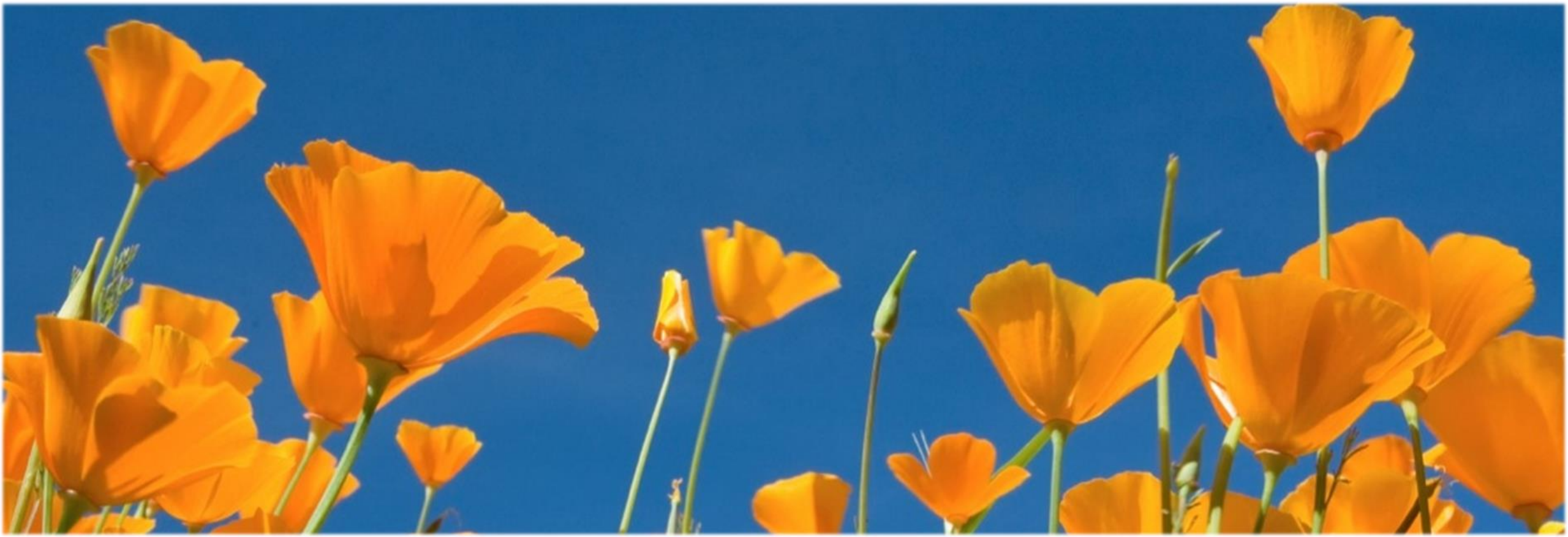


Final Recommendations for Making Conservation a California Way of Life

Joe Berg, Director of Water Use Efficiency
Association of California Cities of Orange County

September 27, 2023

What will be presented?

01 Conservation as a CA Way of Life Framework Basics

02 Final Standard Recommendations

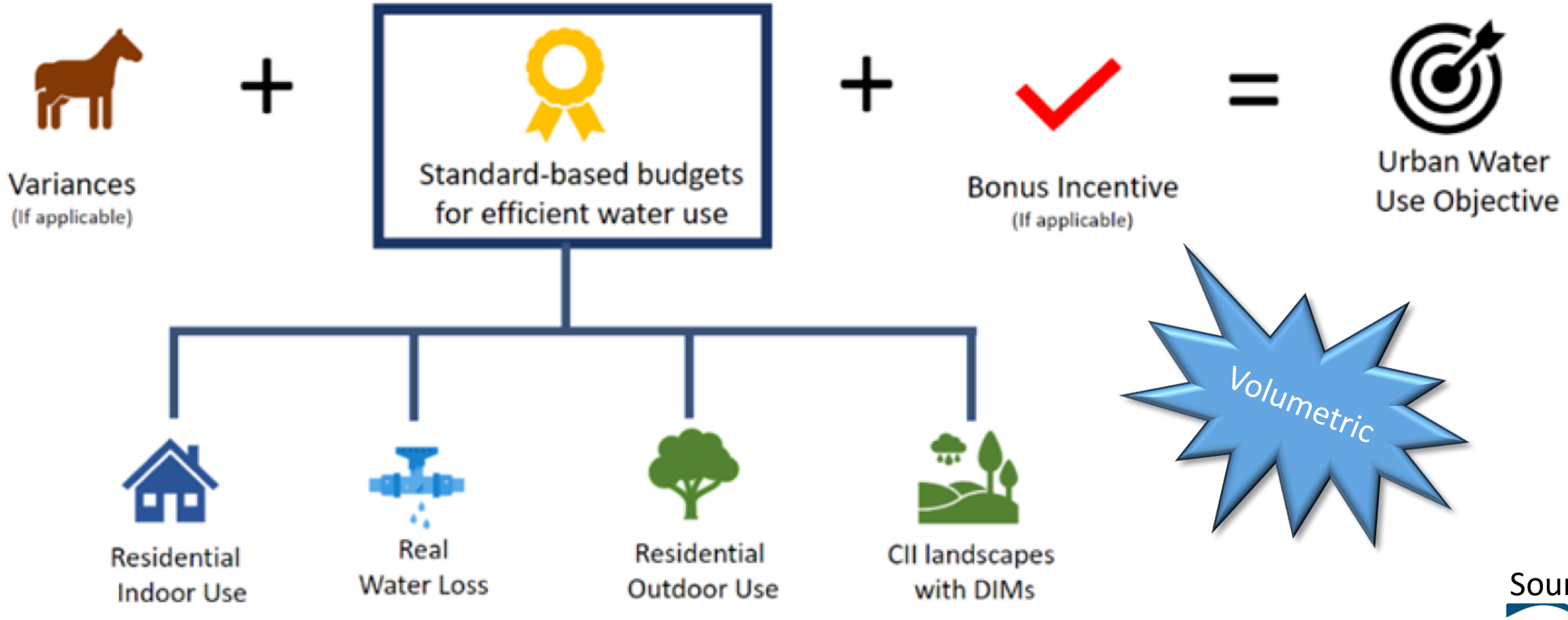
03 Commercial, Industrial and Institutional Performance Measures

04 Cost to Comply and Practical Implications

Framework Basics

Implement SB 606 & AB 1668 (2018)

Figure 1: How a supplier calculates its urban water use objective



Source:

Final Standard Recommendations

Figure 2: How a supplier would calculate its Residential Indoor Budget

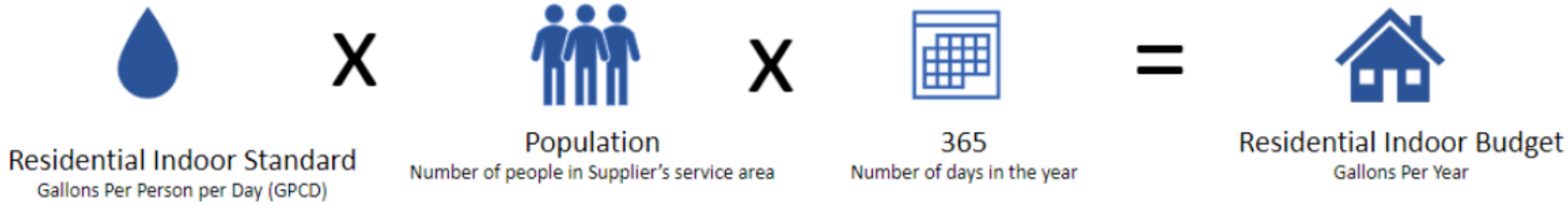


Table 1: Residential indoor standard as defined in Water Code Section 10609.4

	Residential Indoor Standard (GPCD)
Through December 31, 2024	55
From January 1, 2025, through December 31, 2029	47
January 1, 2030, onwards	42

Established by AB 1175 in 2022.

Source:

Final Standard Recommendations

Figure 3: How a supplier would calculate its Residential Outdoor Budget

Table 2: Residential Outdoor standards

	Landscape Efficiency Factor
Through June 30, 2030	0.80
From July 1, 2030, to June 30, 2035	0.63
July 1, 2035, onwards	0.55

Limited variances can be requested annually.

Source:

Final Standard Recommendations

Figure 4: How a supplier would calculate its Outdoor Budget for CII landscapes with DIMs

Table 3: Standard for CII Landscapes with Dedicated Irrigation Meters

	Landscape Efficiency Factor
Through June 30, 2030	0.80
From July 1, 2030, to June 30, 2035	0.63
July 1, 2035, onwards	0.45

Special Landscape Areas = LEF of 1.0 (i.e. Sites irrigated with recycled water, engineered slopes, etc.)

Limited variances can be requested annually

Source:

Final Standard Recommendations

Figure 5: How a supplier would calculate its Water Loss Budget

A supplier would calculate its annual water loss budget by multiplying its system-specific standard by the number of days in the year and, depending on the units associated with the standard, either the number of total service connections or the length of the distribution system, in miles.

Established through Rule Making process required by SB 555.

Source:

Bonus Incentive for Potable Reuse

- Bonus incentive available for potable reuse
  - Not to exceed 15% of objective for “existing facilities”
    - Environmental review completed before 1/1/2019; production began before 1/1/2022.
    - Utilizes microfiltration and reverse osmosis technologies.
  - Not to exceed 10% of objective for “other facilities”
- GWRS is considered an “existing facility”
  - Basin agencies may be eligible to add up to 15% to their calculated objective.
  - Based on individual retailer's potable reuse volume delivered to residential and DIM connections, adjusted for groundwater recharge and recovery loss.

CII Performance Measures

Not Volumetric

- Customer Classification System
  - U.S. EPA's ENERGYSTAR Portfolio Manager (18 categories)
    - Plus CII laundries, large landscapes, water recreation, and car washes.
  - Includes timelines and compliance milestones for suppliers to complete classifications.
- Best Management Practice (BMP) Implementation Plans
  - Targets top 2.5% and 20% of CII users for specific offerings.
  - Offers a menu of rebate, education, etc. options to choose from.
  - Bans potable irrigation of NFT by July 1, 2025.
  - Includes timelines and compliance milestones for suppliers to begin offering programs by July 1, 2025.

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CII Performance Measures (Cont.)

- Splitting mixed-use CII Meters
  - Threshold of 500,000 gallons or more per year per meter used towards irrigation, triggers the split to indoor and outdoor metering.
    - Landscape water use to be estimated using an efficiency factor of 0.76.
    - Dedicated metering or In-lieu technology.
  - If split, new dedicated irrigation meters become part of the volumetric standard.
  - New indoor meters stay in CII Performance Measures BMPs.

Estimated Costs to Compliance Costs

Preliminary: based on SWRCB partial data and assumptions that create compounding errors. Excludes costs for compliance with Commercial, Industrial and Institutional requirements and costs for agencies to maintain compliance.

Conservation Program Costs 100% Higher than Base Cost Estimate

(per draft WSC/M.Cubed report)

Supplier Name	Reduction Required (AFY)	Net Compliance Cost ($/Yr) Annual Total	/Connection	/Per Capita	Total Cost Over 11 years
Anaheim City of	3,789	$4,909,447	$76.58	$13.54	$54,003,922
Brea City of	1,841	$2,951,573	$215.21	$68.12	$32,467,301
Buena Park City of	2,688	$5,164,290	$268.22	$61.70	$56,807,185
East Orange County Water District	111	$215,077	$106.60	$66.04	$2,365,849
El Toro Water District	534	$171,251	$17.04	$3.49	$1,883,758
Fountain Valley City of	1,205	$2,340,568	$136.34	$39.52	$25,746,253
Fullerton City of	2,533	$2,604,825	$81.51	$18.55	$28,653,072
Garden Grove City of	2,905	$4,830,173	$143.05	$27.70	$53,131,898
GSWC - Placentia	171	($17,948)	($1.37)	($0.33)	($197,424)
GSWC - West Orange	1,243	$2,138,904	$76.01	$18.87	$23,527,943
Huntington Beach City of	3,583	$5,536,789	$101.64	$27.55	$60,904,675
Irvine Ranch Water District	N/A	N/A	N/A	N/A	N/A
La Habra City of	1,792	$2,940,473	$224.10	$46.59	$32,345,205
La Palma City of	293	$457,426	$103.43	$28.71	$5,031,691
Laguna Beach County Water District	975	$1,709,009	$197.12	$89.40	$18,799,102

MWDOC

Estimated Costs to Compliance Cost (Cont.)

Preliminary: based on SWRCB partial data and assumptions that create compounding errors. Excludes costs for compliance with Commercial, Industrial and Institutional requirements and costs for agencies to maintain compliance.

Conservation Program Costs 100% Higher than Base Cost Estimate

(per draft WSC/M.Cubed report)

Supplier Name	Reduction Required (AFY)	Net Compliance Cost ($/Yr) Annual Total	/Connection	/Per Capita	Total Cost Over 11 years
Mesa Water District	2,022	$3,885,158	$155.91	$35.32	$42,736,738
Moulton Niguel Water District	1,087	$406,438	$7.57	$2.36	$4,470,819
Newport Beach City of	3,021	$2,082,164	$78.07	$31.00	$22,903,805
Orange City of	4,329	$9,610,257	$263.95	$68.35	$105,712,824
San Clemente City of	803	$52,740	$3.02	$1.02	$580,145
San Juan Capistrano City of	425	$144,959	$12.42	$3.80	$1,594,551
Santa Ana City of	N/A	N/A	N/A	N/A	N/A
Santa Margarita Water District	3,266	$1,142,240	$20.53	$7.02	$12,564,638
Seal Beach City of	382	$399,539	$74.11	$15.63	$4,394,925
South Coast Water District	703	$415,888	$30.70	$11.99	$4,574,763
Trabuco Canyon Water District	637	$1,208,541	$302.92	$90.57	$13,293,953
Tustin City of	1,746	$3,322,101	$234.53	$48.84	$36,543,114
Westminister City of	1,225	$2,695,033	$130.05	$28.11	$29,645,359
Yorba Linda Water District	2,198	$2,975,677	$118.20	$36.24	$32,732,445
Total	**45,508**	**$64,292,592**	**$82.17**	**$20.05**	**$707,218,509**

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Enforcement

Table 2: Compliance and Enforcement Actions for State Water Board

Item #	Description	Deadline	CWC Section
1	Provide progressive enforcement: May issue informational orders	On or after November 1, 2023	10609.26(a)(1) SB
2	Provide progressive enforcement: May issue written notices	On or after November 1, 2024	10609.26(b) SB
3	Provide progressive enforcement: May issue conservation orders	On or after November 1, 2025	10609.26(c)(1) SB
4	Provide progressive enforcement: May impose civil liability (fine) for a violation of regulation	After November 1, 2027	1846.5(b)(2) AB

KEY for Table 2:

AB = Assembly Bill 1668; **CWC** = California Water Code, **DWR** = California Department of Water Resources Water Code, **State Water Board** = State Water Resources Control Board, **SB** = Senate Bill 606

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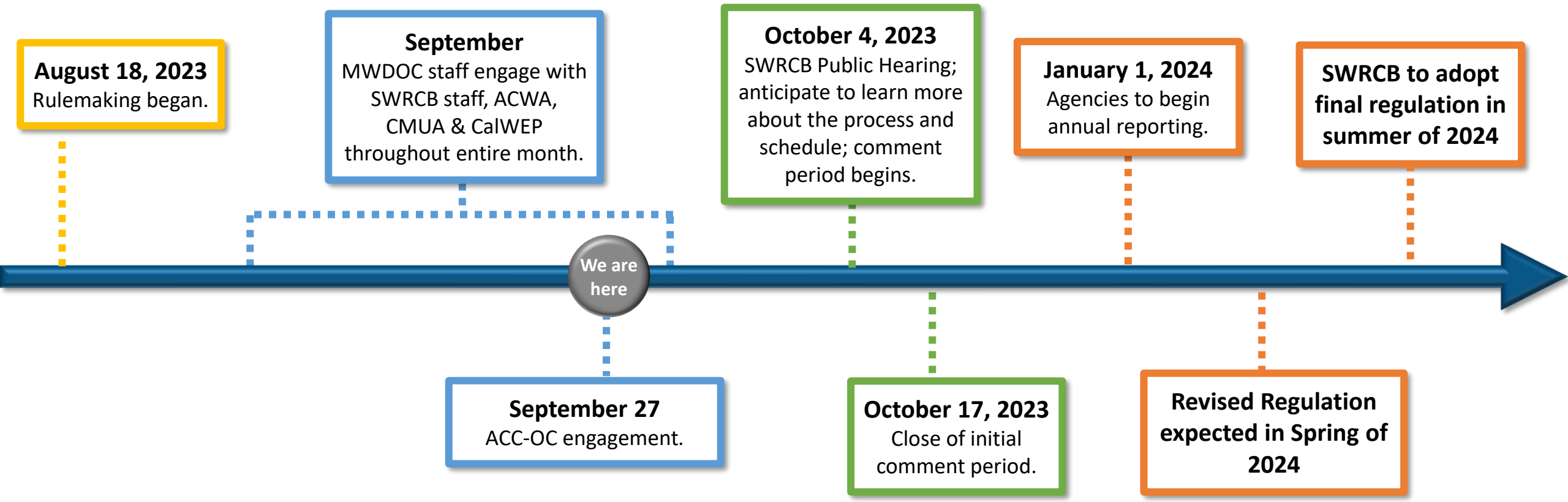
Next Steps


August 18, 2023
Rulemaking began.
September
MWDOC staff engage with SWRCB staff, ACWA, CMUA & CalWEP throughout entire month.
October 4, 2023
SWRCB Public Hearing; anticipate to learn more about the process and schedule; comment period begins.
January 1, 2024
Agencies to begin annual reporting.
SWRCB to adopt final regulation in summer of 2024
We are here
September 27
ACC-OC engagement.
October 17, 2023
Close of initial comment period.
Revised Regulation expected in Spring of 2024

Practical Implications of WUE Standards for OC Cities

- Increased water rates to consumers
  - Disproportionately impacts the Disadvantaged
- Does not include water for residential pools after 2035
- Blighted landscapes that would lower property values
- Unachievable water savings goals due to customer unwillingness to participate in efficiency programs
- Regulations are being adopted based on partial data and compounding data errors
- The timeline to comply by 2035 is too compressed

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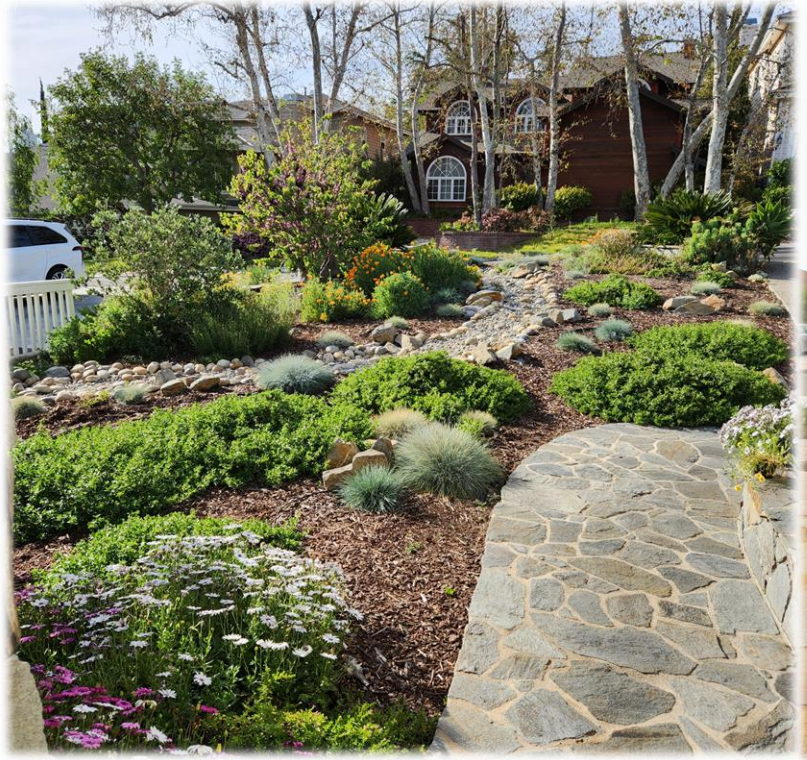

Discussion

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

Joseph M. Berg

Director of Water Use Efficiency

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main office

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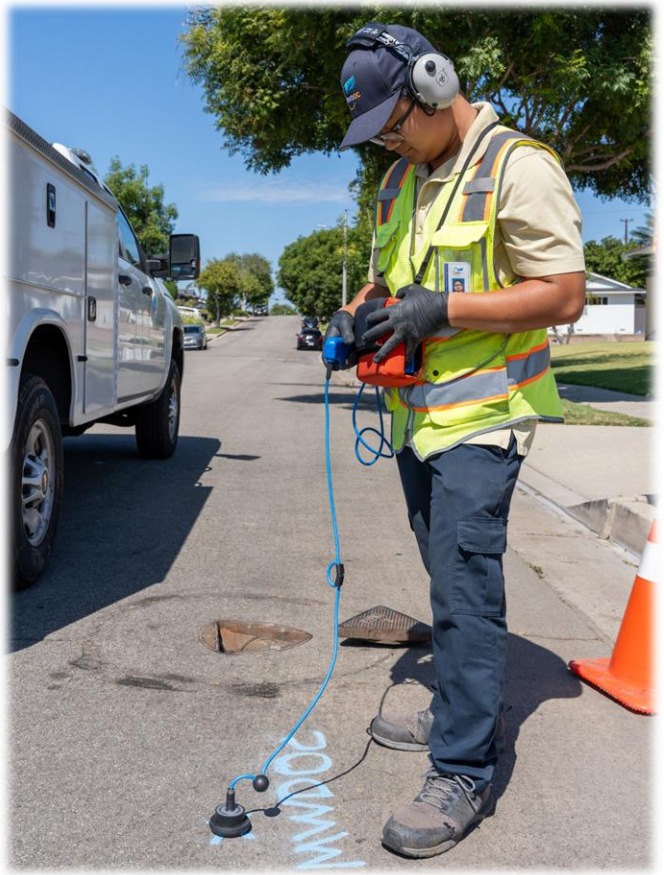
MWDOC MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

How MWDOC is Assisting Member Agencies

- General awareness of Standards development and adoption process.
- Numerous comment letters over the past several years.
- WUE Program Implementation & Funding Acquisition.
- Water Loss Shared Services and Technical Assistance.
- Dedicated Irrigation Meter Area Measurements – *underway*.
- CII Customer Classifications – *initiation and RFP process soon*.
- CII BMP Implementation Plans - *initiation and RFP process soon*.



Santa Margarita Water District

Overview: Urban Water Use Objective & Outdoor Water Use Standard

How low can outdoor water use reasonably go for *existing and new* residential landscapes?

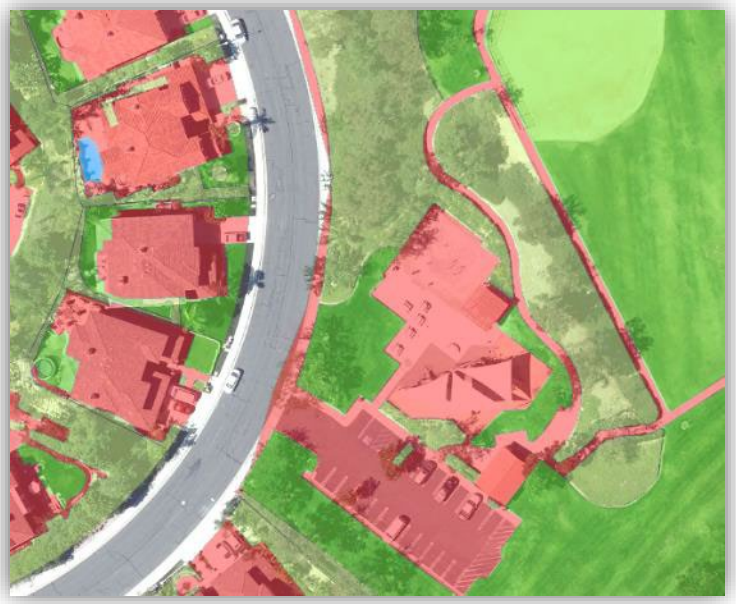
Is this a long-term compliance approach?

ACC-OC, 9/27/23
Nate Adams
natea at SMWD.com

Santa Margarita Water District

TOPICS

- Need to get Dedicated Irrigation Meter landscape area data by 2028
- State's ambitious goals for outdoor water use efficiency
- What is a Reasonable Timeline for Landscape Change?



Santa Margarita Water District

Outdoor Water Use & Outdoor Budgets

- Outdoor water use is the #1 demand for many CA water retailers

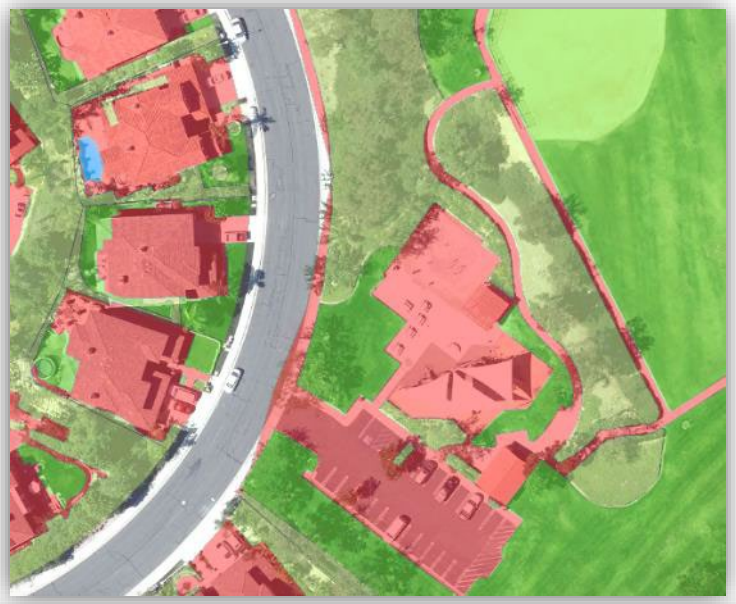
- Compliance may come down to:
  - How accurate your outdoor budget is
  - Outdoor water use

- CA Dept. Water Resources re-sending emails with residential landscape area measurements
  - Look for an email from Scott.Hayes @ water.ca.gov
- By July 2028, water retailers must obtain their own landscape area measurements for dedicated irrigation meters.

Santa Margarita Water District

Obtaining Irrigable Area Data is Complex

- Budget-based tiered rate structure, implemented in 2015.
  - Landscape area measurements (LAM) for all residential (RES) and dedicated irrigation meter (DIM) accounts
  - ~1 year + $1.5 million + 4 FT and 3 LT staff to obtain… and still refining!
    - DIM LAM is challenging
- San Juan Capistrano (2022-2023)
  - ~11K services; 700 DIMs
  - $0.25+ million
  - 10 staff; 3,000 hours
  - Community partnerships critical



Santa Margarita Water District

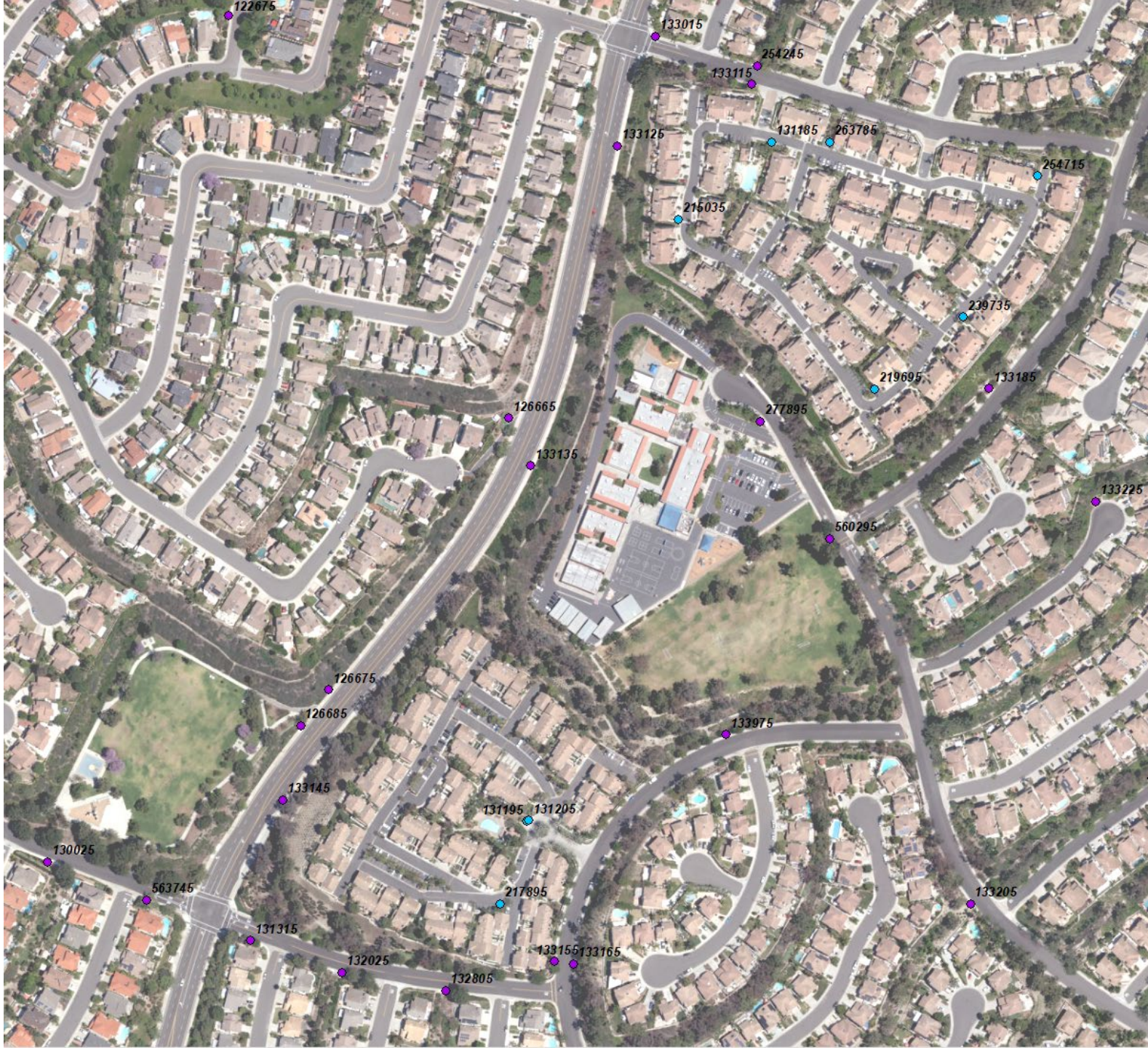
Dedicated Irrigation Meters (DIMs)

By July 1, 2028 all retailers to have measured all landscape areas associated with dedicated irrigation meters.

<u>Where are DIMs?</u>

City parks, medians, parkways, schools, ?

HOA common areas



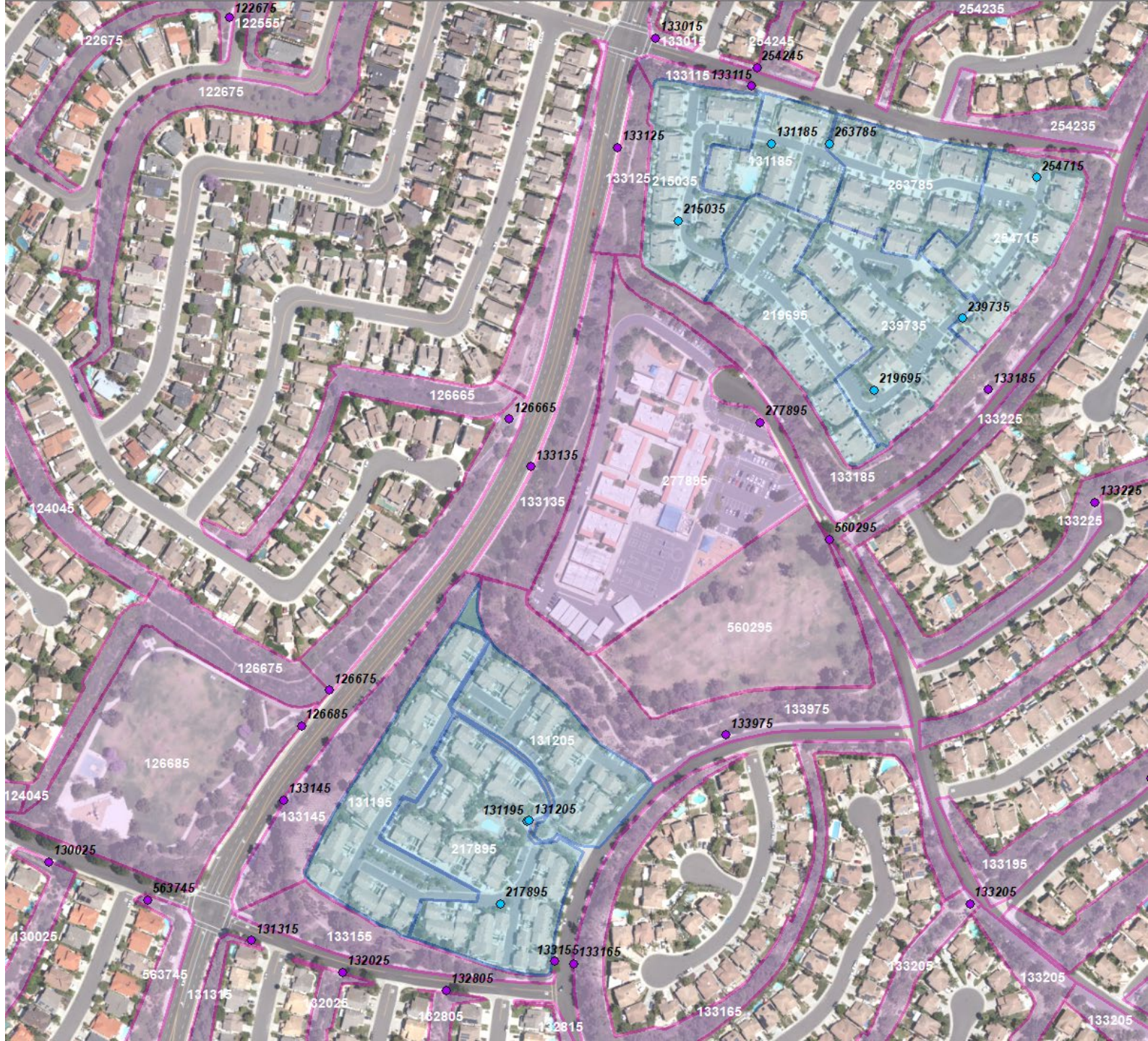
Santa Margarita Water District

Dedicated Irrigation Meters (DIMs)

Step 1:
GPS meters

Step 2:
Obtain, find, and map irrigated coverage areas for each irrigation meter.

Step 3:
Determine “Irrigable Area” via landscape classifications. Find a vendor or work with MWDOC.



New Development: Real World Performance

Landscape Efficiency Factor (LEF)

State's expectation is that all residential landscapes (plants & pools) perform at a LEF of:

0.8 now through 2030

0.63 2030-2035

0.55 in 2035

Google image from July 2019

Homeowner maintained landscaping

Parkway HOA DIM, Recycled Water

Google image from Feb 2018

New Development Design: 0.55 ET Factor

Residential developments installed after 2016 do benefit from efficient MWELO standards:

- Smaller landscaped area (zero-lot lines)
- Plant palette is very low water-use
- Efficient spray nozzles and/or drip
- HOA maintained parkways; DIM w/ Recycled Water

New Development: Real World Performance

Landscape Efficiency Factor (LEF)

State's expectation is that all residential landscapes perform at a LEF of:

0.8 now through 2030

0.63 2030-2035

0.55 in 2035

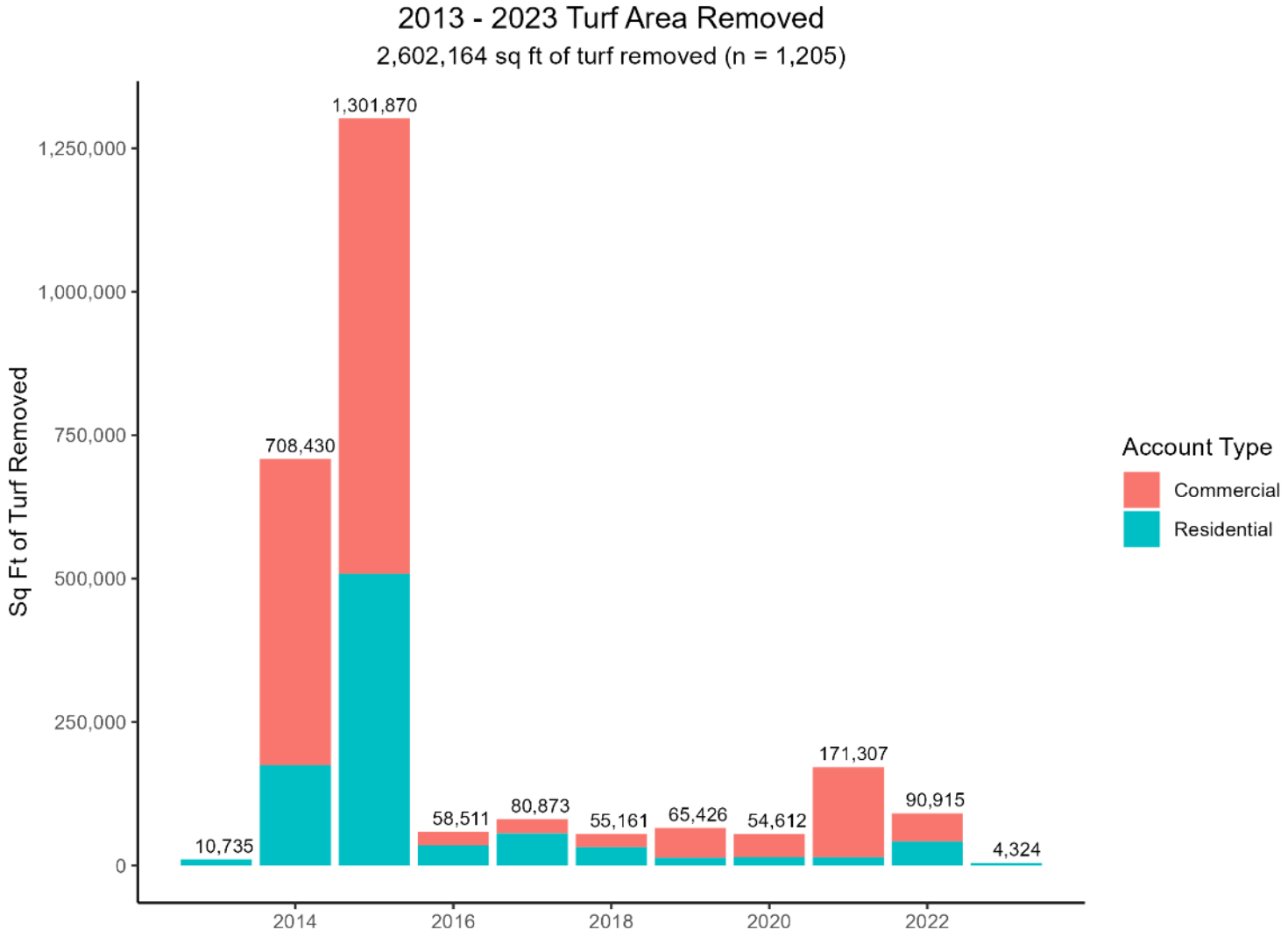
<u>SMWD Single-Family Residential Outdoor Efficiency</u>

Brand new residential development performs at **0.69**

Entire SMWD service area performs at **0.94**

Turf Removal Rebate Participation in SMWD

- The District has removed ~2.6 million sq.ft. of turf to date; >$5 million in rebates
- 1.7 million sq.ft. for commercial ($3.5 million in rebates)
- ~1 million sq.ft. for residential applicants ($1.8 million in rebates)



Pace of Landscape Change

- 650 acres of turf on single-family residential parcels

- To meet the 2030 Outdoor Standard (0.63 Landscape Efficiency Factor):
  - 430 acres of turf need to be removed (66% of turf area)
  - $188 million
  - 2030 is 6 years away, so we need to convert:
    - 72 acres of turf per year by 2030

Historical Single-Family Residential Activity

To date, 23 acres of turf have been removed in 10 years through our turf removal rebate program; 2.3 acres/year, or 3% of the pace needed!

Santa Margarita Water District

Thank You

Nate Adams
natea @ smwd.com

Irvine Ranch Water District

OCTOBER 4TH PUBLIC HEARING ON THE "MAKING CONSERVATION A WAY OF LIFE" PROPOSED REGULATION

SEPTEMBER 27, 2023

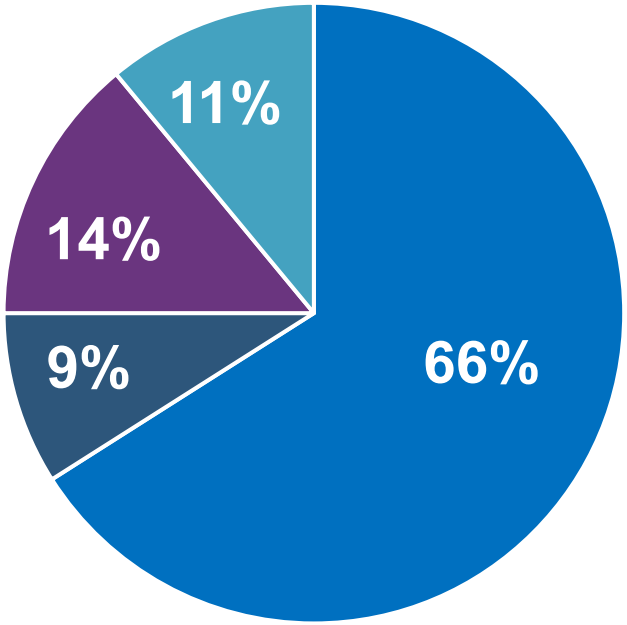
AGENDA

- IRWD's 30 Years of Water Efficiency Investments
- How Did We Get Here?
- October 4th Public Hearing
- 5 Suggested Comment Areas for Cities
- Questions

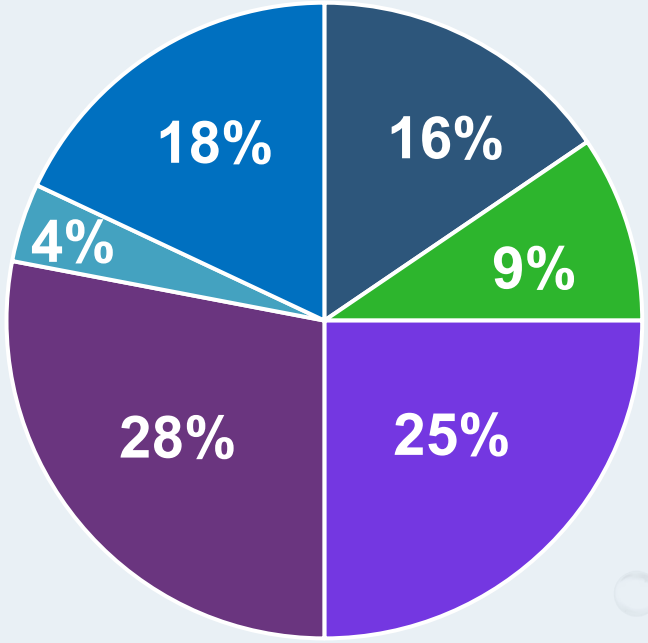
Irvine Ranch Water District

IRWD WATER SOURCE PORTFOLIO

1990



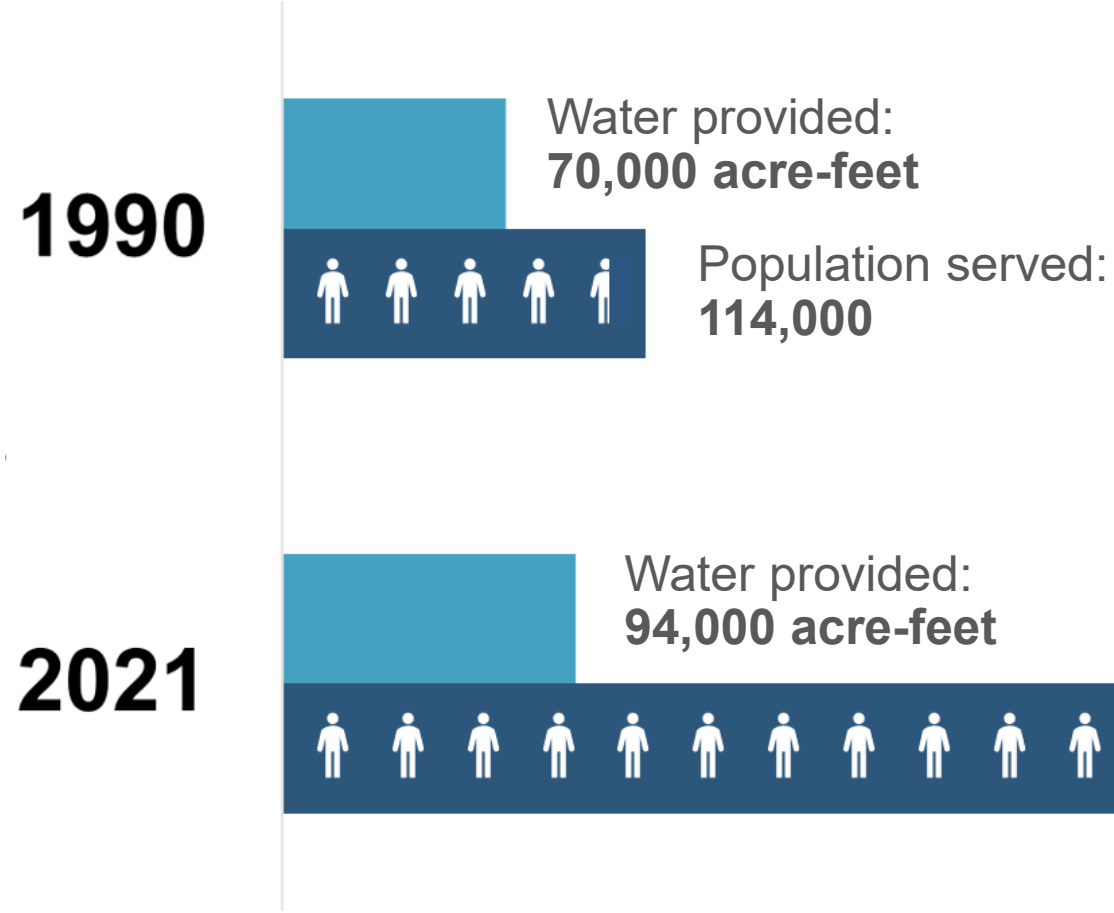
Today



Over 50% of IRWD's total water supply is from potable reuse or traditional recycled water.

Irvine Ranch Water District

GROWING COMMUNITY, GROWING EFFICIENCY

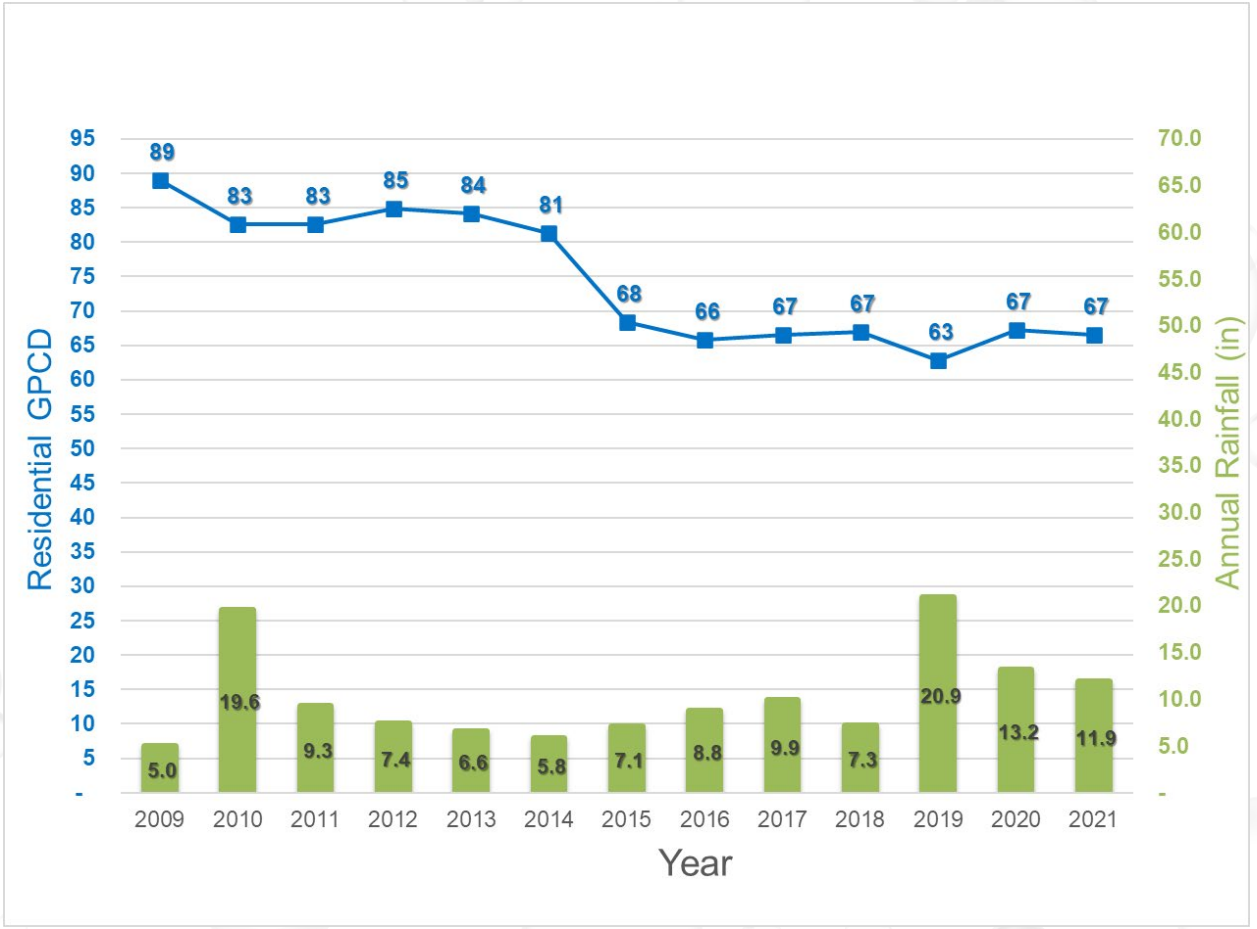


IRWD customers are among the most efficient in California

Irvine Ranch Water District

IRWD WATER EFFICIENCY : 30 YEARS OF INVESTMENT

- Over **$52 million** invested since 2009
- **Water budget-based rates** since 1991
- Indoor plumbing fixtures
  - **New** and existing homes - statistically no difference in use
  - No cost-effective additional measures
- **Multiple outdoor programs**
  - Weather-based irrigation controllers
  - Conversion to drip irrigation
  - Pressure reducing valves
  - Pressure reducing sprayheads
  - Landscape tune-up program
  - Turf replacement program ($5/sq.ft)
  - Landscape design assistance program
  - Training and outreach



IRWD ETF ~ 0.7
IRWD New Development ETF ~0.66

Irvine Ranch WATER DISTRICT

WHAT THE PROPOSED OUTDOOR STANDARDS MEAN?

Standard until 2030 (0.8 ETF)- Can support turf if it is maintained with a well-functioning irrigation system, the majority of the landscape is not turf, and the other plant material is low water use.

Standard from 2030- 2035 (0.63 ETF)- Would be difficult to support any turf in a healthy landscape.

2035 Standard (0.55 ETF)- Would support very limited turf. The majority of the landscape would need to be drought tolerant plants.

Irvine Ranch WATER DISTRICT

WHAT WOULD IT TAKE TO FOR IRWD TO GET TO 0.63 BY 2030?

Residential Case Scenarios to Meet DWR's Proposed ET_{Factor} of 0.63 by 2030

Residential irrigated turf area (acres):	440.0
Residential pools & spa area (acres):	70.0
Total residential LAM with a Kc > than 0.5 (acres):	510.0
Average cost to convert turf into drought tolerant plants ($/sq-ft)	10.00
Rebate amount ($/sq-ft)	5.00

Since 2010 IRWD has offered rebates from $2-$5/sq.ft with a strong, innovative outreach program.

Achieving 0.63 ETF would require 55 acres/year and $168 M.

Percentage of LAM with Kc > than 0.5 to convert:	76%
Turf area to convert (acres):	386.2
Percentage of turf area to convert:	**88%**
Total cost (in million $):	168.2
Total rebate amount (in million $):	84.1
Annual turf area to convert (acres):	55.2
Annual percentage of turf area to convert:	13%
Annual cost (in million $):	24.0
Annual rebate amount (in million $):	12.0

Irvine Ranch Water District

IRWD'S TURF REPLACEMENT EXPERIENCE

Area of Turf Replaced

(over the last 12 years)

Residential: 35 acres

Commercial: 84.5 acres

Irvine Ranch Water District

HOW DID WE GET HERE?

Steps in the Process	Date
Governor Brown releases the California Water Action Plan which called to "making conservation a California way of life."	2014
"Making Conservation a California Way of Life" Framework is released by the Brown Administration	2017
AB 1668 (Friedman)/SB 606 (Hertzberg) introduced, negotiated & enacted the "Making Conservation a California Way of Life" laws	**Spring 2017 – Spring 2018**
Department of Water Resources (DWR) begins process to develop on standards and implementation	2019-2022
State Water Resources Control Board (State Board) holds 3 staff workshops on potential impacts to parklands, urban trees and wastewater	Dec. 2021 – May 2022
SB 1157 (Hertzberg) introduced & enacted changing the indoor standards	**Feb. – Sept. 2022**
State Board adopts water loss standards, after a 4.5 year process	Sept. 2022
DWR submits its recommendations to the State Board	Dec. 2022
State Board holds workshop on proposed framework for "Making Conservation a California Way of Life"	**March 2022**
State Board begins the formal rulemaking process and releases the proposed regulation	Aug. 18, 2022
State Board Public Hearing on the proposed regulation	**Oct. 4, 2022**
Deadline to finalized implementing regulation, per the APA	Aug. 2024

OCTOBER 4TH PUBLIC HEARING

State Board Members want to hear from local elected officials!

- State Board will conduct a public hearing on **October 4 @ 9:30 am**
- Public comment is being accepted & direction will be provided to staff
- **This is the best chance to get changes to the regulation**
- While the hearing is expected to go all day, elected officials will be given priority to make public comments
- Comment letters will be accepted through **October 17**

State Board October 4th Public Comment Sign-up

- Select Agenda Item 8- "Conservation CA Way of Life"
- Select "Speak"

Irvine Ranch WATER DISTRICT

5 SUGGESTED COMMENTS FOR THE STATE BOARD

- **Support Water Efficiency-** Indicate general support for enhancing California's water efficiency

- **Tell Your Story-** Share what the regulation would mean for your community (e.g., cost, rate increases heat islands, leaving some of the community behind, needed landscape transformations, etc.)

- **Implementability-** Ask the State Board to modify the regulation to improve its implementability (e.g., reduce data submittal requirements, recognizing the time required to obtain the water savings, revise the CII performance measures, etc.)

Irvine Ranch WATER DISTRICT

5 SUGGESTED COMMENTS FOR THE STATE BOARD

- **Local Communities Have Many Funding Needs-** Multiple investments are needed to adapt to climate change (e.g., infrastructure, water reliability improvements, etc.) and modifying the regulation to reduce costs better balances these competing needs

- **Request In-person Meetings to Work Out Changes-** Request that the State Board direct their staff to hold public, in-person working meetings to go line-by-line and work to improve the proposed regulation

Irvine Ranch WATER DISTRICT

CONTACT INFORMATION

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compton@irwd.com

Irvine Ranch
Water District