Regional Water Authority

- 20 public and private water suppliers in the Sacramento region
- Serving 2 million people
- Membership Association
  - Water supply planning
  - Water Efficiency
  - Advocacy/Legislative
  - Collaborative projects
  - Grants
Overview - Past, Future, & Present

• Where we were: 20 X 2020 Legislation
• Where we will be: New Laws, New Era
  – Supplier specific water budgets
  – Updated planning requirements
• Where we are now: Progressing and Preparing
Where we were - 20 X 2020 Legislation

- Senate Bill X7-7
- Statewide 20% reduction in urban use by 2020
- Individual supplier reductions varied
- Mixed reviews
  - Good: ultimate flexibility in how to reduce
  - Bad: unfair reductions (previous efforts, cost effective)
- Deadline: December 31, 2020
- Suppliers report compliance in 2020 UWMPs
<table>
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<tr>
<th>Water Supplier</th>
<th>Baseline GPCD</th>
<th>Met 2015 Target?</th>
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<th>2020 Target</th>
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Water Use Trends

Population, Water Use and GPCD in the Sacramento Region

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<th>Population</th>
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<td>2019</td>
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### GPCD & R-GPCD

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<th>GPCD</th>
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<td>2018</td>
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<tr>
<td>2019</td>
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</table>
Regional Monthly R-GPCD

2019 Residential Gallons Per Capita Per Day (R-GPCD)


Regional Average
Agency Minimum
Agency Maximum

8
“To make a long story short, now that these bills are law, it’s illegal to take a shower and do a load of laundry in the same day because you’ll exceed your ‘ration.’ ”
Where we will be - New Laws, New Era

Senate Bill 606 and Assembly Bill 1668

- Signed by Governor on May 31, 2018
- Interrelated bills that amend existing law
- Long-term water use efficiency/conservation
- Better prepare CA for droughts and climate change
- Based on Governor Brown’s Executive Order B-37-16
Four Primary Goals

1. Use Water More Wisely
   - Create, adopt, report, and enforce water budget-based method for quantifying urban retail water supplier water use targets

2. Eliminate Water Waste
   - Setting urban retail supplier water loss standard, methodology, reporting and enforcement (in coordination with SB 555 requirements)
   - Customer Prohibitions

3. Strengthen Local Drought Resilience
   - Emergency declaration based on local water shortages
   - Urban water shortage contingency planning
   - Countywide planning for small water suppliers and rural communities

4. Improve Agricultural Water Use Efficiency & Drought Planning
Four Primary Goals

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The Target Audience

- **URBAN RETAIL WATER SUPPLIER**: public or private supplier that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre feet of potable water annually (not wholesalers)
  - Example: City of Sacramento, Sacramento Suburban Water District

**NOT The Target Audience**

- Individual persons
- Individual households
- Individual businesses, industries, or institutions
Terminology

• **STANDARD:** the equation/method used to calculate the volumetric estimates of the objective
  • Example: 55 gallons X population

• **OBJECTIVE:** volumetric estimate of aggregate water use calculated from the standards for each urban retail water supplier
  • Aka Water Use Budget and/or Target
  • Example: 555 million gallons
Calculating Water Targets

To create each water provider’s unique target, the following standards will be calculated and added together:

**INDOOR USE**
The standard for indoor residential water use is 55 gallons per person per day multiplied by the population of the service area.

**OUTDOOR USE**
The standard for outdoor residential water use is based upon a community’s climate and the amount of landscape area and is still to be determined.

**WATER LOSS**
The standard for water loss due to leaks in the water system pipes is still to be determined.

**CII LANDSCAPE**
The standard for outdoor CII water use for accounts with dedicated irrigation meters is still to be determined.
The Indoor Standard

The standard for indoor residential water use is 55 gallons per person per day multiplied by the population of the service area.

55 GPCD x Service Area Population x 365 days = Indoor Standard

• GPCD will reduce to 52.5 after 2025 and 50 GPCD after 2030

• Originated with SB X7-7 (2009)

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department’s 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.
The Outdoor Standard

The standard for outdoor residential water use is based upon a community’s climate and the amount of landscape area. This customized standard is still to be determined.

- **Irrigable** landscape will be measured via aerial imagery from DWR
- Irrigable = currently irrigated or could be irrigated in the future
- Outdoor standard calculation will take into consideration the unique climate of each water provider’s location
The Water Loss Standard

The standard for water loss reduction due to leaks in the water system pipes is still to be determined.

- SB 555 requires Annual Validated Water Loss Audit Reports submitted to DWR
- Water Board to set volumetric water loss performance standards by 2020 in **gallons per connection per day of water loss**.
- Standard will incorporate cost effectiveness
Commercial, Industrial, & Institutional

**Volumetric:** The standard for outdoor CII water use for large landscape accounts with dedicated irrigation meters is still to be determined.

- Likely be similar to residential outdoor use standard, based on local climate and irrigable landscape area.

**Non-Volumetric:** All other CII water use

- Switched from budget based to performance measure based
  - How to budget for restaurants? Hair salons?
- Best management practices by sector
- Thresholds for converting mixed CII meters to dedicated irrigation meters
- Standard classification of CII accounts in supplier databases
- More to come
CALCULATING WATER TARGETS

**INDOOR USE**

The standard for indoor residential water use is 55 gallons per person per day multiplied by the population of the service area.

**OUTDOOR USE**

The standard for outdoor residential water use is based upon a community’s climate and the amount of landscape area and is still to be determined.

**WATER LOSS**

The standard for water loss due to leaks in the water system pipes is still to be determined.

**CII LANDSCAPE**

The standard for outdoor CII water use for accounts with dedicated irrigation meters is still to be determined.

\[
1 \text{ MG} + 3 \text{ MG} + 10 \text{ MG} + 1 \text{ MG} = 15 \text{ MG}
\]

= WATER SUPPLIER’S UNIQUE WATER TARGET

15 MG
Variance
DWR will develop and recommend variances for each of the following unique water uses:

- Evaporative coolers
- Horses & other livestock
- Seasonal populations
- Landscape irrigated with recycled water
- Soil compaction & dust control
- Ponds & lakes to sustain wildlife
- Irrigation of vegetation for fire protection
- Agricultural uses
- Others TBD

Potable Reuse Bonus Incentive
Up to 15%
A credit of up to 15% of water use objective for potable reuse water delivered to residential water users and CII landscape areas with dedicated irrigation meters, if applicable.
STEP 1

INDOOR USE + OUTDOOR USE + WATER LOSS + CII LANDSCAPE

1 MG + 3 MG + 10 MG + 1 MG = 15 MG

STEP 2 Incorporate variances and/or incentives

STEP 3 Water supplier meter data for 4 areas = 14 MG

STEP 4 14 MG (water use) – 15 MG (target) = -1

Conclusion Water Supplier is under budget/in compliance

(IMPORTANT: Suppliers do not have to meet each target exactly...only collectively)
Efficiency Standards

TIMING

2018
Begin standard development

2022
Adopt standards, PMs, and method

2023
Suppliers calculate objectives

2026
All suppliers reach objectives

Source: State Water Resources Control Board
More detailed Timeline

**Reporting regulation**
- **Fall 2018**: Begin rulemaking
- **After Jan 2019**: Adopt regulation

**Water Loss Standard**
- Stakeholder meetings (now)
- **By Jan 2019**: Begin rulemaking
- **By July 2020**: Adopt regulation

**Residential Indoor Standard**
- **Study whether 55 GPCD reflects best practices**
- **Study impacts of a changing standard**
- **Stakeholders engage in research**
- **By Jan 2021**: Complete report

**Other Standards**
- Stakeholders and public engage in studies and rulemaking
- **By Oct 2021**: Recommend standards, CII PMs, variances and method to calculate objective.
- **By May 2022**: Identify potential impacts
- **By June 2022**: Adopt standards and CII PMs

**Enforcement**
- **Starting November 2023**: Board may issue informational orders
- **Starting November 2024**: Board may issue written notices
- **Starting November 2025**: Board may issue conservation orders
- Providers that violate these orders may be subject to fines of up to $1000/day
- **Starting in 2027**: Violating a regulation may also result in a fine

**Source:** State Water Resources Control Board
Four Primary Goals

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4. Improve Agricultural Water Use Efficiency & Drought Planning
Urban Water Management Plans Basics

Who: Urban Retail Water Suppliers

When: Every 5 years, next one 2020

What is it:

• Assess the reliability of water sources over a 20-year planning time frame
• Describe demand management measures and water shortage contingency plans
• Report progress toward meeting a targeted 20 percent reduction in per-capita (per-person) urban water consumption by the year 2020
• Discuss the use and planned use of recycled water

What it is not:

• Supplier Master Plan/Detailed Demand Forecasting/Modeling
• Infrastructure Plan/Capital Improvement Plan, etc.
• Conservation/Efficiency Plan
Enhanced Drought Planning

- UWMP drought risk assessment timeframe from 3 to 5 years
- Standard Water Shortage Contingency Plan Stages (6)
- New topics to cover: Climate Change, Water Energy, etc.

<table>
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<th>Percent Reduction</th>
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<tbody>
<tr>
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<td>Up to 40%</td>
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<tr>
<td>5</td>
<td>Up to 50%</td>
</tr>
<tr>
<td>6</td>
<td>Greater than 50%</td>
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Enhanced Reporting

• Applies to wholesale and retail water providers
• Reporting Requirements
  • Regulation adopted in 2020
  • Monthly reporting on production and conservation metrics
  • Annual Water Shortage Assessment in 2022 (similar to “stress test”)
  • Annual urban water use objective required every November 1 -- beginning in 2023.
Where we are now - Progressing and Planning
State Activities

• Indoor Standard
  – Statewide study to investigate if current standard is appropriate and report back to legislature
    • City of Sacramento and City of Folsom (+ Flume pilot)

• Outdoor Standard
  – State conducting ongoing pilot studies and analysis to refine landscape budget approach in partnership with Eagle Aerial
    • City of Folsom

• Water Loss Standard
  – Formal rulemaking process to begin in September.
  – Draft economic model and supplier targets released

• Ongoing workgroup meetings and comment periods
Where we are now - Progressing and Planning

RWA Activities

- **Indoor Standard**
  - $100,000 in grant funding to study indoor water use and fixture saturation

- **Outdoor Standard**
  - RWA Landscape Budget Pilot with Land IQ (5 suppliers)
  - Partnership with UC Davis to study various irrigation efficiency approaches
  - Staff on technical advisory workgroup

- **Water Loss Standard**
  - RWA Leadership Roles
    - CA NV AWWA Water Loss Committee Chair
    - ACWA Water Loss Lead
    - SWB Board Member meetings with RWA member agencies
RWA Regional Water Efficiency Program

- 19 suppliers
- $580,000 annual budget
- Public Outreach
  - Bewatersmart.info
  - Annual Campaign
- School Education
- Professional Landscape Trainings
Key Messages and Calls to Action

Primary Messages

• Using water efficiently is important no matter the weather
• Efficient watering grows healthy plants
• Most water use occurs outdoors

Primary Call to Action

• The best way to know if your yard needs water is to check the soil’s moisture level with a meter, screwdriver or by digging down
Overwatering?

Find tips on how much water your yard really needs at BeWaterSmart.info

Overwatering?

Find tips on how much water your yard really needs at BeWaterSmart.info
CHECK THE SOIL AND SAVE
A MOISTURE METER TELLS YOU IF YOUR YARD NEEDS WATER
LEARN MORE AT BEWATERSMART.INFO

WATER SAVER

Get a free moisture meter at BeWaterSmart.info

The best path to healthy and happy plants is to deliver the right amount of water. Check the soil with a moisture meter to see if your plants are thirsty.
More Than a Drop in the Bucket

The average running toilet can waste 200 gallons of water per day

That's enough for 600 dog baths every month

Learn more about leaks and how to fix them at BeWaterSmart.info

TOILET LEAKS ARE
More Than a Drop in the Bucket

The average running toilet can waste 200 gallons of water per day—enough for 600 dog baths every month.

The non-toxic blue dye tablets in this packet give you an easy way to check for leaks. Just follow the simple instructions on the back of this card. If you find a leak, plunger it or call a plumber and fix it fast!

Toilet Leaks Are the Most Common Household Leak

Toilet leaks are the most common type of leak in the home and are commonly caused by a malfunctioning flapper or flapper valve. Toilets flappers warp over time and can compromise their seal to hold water in the toilet tank.

Some toilet leaks are easy to hear (a “running toilet”), but smaller leaks may be silent. The good news is that fixing your toilet for leaks is simple: here’s what to do:

Step 1: Don’t flush! Place a non-toxic blue dye tablet to the toilet tank

Step 2: Wait 15-20 minutes.

Step 3: If the water in the toilet bowl turns blue, then you might have a leak.

If you find a leak, turn off the water to your toilet and make repairs.FIow toilet flappers can be made at most hardware stores and are generally easy to replace. If you are unsure about what to do, consult a professional plumber for help.

If you decide to replace your toilet, remember to look for the WaterSense label, which indicates the toilet has been third-party certified to be 20 percent more efficient than non-labeled toilets without sacrificing performance.

Learn more about leaks and how to fix them at BeWaterSmart.info

Be WATER SMART Regional Water Authority

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Challenges

• Still many unknowns at this time
  • Standards
  • Increased staff and budget (program & infrastructure & maintenance)
  • Enforcement
• What if CA is already relatively efficient?
• Changing water savings trends (passive to active)
• Climate Change impacts
• Layers of regulation, how to prioritize
• State staffing capacity
• Media and Customer communication
- Increase water efficiency awareness in the state
- Motivate agencies to reevaluate efficiency goals/programs
- Foster new/strengthen state, regional & local partnerships
- Improve drought planning
- Effort=Savings/Benefit? Cost effective?
- Water efficiency is great but not GRAND
- Targeted efficiency programs
- Lots more meetings!
Overwatering?
Check the soil before you water.

Questions?
Amy Talbot
atalbot@rwah2o.org