
  - 🔥 Special Landscapes – 100% ETF
    - 🌱 Based on MWELO 2015
    - 🌱 **Includes engineered slopes**, recreational areas (e.g. sports fields), landscapes irrigated with recycled water
    - 🌱 May be expanded to include more types of landscapes
- 💧 MWELO Exempt Landscapes
  - 🔥 Cemeteries, public botanical gardens, registered historic sites, and more

	Recommendation	
	2022—2029	2030+
Regular Landscape Area ETF	80%	65%
New and Rehabilitated Development ETF	45%	45%
Special Landscapes ETF	100%	100%

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# Water Loss Objective

## Aggregate estimated efficient water losses

-  Each urban water supplier will be assigned an individualized volumetric water loss standard based on:
  -  Real loss
  -  Economic model developed by SWRCB
  -  Supplier's own unique data
-  13 OC agencies have been assigned water loss reductions
-  Several OC agencies have re-submitted corrected audits from prior years
-  Some OC agencies are developing custom inputs to the economic model in order to file for an adjustment to their Water Loss Performance Standard
-  Non-enforceable apparent loss component focusing on customer meter accuracy testing

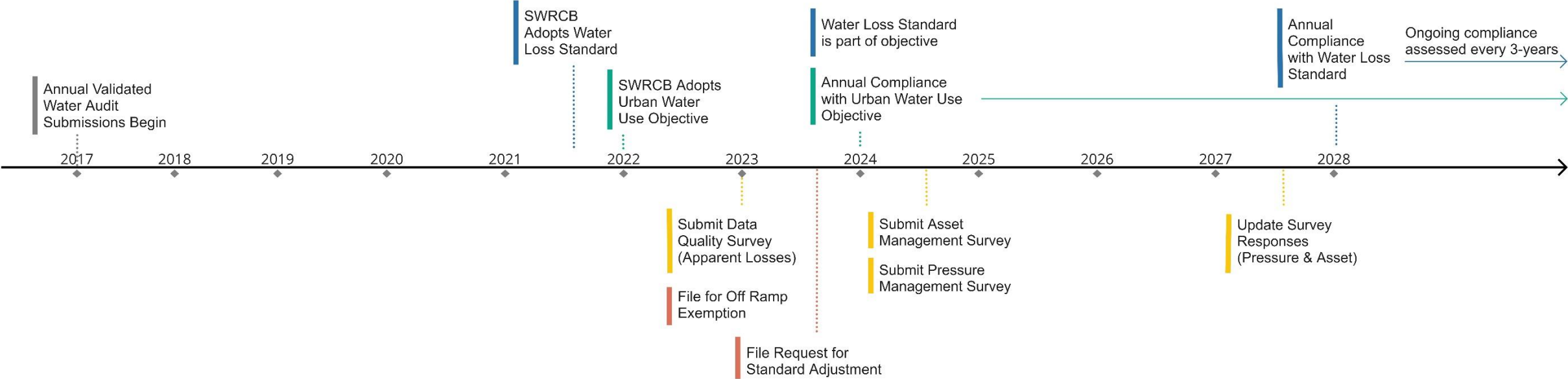
	Baseline Water Loss (2017-19)	Water Loss Performance Standard (GPCD)	Water Loss reduction (GPCD)
Anaheim	23.5	19.5	4
Brea	15.2	15.2	
Buena Park	35.8	16.4	19.4
East OCWD	25.8	25.8	
El Toro WD	24.2	24.2	
Emerald Bay SD			
Fountain Valley	11.9	11.9	
Fullerton	18.4	18.4	
Garden Grove	22.9	11.9	11
Golden State - Placentia	27.3	22.5	4.8
Golden State - Orange	19.5	19.5	
Huntington Beach	14.8	14.8	
Irvine Ranch WD	14.9	14.9	
La Habra	28	20.1	7.9
La Palma	37.2	15	22.2
Laguna Beach CWD	24.4	17.5	6.9
Mesa Water	18	18	
Moulton Niguel WD	24.7	24.7	
Newport Beach	26.2	18.4	7.8
Orange	31.1	21.6	9.5
San Clemente	36.4	17.9	18.5
San Juan Capistrano	13.1	13.1	
Santa Ana	13.8	13.8	
Santa Margarita WD	16.2	16.2	
Seal Beach	26.3	15.4	10.9
Serrano WD			
South Coast WD	8.1	8.1	
Trabuco Canyon WD	20.2	20.2	
Tustin	37.4	11.3	26.1
Westminster	14.5	14.5	
Yorba Linda WD	40.5	20.9	19.6



# Water Loss Objective Schedule



- Water Loss Standards
- Water Use Objective
- Additional Reporting
- Adjustment & Exception Filing
- Annual Validated Water Audits Submitted to DWR



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# Variances



## Aggregate estimated water use for variances approved by the State Water Board

- Variances are unique uses of water that can have a material effect; requires DWR/SWRCB approval
- DWR calculation methodology must be used and threshold of significance must be met: each variance must be at least 5% of UWUO
- Variances under consideration include:
  - ~~Parkway Strips~~ (instead request adjustment to irrigable areas)
  - Emergency: *Fires and earthquakes*
  - Seasonal Population: *Non-permanent rentals*
  - At-home medical devices: *Home dialysis machines*
  - Residential Agriculture
  - Dust Control: *Residential horse corrals*
  - Evaporative coolers
  - Sustaining Wildlife
  - Recycled Water With High TDS for Irrigation





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# Potable Reuse Bonus



## Bonus Credit for Potable Reuse

- 💧 An urban water supplier is eligible for one of the following:
  - 💧 Volume of potable reuse water from existing facility, **not to exceed 15% of the urban water use objective**
    - 🌱 Completed environmental review by 1/1/2019
    - 🌱 Became operational by 1/1/2022
  - 💧 Volume of potable reuse water from a new facility, **not to exceed 10% of urban water use objective.**
- 💧 OCWD agencies are eligible through the GWRS
- 💧 Calculation methodology based on “last in first out” and a loss factor



## Volumetric Water Use Objective (Water Budget)

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## Non-Volumetric

### Commercial, Industrial, and Institutional (CII) Performance Measures

Actions taken by urban retail water suppliers that will result in increased water use efficiency in the CII sector.



# Non-Volumetric Standards - CII Performance Measures



## Actions to result in CII Water Efficiency

- 💧 Commercial, Industrial, and Institutional (CII) not included in volumetric water budget
- 💧 DWR to develop recommendations on Performance measures:
  - 🔥 CII water use classification system
    - 🌱 Previous recommendation: up to 97 categories
    - 🌱 Current recommendation: 19 categories
  - 🔥 Best Management Practices such as water audits and/or water management plans
  - 🔥 Threshold to split mixed-use meters
    - 🌱 Recommendation is 20,000 square feet of landscape
    - 🌱 May implement an in-lieu technology



# Schedule



**October 1, 2021**

Standards recommendations by DWR/SWRCB to be made to the legislature

We are here

**June 30, 2022**

Legislature to adopt standards

**January 1, 2024**

First annual report on WUO and actual use is due

**January 1, 2025**

Indoor standard lowered to 47 GPCD

**January 1, 2026**

SWRCB may issue conservation order to suppliers not meeting their objective

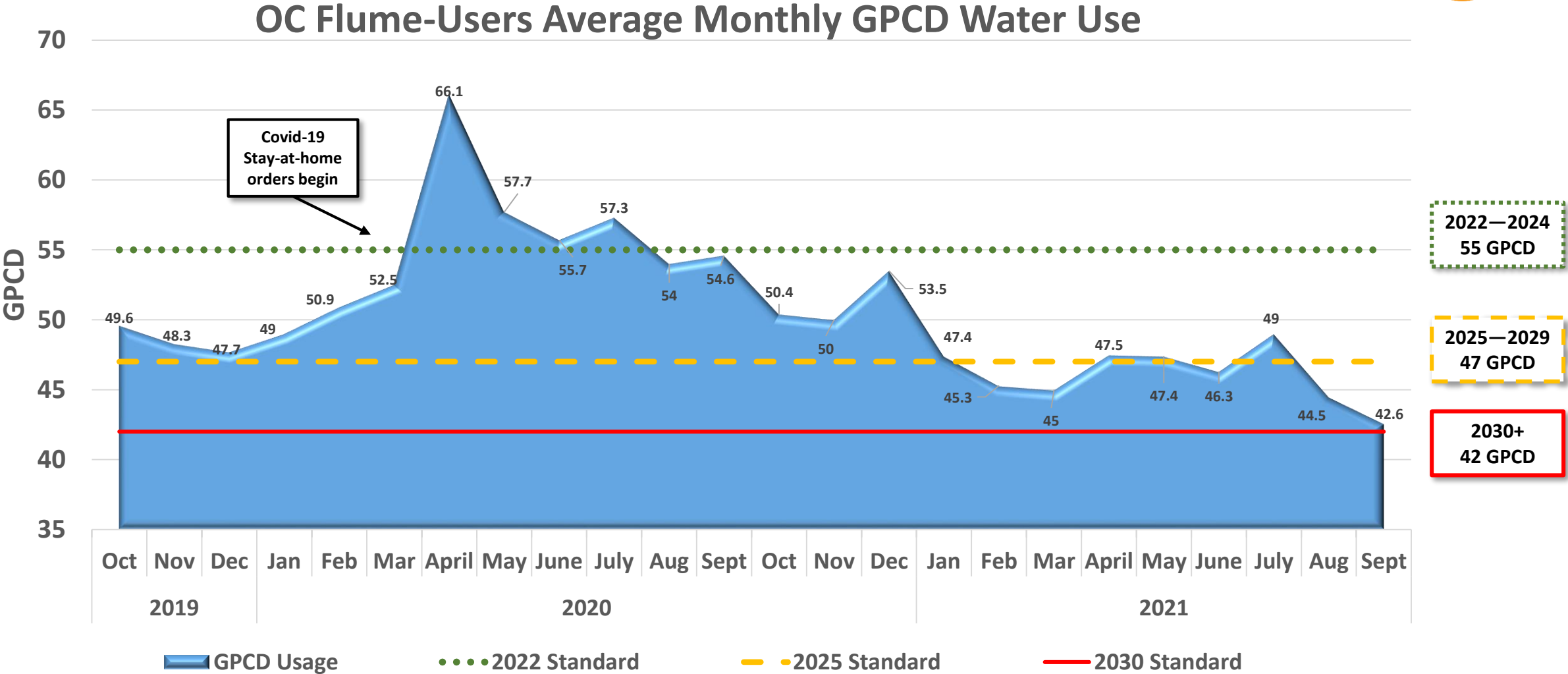
**January 1, 2027**

**Urban water suppliers to meet WUO**

**January 1, 2030**

-Indoor standard lowered to 42 GPCD  
-Outdoor regular landscape ETF standard lowered to 65%

# Impacts to Orange County



**Note:** Data does not represent all OC water usage nor is it a statistically representative sample; averages only include households that have opted to install a Flume water monitoring device. The number of installed Flumes increased significantly starting in June 2021, the increased sample size may have an impact on monthly average GPCD usage.



# Impacts to Orange County



## 💧 ETF Factors

- 💧 Engineered slopes are considered special landscapes
- 💧 This assigns all engineered sloped areas 100% of  $ET_o$  instead of 80% and 65%!
- 💧 Significant positive impact for retailers with hilly topography

## 💧 Potable Reuse Bonus

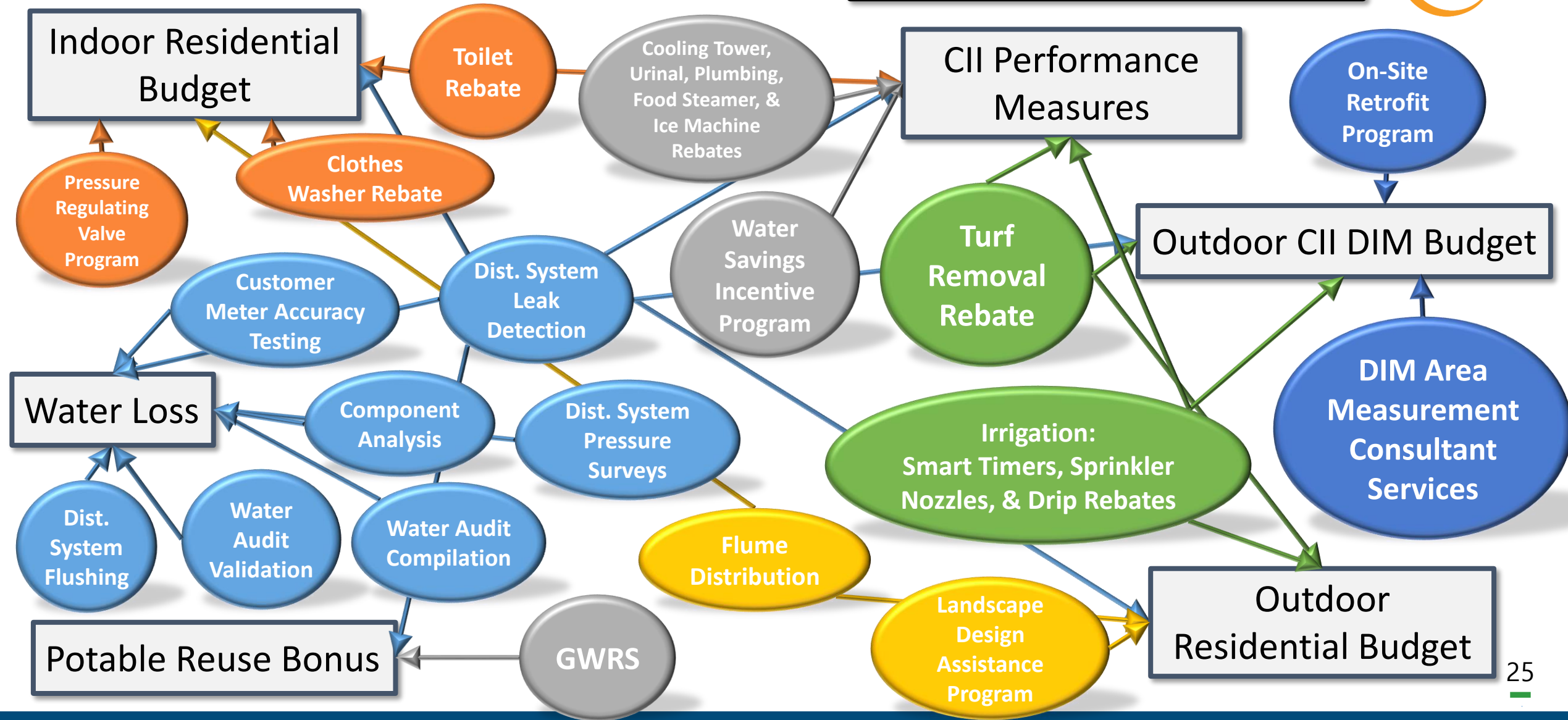
- 💧 Basin agencies may receive a credit of up to 15% of their calculated objective





# MWDOC Existing Programs Help With Compliance

Since 2020, MWDOC has been awarded \$3.9M in federal and state grant funds to support these programs!



Thank you for your attention.  
Please **let us know** if you have questions.

## Joe Berg

Director of Water Use Efficiency

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**MWDOC** MUNICIPAL WATER DISTRICT OF ORANGE COUNTY