

Getting to Efficiency

Data Fundamentals
for UWUO Reporting

August 5, 2026 | 10:00 am – 11:30 am

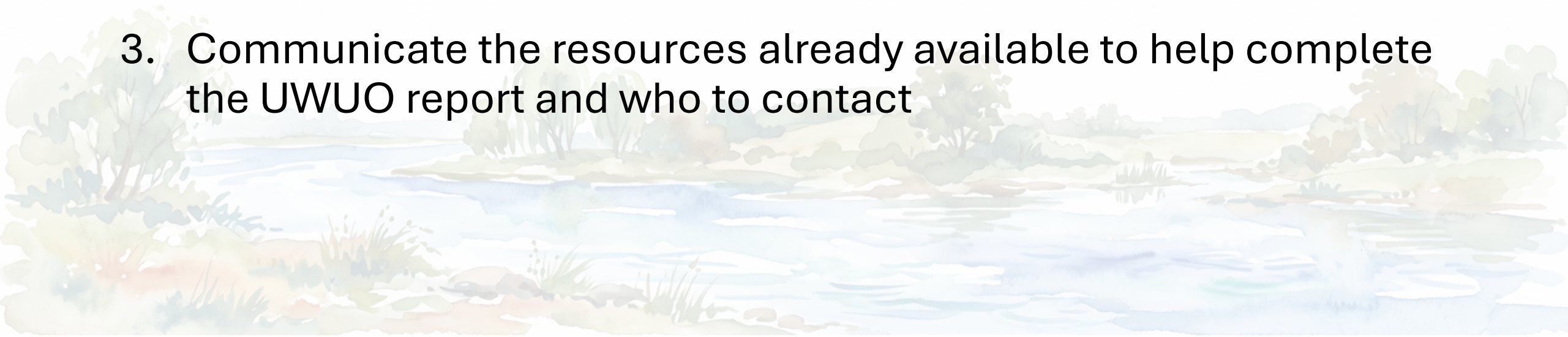


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PROUD PARTNERS

Learning Objectives

1. Define which data sets will be critical to complying with the UWUO
2. Identify where to access this data, who is responsible for it, recognize common data quality issues
3. Communicate the resources already available to help complete the UWUO report and who to contact



Who we are



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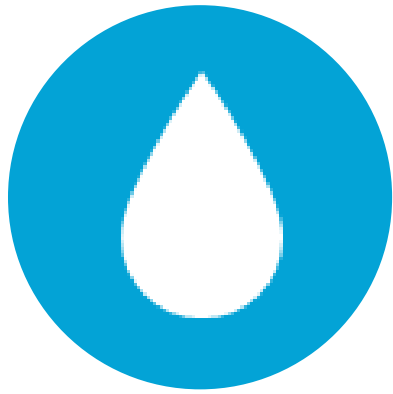
Justin Finch
Water Efficiency Manager
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The Three Elements of *Making Conservation a California Way of Life*



**Urban Water Use
Objective**



**CII Performance
Measures**

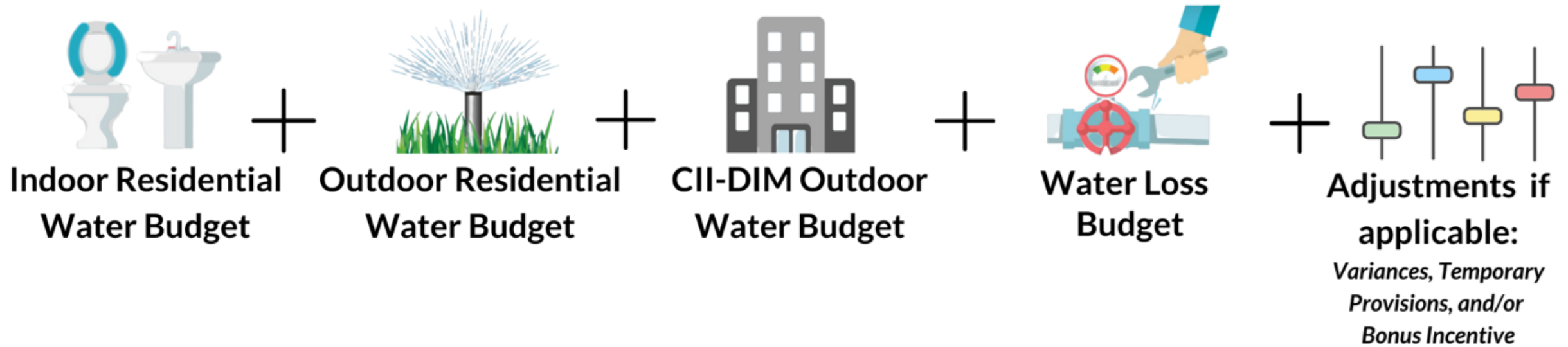


**Annual
Reporting**



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.**

Example of how data is used in objective calculation



| Residential service area population is pre-filled by the State



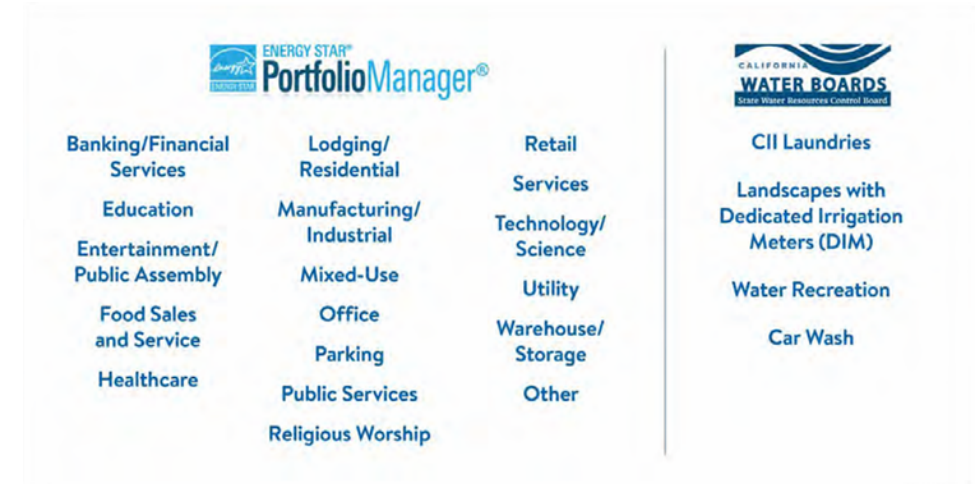
Performance Measures

Classify CII Customers

Identify High Water Users

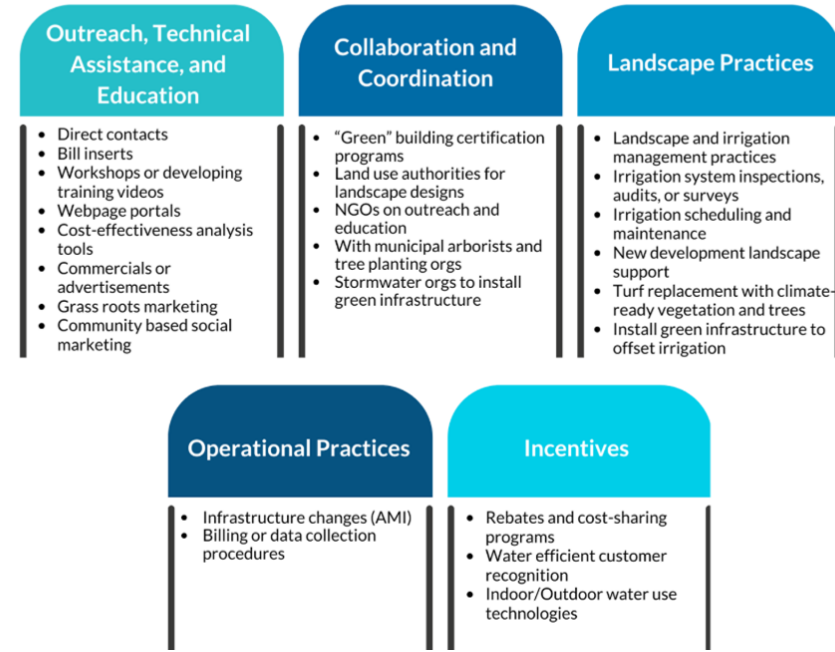
Deploy Best Management Practices (BMP)

Identify large landscapes with mixed-use meters and convert to DIMs or use in-lieu technology



Categories for Best Management Practices

This list is not exhaustive, and some programs may address multiple Best Management Practices (BMPs) simultaneously.





Annual Reporting

Annual Report due January 1st to State Water Board using their excel-based reporting template

Reporting began in 2025.

Compliance with the regulation is required beginning January 1, 2027.

What's already been done for you?

- Statute directs the State to identify **opportunities for streamlining reporting and eliminating redundant data submissions**
 - Staff identified existing data sources that meet reporting needs
 - The reporting form pre-fills and calculates fields whenever possible
- Both source data and reported data are published on the Open Data Portal
 - <https://data.ca.gov/dataset/urban-water-use-objectives-conservation>

Actual Water Use (Potable and Nonpotable), Demands Relevant to the Objective	Value
Annual, aggregate potable deliveries to Single-family Residential connections	1,584,578,441
Annual, aggregate potable deliveries to Multi-family Residential connections	577,514,251
Total Potable Residential Water Use	2,162,092,692
Annual, aggregate residential Recycled Water Demand (excluding metered irrigation)	0
Annual, aggregate residential Non-potable Demand (non-recycled, excluding metered irrigation)	0
Annual, aggregate residential non-potable metered irrigation	0
Total Non-Potable Residential Water Use	0
Volume of water delivered to residential landscapes that the Department excluded from its LAM analysis and are not currently a part of the residential outdoor budget. (This does not include new construction)	282,065,283
Total Residential Water Use	1,880,027,409
Annual, aggregate potable deliveries to Commercial, Industrial, or Institutional Landscapes with dedicated irrigation meters	47,134,857
Annual, aggregate non-potable deliveries to Commercial, Industrial, or Institutional Landscapes with dedicated irrigation meters	0

Previously reported values are prefilled into the form where applicable

Other fields are calculated for the user

Data Entry in the UWUO

Key to the Colors Used Throughout This Workbook

Not Editable Fields:	
Blue Grey	Prefilled from Source Table or Hardcoded Value
Blue	Parameter defined in statute or regulation
Grey	Calculated Total
Dark Grey	Budget Total
Editable Fields:	
Green	Mandatory
	Conditionally mandatory, pending prior responses
Gold	Optional
	Optional; fillable pending prior responses
	Reporting requirement does not apply, based on other responses

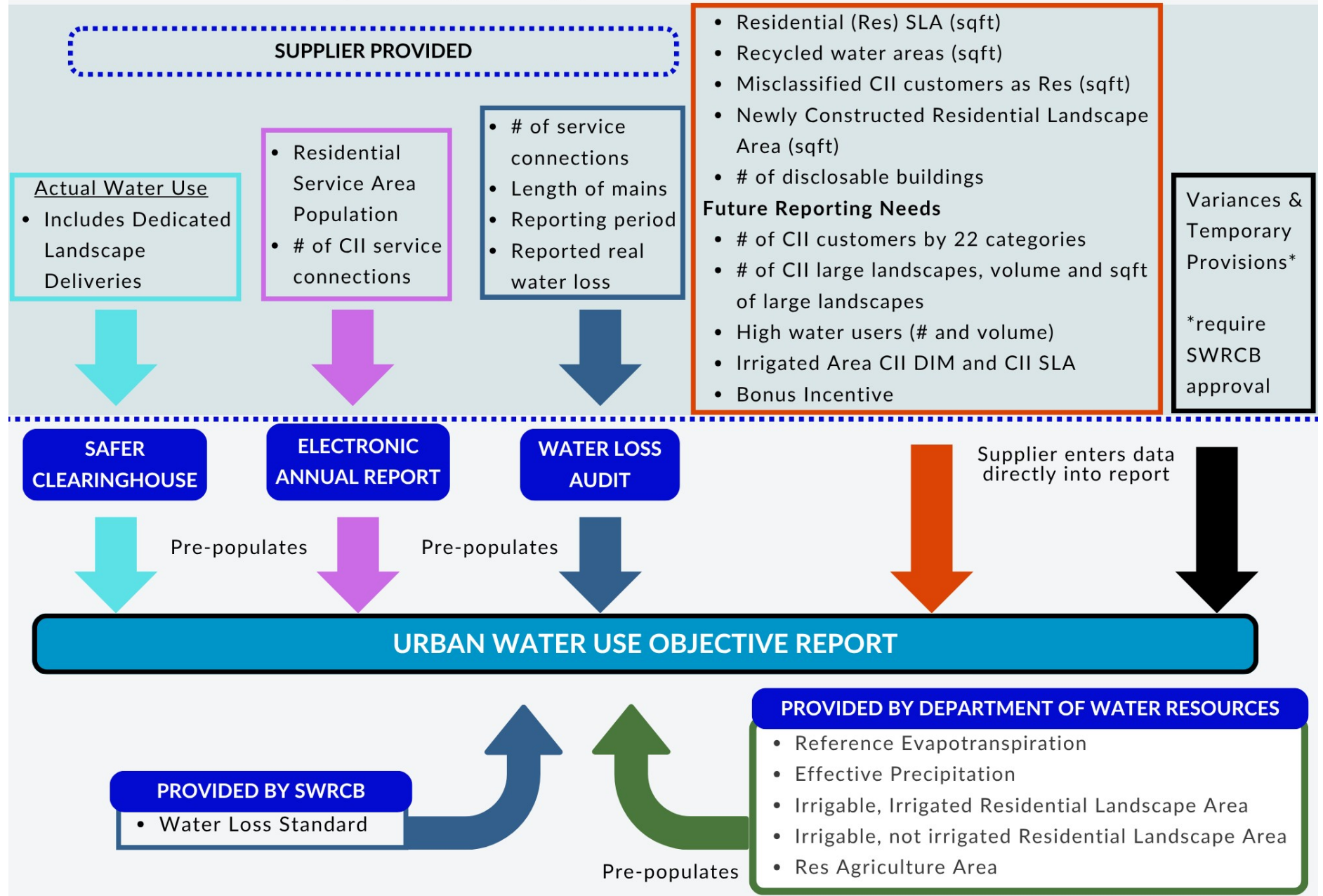
Mandatory Reporting Form Tabs	Prefilled Mandatory Fields	Supplier Provided Mandatory Fields
1. Resi Indoor Budget	1	0
2. Resi Outdoor Budget	6	1
3. Water Loss	10	3
4. Actual Water Use	13	5
5. CII Classification	8	27
6. DIM or In-Lieu Tech	0	3
7. CII BMPs	0	22

URBAN WATER USE OBJECTIVE REPORT

DATA FLOW FOR FISCAL YEAR



Data Sources in the UWUO



Pre-filled vs mandatory inputs: what to do?

- **Pre-filled values:**

- Are they correct? Have you validated them against the source data?
- Changing this requires either going to the source database or an alternative data request.

- **Mandatory inputs:**

- Track down internal data.
- Calculate this value and keep track of methods for future changes or audit

Components of the Residential Outdoor Budget (excluding Special Landscapes and New Construction)	Value	Units	Calculation Instructions and Notes
Unit Conversion Factor	0.62	Gallon-Feet/Inches	Value of 0.62 is derived from the conversion of inches to feet (for ET ₀) and 1 cubic foot to 7.48 gallons (7.48/12).
LEF for Residential Landscapes	0.8	Unitless	
Irrigable Irrigated Residential Landscape Area, as measured by the Department	149,500,274	Square Feet	Obtained from Landscape Area Measurement Table
*Landscape area categorized as residential in the DWR LAM data but identified by supplier as CII		Square Feet	*If not applicable: enter 0

Build Your Internal UWUO Reporting Team

Successful UWUO reporting requires coordination across multiple staff, it's likely not just one person or department.

Reporting Need	Identify Your Internal Subject Matter Experts
Electronic Annual Report (EAR)	Who prepares and submits the Electronic Annual Report each year?
Monthly SAFER Report	Who submits the Monthly SAFER production and connection data?
Water Loss Audit	Who completes the annual AWWA Water Loss Audit?
Leak Management / Leak Registry	Who manages leak tracking, repairs, and asset management data needed for the leak registry?
GIS & Service Area Data	Who maintains GIS, service area boundaries, parcels, and landscape mapping?
Water Production & Operations	Who tracks production, imports, groundwater pumping, recycled water, and source supplies?
Customer & Billing Data	Who manages service connections, customer classifications, billing records, and dedicated irrigation accounts?
Planning & Water Resources	Who develops water demand projections, conservation planning, and UWMP-related data?
Regulatory Coordination	Who reviews, certifies, and submits regulatory reports?

Example of Tracking Data Sources

Data Point	Supplier's Internal Source	Internal Business Owner (Responsibility for preparing/using data)	Process Notes	Entry Method (Entry or Validate from other Report)
Connections & Accounts Total and by Classification	1. Geographic Info System 2. Customer Information System (Billing System)	1. GIS / Engineering Department 2. Customer Accounts Department	Use both systems to 'true up' and sort. Check for locations that changed classification or abandoned.	Validate
Landscape Area	1. Geographic Info System 2. Customer Info System 3. CA-DWR	Water Efficiency Department	1. Re-run and validate each year. 2. Re-run and validate / compare to GIS each year. 3. Validate each year.	Residential: Validate CII: Entry

Common Data Quality Challenges

Inconsistent Interpretation of Data

- Siloed collection and reporting
- Limited documentation

Source Data Inaccuracies

- Data not collected
- Poor data quality
- Inaccurate assumptions

Incomplete Fields

- Data not reported or underreported
- Empty field vs zero

Inconsistent Units and Time Periods

- Volumetric units
- Fiscal vs calendar year

Available Resources

CalWEP's Available Resources

Compliance planning

understand & meet requirements

[Compliance Resource Hub](#)

[Variance Estimator \(w/ CaDC\)](#)

[UWUO Data Flow Charts](#)

[CalWEP LAM Explorer](#)

Powered by WaterView

[Nonfunctional Turf Toolkit](#)

Resources available at:

calwep.org/compliance-resource-hub

Note: some resources are member-only

Compliance Tasks

measure, identify, validate

[CII-DIM Guidebook \(w CaDC\)](#)

[AI-assisted CII Classification](#)

[Guidebook: CII Classification](#)

[Guidebook: CII Outreach & Education Strategies](#)

[CII BMP Database \(in development – Winter 2026\)](#)

[Estimating Water Savings](#)
Measurement & Evaluation Guidebook

Program delivery

conservation into action

[Smart Rebates](#)

[Direct Distribution](#)

[Qualified Water Efficient Landscaper Trainings](#)

[Leak Repair Elite](#)

[Water + Energy Connection for CII Trainings](#)

Variances & Alternative Data

CALIFORNIA
WATER EFFICIENCY
PARTNERSHIP

Supplier Tools
Welcome WVLAKEWOOD [Log Out](#)

CalWEP LAM Explorer

Water District Totals			
Service Area	7.73 SQMI	ET	45.66 IN
Population	63,083	Peff	5.47 IN
Total Parcels	19,774	LEF (2025)	0.8
Total RES Extensions	19,716	GPCD	47
Source	DWR Annual Report	Vintage	12/1/2024

RES LAM Totals			
Total Res Parcels	19,144	NI Area	74,160,100 SQFT
II Area	28,052,369 SQFT	Extension II Area	8,648,025 SQFT
INI Area	9,411,037 SQFT		

CII LAM Totals			
Total CII Parcels	577	Vegetative Cover INI	66,798 SQFT
II Area	23,016,580 SQFT	Bare Earth INI	
NI Area	44,922,330 SQFT	Pervious NI	
Impervious	34,125,970 SQFT	Undeveloped Lands	
Pools	23,124 SQFT	Horse Corrals	
Trufgrass II	12,621,304 SQFT	Open Water	
Canopy II	6,608,465 SQFT	Artificial Turf	
Vegetative Cover II	1,047,446 SQFT	Agricultural Land	
Bare Earth II	636,447 SQFT	Functional Turf	
Turfgrass INI	414,796 SQFT	Non Functional Turf	
Canopy INI	323,674 SQFT		

All your state provided data in ONE PLACE

Indoor Residential
Water Budget

Outdoor Residential
Water Budget

CII-DIM Outdoor
Water Budget

CalWEP LAM Explorer

POWERED BY WATERVIEW
Water Efficiency Software



The screenshot displays a web-based GIS interface for the City of Waukegan. The main map area shows an aerial view of a neighborhood with several streets labeled, including Clark Ave, South St, Mayfair Blvd, and Mayfair Park. A 'Markup' menu is open, providing options for creating and editing map features. The bottom of the interface includes a search bar, a record count, and a table header for data display.

Markup Menu Options:

- Create New Markup
- Change Target Markup
- Draw Polygon
- Draw Polyline
- Draw Circle
- Place Icon
- Place Label
- Clear Drawings

Table Header:

Type	Address	APN	Land Use Detail	Parcel Area	II Parcel	IRI Parcel	NI Parcel	Extension Count
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CALIFORNIA
WATER EFFICIENCY
PARTNERSHIP

Where Do I Go if I Have to Edit My Data?

Data Needed	Agency	Contact	Email
General UWUO Reporting Questions	State Water Board	Conservation Program	WaterConservation@waterboards.ca.gov
Residential Service Area Population	State Water Board	Marielle Rhodeiro / DDW District Offices	Marielle.Rhodeiro@waterboards.ca.gov
Reference Evapotranspiration (ETo)	DWR – CIMIS	Bekele Temesgen / Ricardo Trezza	WUE_LAM@water.ca.gov
Effective Precipitation	DWR – CalSIM ETAW	Bekele Temesgen / Morteza Orang	WUE_LAM@water.ca.gov
Irrigable & Irrigated Landscape Area	DWR	Bekele Temesgen / Scott Hayes	WUE_LAM@water.ca.gov
WUE Data Portal	DWR	Water Use Efficiency Team	WUEStandards@water.ca.gov

Next Steps

- Variance office hours: Sept. 1st and 2nd, 2pm
- Data 201 webinar: Sept. 2, 10am
- Received submissions to intake form and are evaluating candidate agencies for technical assistance pilot

Questions?

WaterConservation@waterboards.ca.gov

Reference Material

Example of Tracking Data Sources

Data Point	Supplier's Internal Source	Internal Business Owner (Responsibility for preparing/using data)	Process Notes	Entry Method (Entry or Validate from other Report)
Population	1. Census 2. University Demographic Research Center	Water Resources / Regulatory Compliance	Verify assumptions with Cities	Validate
Connections & Accounts Total and by Classification	1. Geographic Info System 2. Customer Information System (Billing System)	1. GIS / Engineering Department 2. Customer Accounts Department	Use both systems to 'true up' and sort. Check for locations that changed classification or abandoned.	Validate
Consumption	Customer Info System (Billing System)	Customer Accounts	Must prorate billed consumption (bill in arrears) for FY/CY	Validate
Landscape Area	1. Geographic Info System 2. Customer Info System 3. CA-DWR	Water Efficiency Department	1. Re-run and validate each year. 2. Re-run and validate / compare to GIS each year. 3. Validate each year.	Residential: Validate CII: Entry
DIMs / In-Lieu Tech	1. Geographic Info System 2. Customer Info System 3. Advanced Metering Infrastructure (AMI)	1. GIS/Engineering 2. Customer Accounts 3. Field Customer Service	Use CIS to identify CII connections. Then, use AMI data to identify irrigation trends in CII accounts.	Entry