

FRAMEWORK 101

Zoom Webinar | September 27, 2023 10AM - 11:30AM This webinar is free and open to the public.







DISCLAIMER

This presentation is not comprehensive of the entire Making Conservation a Way of Life proposed regulation. For questions or additional details, please review the official Proposed Text of Regulation.

WHAT WE'LL COVER TODAY

1

Framework 101: What's Included, Data Needs, and How to Prepare (50 minutes)

Tia Fleming, CalWEP
Jaz Molloy, Eagle Aerial Solutions
Andrew Brenner, NV5

2

Reporting
Requirements and
What Happens Next
(10 minutes)

Lisa Cuellar, CalWEP



Q&A with the State Water Board and Department of Water Resources (30 minutes)

Charlotte Ely and Karina Herrera, State Water Board Sabrina Cook, Department of Water Resources





PART 1

Framework 101: What's Included, Data Needs, and How to Prepare

Tia Fleming, CalWEP
Jaz Molloy, Eagle Aerial Solutions
Andrew Brenner, NV5





HOW DID WE GET HERE?

2009

• Senate Bill X7-7 (20% by 2020)

2014

- California Water Plan Update
 - Action 1: "Make Conservation a California Way of Life"
 - Action 5: "Manage and Prepare for Dry Periods"

2016

 Governor Brown Issued Executive Order B-37-16 entitled "Making Conservation A California Way of Life"

2018

- Implementation Legislation: Senate Bill 606/Assembly Bill 1668
- Making Conservation A California Way of Life Primer Released

2022

DWR recommendations released

2023

Draft regulation from SWRCB released







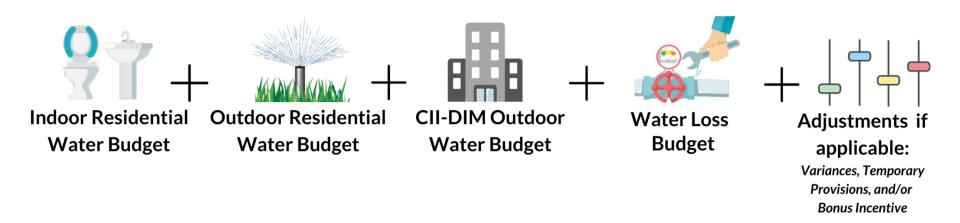






Calculating the Urban Water Use Objective

Providers cannot exceed the SUM of the standards



^{*}Agriculture and indoor CII not part of objective, though indoor CII is covered by Performance Measures.



Water use objective will be set based on the <u>overall</u> water use of urban water supplier.

Suppliers do not have to meet each standard individually Budgets not set for individual customers





The Indoor Standard



Indoor Standard (GPCD) x Service Area Population x 365 days





Indoor Standards Passed by Legislature (SB 1157 (2022))

2020-2024: **55 GPCD**

2025-2029: 47 GPCD

2030-onwards: 42 GPCD





Potential Indoor Variances

*Urban suppliers must request approval directly from the State Water Board in order to use the variance in calculating their UWUO.

Variance Category	Threshold of Significance
1) Evaporative Coolers	5% or more of the UWUO
2) Seasonal Populations	5% or more of the UWUO *reduced to 1% if use AMI data with daily/hourly reporting capabilities.





Indoor Temporary Provisions

** NFW **

An urban retail water supplier may request a temporary provision to respond to **negative impacts** to wastewater collection, treatment, and reuse systems, if the supplier shows to the satisfaction of the Board..that meeting the budget for efficient residential indoor use is causing challenges within wastewater collection, treatment, and reuse systems.

(Pg. 10 of Proposed Regulatory Text)





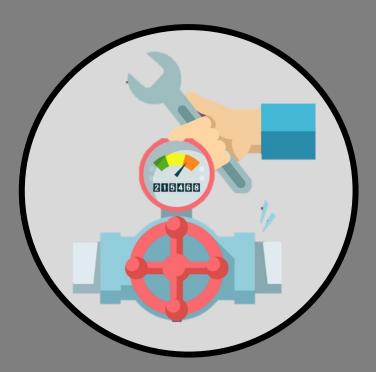
Data Requirements

Parameter	Source Specified in Reg Text	Alternative Data Allowed?	Reg Text Section
Service Area Population	Board (Electronic Annual Report)	No	975(b)(1)(B)





The Water Loss Standard







The standard for water loss due to leaks in the water system pipes is based on a real loss standard of gallons per connection per day.

Suppliers can find the most updated excel spreadsheet with their target at: waterboards.ca.gov/conservation/water_loss_control.html

Key Points



- Review your inputs: Suppliers can submit changes to model inputs for approval from SWB to modify target. If you have a reduction required, we recommend you take this step.
- SB 555: The State Water Board can enforce the water loss target independently of the overall water use objective.(But not at the same time!)

Water Loss Resources

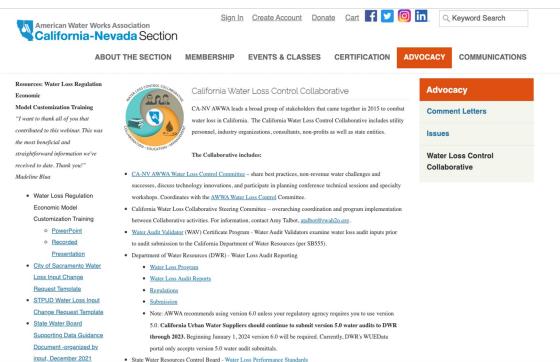
The CA-NV Section of AWWA has some excellent resources on their website:

ca-nv-awwa.org/waterlosscollaborative



Not sure where to start? Email Amy Talbot and she can help get you on the path to success.

atalbot@rwah2o.org



The Residential Outdoor Standard



Outdoor Residential Water Standard

Suppliers Unique Climate

X

Amount of Landscape Area

X

Efficiency Factor





Outdoor Residential Water Budget (Routdoor) =

(ETo-Peff) x LA x LEF x 0.62

ETo = Reference evapotranspiration (inches)

Peff = Effective precipitation (inches)

LA = Landscape area for a water supplier (sq. ft)

LEF = Landscape Efficiency Factor (unitless) represents a percentage of reference ETo; function of plants' water needs & irrigation efficiency

0.62 = unit conversion factor

LAM: Landscape Area Measurement

Landscape Area Measurement

Developed using 2018, 4 band (NIR) aerial imagery + county assessor supplied parcel data

A residential service area landscape analysis was conducted for each of the 399 urban water suppliers - providing irrigated landscape measurements that meet/exceed a 95% accuracy requirement across the **SERVICE AREA**.















What will my Outdoor Standard be?

Outdoor Residential Landscapes include:

TOTAL SQ FT for all IRRIGABLE IRRIGATED (II) landscape

** **NEW** **

Include up to 20% of the IRRIGABLE NOT IRRIGATED (INI) landscape (through June 30, 2027)





What data was provided?

Data Package from DWR contained 1 ZIP (GIS) file, CSV & PDF

ZIP file included:

Total Service Area Data

- AOI (Area of Interest)
- Total residential irrigated, irrigable not irrigated and non-irrigable area
- LandMask (AG, Void, Horse Corral)

Parcel level estimations:

- SFR & MFR
 - Irrigable irrigated (II)
 - o irrigable not irrigated (INI)
 - Non-irrigable (NI)

Disputed Parcels





What data was provided?

CSV: Parcel Level ESTIMATIONS included ONLY AS A GUIDE

PDF: Project Summary including TOTAL aggregate landscape classifications AND accuracy report

THIS IS THE MOST IMPORTANT PART

Summary of Results

The 20,763 single-family and multi-family residential parcels in Folsom City Of are composed of 57.8 percent not irrigable, 35.3 percent irrigated, and 7.0 percent irrigable not-irrigated land-scapes. The district-level weighted accuracy of the classification is 95.28 with a confidence interval of [95.27%, 95.29%]. Table 9 shows the water district accuracy statistics at the point, parcel, and district level. The total area at the three-class level for the whole district is provided in Table 3. In addition, the irrigation status summary and mean and median percent of irrigation classes found in parcels of each LUC are provided in Tables 4 and 5. The average class coverage by parcel size and a summary of canopy cover by parcel size are included in Table 6 and Table 7.

Table 3: Total predicted area for the district by irrigation status level. For irrigation status definitions, please see Table A1 of the appendix.

Class	Percent of area in analysis	Total area (sq. ft.)	95% confidence interval (sq. ft.)
Not-irrigable	57.8	120,745,174.70	5,028,485.86
Irrigable irrigated	35.3	73,645,325.60	10,180,924.29
Irrigable not-irrigated	7.0	14,522,635.24	1,742,709.27





Where is the LAM Data?







Landscape Efficiency Factor (LEF)

 $R_{outdoor} = (ETo-Peff) x LA x LEF x 0.62$

2023 – 2029 = 0.80 LEF

2030 and **2034** = 0.63 LEF

2035 onwards = 0.55 LEF

New Developments = 0.55 (or current MWELO ETAF value)

Special Landscape Areas (SLA) = 1.0 LEF





Potential Outdoor Variances

Variance Category	Threshold of Significance
1.) Horses & Other Livestock	5% or more of UWUO
2.) Landscape Areas Irrigated with Recycled Water w/ High TDS	5% or more of UWUO (total includes water attributed to the same category for CII DIM)
3.) Dust Control (horse corrals & animal exercise arenas)	5% or more of UWUO
4.) Ponds & Lakes to Sustain Wildlife	Regulatory requirement = no threshold
5.) Water for Emergency Events (not incl. droughts)	5% or more of UWUO (total includes water attributed to the same category for CII DIM)
6.) Residential Agriculture	5% or more of UWUO *reduced to 1% if estimate uses crop-specific landscape area

Outdoor Temporary Provisions

** **NEW** **

May be requested for:

- Water for existing pools, spas, similar water features (2035-2040)
- Water for planting new, climate-ready trees
- Water for the establishment of qualifying landscapes (e.g. lowimpact development, ecological restoration)

Data Requirements

Data Point	Source Specified in Reg Text	Alternative data allowed?	Reg Text Section
Reference ET	DWR (CIMIS)	Yes	975(b)(2)(B)
Effective Precipitation	DWR (Cal-SIMETAW)	Yes	975(b)(2)(B)
Landscape Area	DWR (LAM)	Yes	975(b)(2)(C)





Data Requirements

Parameter	Source Specified in Reg Text	Alternative Data allowed?	LEF	Reg Text Section
Residential SLAs (dedicated solely to edible plants)	Supplier	N/A	1.0	975(b)(2)(D)
Residential SLAs (irrigated with recycled water)	Supplier	N/A	1.0	975(b)(2)(D)
New Construction	Annual reporting required by section 495(b)(6) (MWELO reporting)	No	0.55	975(b)(2)(E)





The CII Standard and Performance Measures



Commercial, industrial and institutional accounts are separated into two different regulations – one is standards based for accounts with dedicated irrigation meters and one is performance measure based.





CII Compliance:

WATER USE STANDARD

CII – DIM /
Equivalent Tech.
Conversion

- CII-DIM Water Budget Equation applies
- If large landscapes do not have DIM, either convert meter or move to In-Lieu Tech Performance Measure

Report annual water use

PERFORMANCE MEASURES

In-Lieu Tech

- =/> 500,000 gallons of water/year
- Demonstrate improved WUE
- Companion water management practices required

Qualitative Reporting

CII BMPs

- 5 BMP categories
- Classification required
- Top users targeted with BMPs
- NFT Ban

Qualitative Reporting

CII Water Use Standard

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2023 - 2029 = 0.80 LEF
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$$2030 - 2034 = 0.63 LEF$$

2035 onwards= 0.45 LEF

New Developments = 0.45 (or current MWELO ETAF value)

Special Landscape Areas (SLA) = 1.0 LEF

DIM Landscape Area Measurement

- Through June 30, 2028 Suppliers shall use actual deliveries associated with landscape irrigation from eAR
- Starting July 1st 2028 Suppliers will use total Irrigated Irrigable (II) square footage for all DIMs

DWR Provides: Cll Landscape Area

- DWR will provide maps of landscape area for all CII parcels
- Will cover associated parkway strips
- Dataset will be a series of polygons that can be overlain on DIM boundaries or parcels



LUCD Classification

Impervious

Pools

Irrigated Canopy

Irrigated Turf/ Cover

Irrigable Not Irrigated Canopy

Irrigable Not Irrigated Turf/ Cover

Not Irrigable Vegetation

Undeveloped Lands

Horse Corrals

Open Water

Artificial Turf Agricultural Lands

Parcel Boundary





DWR Provides: Cll Landscape Area

- For CII parcels NFT will be delineated
 - Streetscape turfgrass
 - Building adjacent turf
 - Some common community landscape areas
- Districts can modify the data based on ground conditions for NFT and other classes
- Spatial database will be delivered to districts
- Imagery 2020, parcel data similar vintage







Agency Provides: Dedicated Irrigation Meter Premise Delineation

- Review the DIM accounts
- Aggregate DIMs into premises
- Delineate premise boundaries
- Create detailed land cover
- Delineate SLA
- Align allowance with usage



Grouping meters into premises based on location and customer name.

Meter ID	Customer Name	Meter Service Address
01-012	CITY OF XX	1452 IOWA AVE
01-000	CITY OF XX	1422 IOWA AVE
01-202	CITY OF XX	1500 IOWA AVE
01-222	CITY OF XX PARKS AND REC	1486 COLUMBIA AVE
01-876	ABC PROPERTIES	1450 IOWA AVE
01-666	ABC PROPERTIES	1420 IOWA AVE
01-340	CITY OF XX PARKS AND REC	1375 MARLBOROUGH AVE

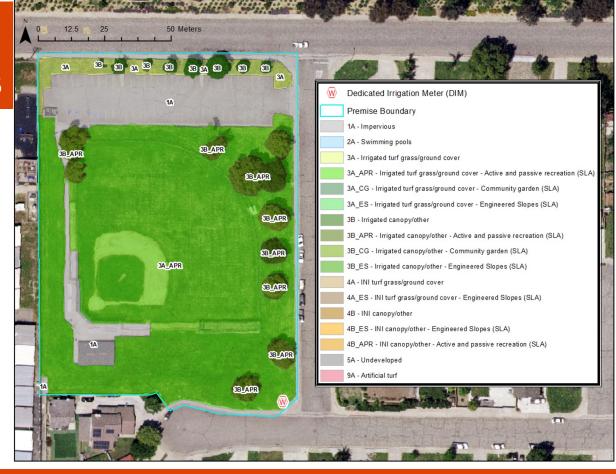
A <u>premise</u> is a series of meters that are adjacent owned by the same customer





SLA:Special Landscape Areas

- Get LEF of 1.0 for
 - Public pools
 - Recycled water
 - Engineered slopes
 - Active passive recreation
 - Edible plants
 - Supplemental water
 - Cemeteries
- Applied to DIMs & MUMs that meet the water use threshold







Potential CII DIM Variances

Variance Category

1.) Landscape Areas Irrigated with Recycled Water w/ High TDS

2.) Ponds & Lakes to Sustain Wildlife

3.) Water for Emergency Events (not incl. droughts)

Threshold of Significance

5% or more of UWUO (total includes water attributed to the same category for outdoor residential)

*reduced to 1% if use detailed plant based leaching requirements

Regulatory requirement = no threshold

5% or more of UWUO (total includes water attributed to the same category for CII DIM)





CII DIM Temporary Provisions

** NEW **

May be requested for:

- Water for planting new, climate-ready trees
- Water for the establishment of qualifying landscapes (low-impact development, ecological restoration)

(Pg. 21 of Proposed Regulatory Text)





Data Requirements

Parameter	Source Specified in Reg Text	Alternative data allowed?	Reg Text Section
Reference ET Effective Precipitation	DWR (CIMIS) DWR (Cal-SIMETAW)	Yes	975(b)(3)(B) 975(b)(3)(B)
Lifective Frecipitation	DVVK (Cal-Silvic (AVV)	res	973(b)(3)(b)
CII DIMs Landscape Area*	Supplier	N/A	975(b)(3)(C)

*DWR will provide CII Landscape Area, supplier is responsible for DIM service area.

CII Performance Measures

Identification
Classification
BMPs
In Lieu Technologies

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				

In-Lieu Technologies

In-Lieu technologies include at least two of the following:

- 1. Water budget-based rate structure
- 2. Water budget-based management program without a rate restructure
- 3. Hardware improvements with enhanced performance and functions
 - Including: metering technology that allow suppliers to identify outdoor water use, smart irrigation controllers, pressure-regulating sprinkler spray heads
- 4. Remote Sensing
- 5. Landscape plant palette transformation programs
- 6. Other water efficient technologies

Additional water management practices for large landscapes without DIMs include all of the following:

- 1. Communications
- 2. Irrigation systems maintenance
- 3. Irrigation scheduling

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Classification Categories

- 1. Education
- 2. Entertainment/Public Assembly
- 3. Food Sales and Service
- 4. Healthcare
- 5. Lodging
- 6. Manufacturing/Industrial
- 7. Mixed Use Properties
- 8. Offices
- 9. Public Services

- 10. Religious Workshop
- 11. Retail
- 12. Services
- 13. Utility
- 14. Other
- 15. Laundry
- 16. Water Recreation
- 17. Vehicle Wash
- 18. CII DIM





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The 5 CII BMPs Categories

1. Outreach, Technical Assistance, and Education BMP

Examples: workshops, advertisements, phone calls/visits

2. Incentive BMP

Examples: rebates/cost-sharing for fixtures, certification programs

3. Landscape Programs BMP

Examples: irrigation check ups, irrigation schedule training, turf removal program

4. Collaboration and Coordination BMP

Examples: Coordination with "green" building certification, collaboration with NGOs on outreach

5. Operational BMP

Examples: Smart meter replacement, billing procedures.

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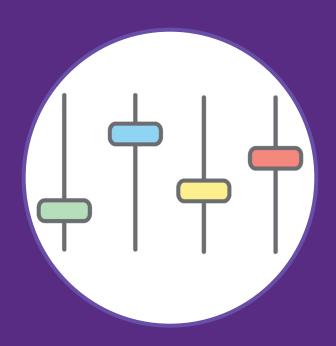
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Additional Adjustments



Bonus Incentive for Potable Reuse

Bonus incentive cannot exceed a percentage of the supplier's total WUO:

- 15% for potable reuse water produced at an existing facility
- 10% of the WUO for any potable reuse water produced at any facility that is not an existing facility



PART 2 Reporting Requirements and What Happens Next

Lisa Cuellar, CalWEP





What to include in the Annual Report

An urban retail water supplier shall submit an **Annual Water Use Report** to DWR that includes:

- ☐ Urban Water Use Objective (UWUO)
- Actual urban water use
- □ Documentation of the implementation of the **performance measures** for CII water use
- ☐ Description of the **progress made** towards meeting the urban water use objective
- ☐ Validated water loss audit report

Details for DWR Reporting

DUE: January 1, 2024

→ DWR has prepared an interim reporting template for the 2023 CY or 22/23 FY reporting period (Excelbased)



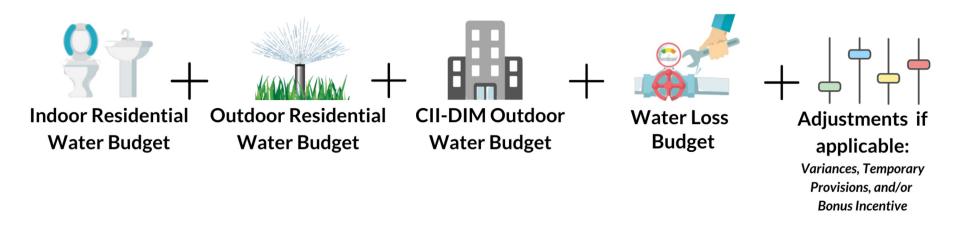
Details for SWRCB Reporting



State Water Board has proposed suppliers also submit a report to the Board staring in 2025.

→ Standardized reporting template(s) under development.

UWUO Metrics



Actual Use Metrics

For the 2023 calendar year or 22/23 fiscal year report the following to DWR:

Residential (gal/yr)

- ☐ Single Family Water Use
- Multi-Family Water Use
- Unmetered residential water use
- ☐ Top 10% of residential customers water use

CII-DIM (gal/yr)

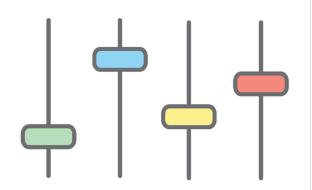
CII-DIM water use as reported in your electronic annual report (eAR) or equivalent

Water Loss (gal/yr)

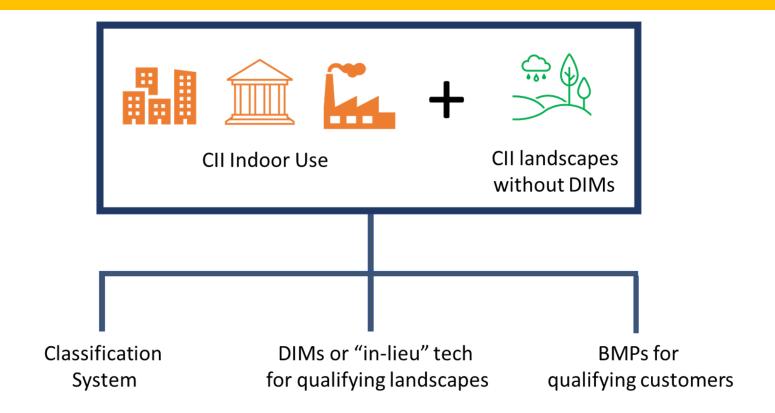
□ Actual system water loss (as reported in your water loss audit report)

Variance Metrics

- □ Urban retail water supplier must annually apply for and receive approval from the State Water Board prior to reporting any variances.
- □ Reporting of variances in the 2024 Annual Water Use Report is speculative.
- ☐ DWR has prepared individual worksheets for each variance calculation.



Performance Measure Metrics



What Happens Next?

First Public Comment Period*	August 18 - October 17, 2023			
Public Hearing	October 4, 2023			
Consideration for Adoption	Summer 2024			
Rule becomes effective, if adopted	October 1, 2024			

State Board Enforcement -Timeline

Jan. 1, 2024

• The State Board may issue *informational orders* pertaining to water production, water use and water conservation to an urban retail supplier that does not meet its Urban Water Use Objective (UWUO).

Jan. 1, 2025

 The State Board may issue written notices to an urban retail supplier that does not meet its UWUO. May request that the supplier address areas of concern in its next annual report.

Jan. 1, 2026

 The State Board may issue a conservation order to an urban retail supplier that does not meet its UWUO.

Nov. 1, 2027

 The State Board may impose civil liability (fine) for a violation of the regulation

Engage in the Process!

Your experience and voice is an important part of this rulemaking



October 4, 2023: State Water Board Public Hearing on *Making* Conservation a California Way of Life

October 17, 2023: Written comments due to State Water Board

Water Use Objective Exploration Tool:

https://www.waterboards.ca.gov/water_issues/programs

What the FRAMEWORK? A ROUND-UP OF WHAT'S GOING ON WITH THE NEW CONSERVATION REGULATIONS

CalWEP.org/framework-updates

Related CalWEP Member Resources



Framework Resource Hub
Cut Sheets
CII Classification Guidance (coming soon!)
What the Framework?! blog

Special Pricing for WaterView
Smart Rebates Program
Direct Distribution (Rachio, Flume, Rainbird)
AWE Tracking Tool with CA module
Landscape Conversion Criteria Tool
QWEL Training Programs

...and more!

PART 3

Q&A with the State Water Board and Department of Water Resources

Charlotte Ely and Karina Herrera, State Water Board Sabrina Cook, Department of Water Resources



