

CALIFORNIA WATER BOARDS

# COLLEGE OF WATER INFORMATICS



## OPEN DATA AND TOOLS STATE WATER RESOURCES CONTROL BOARD

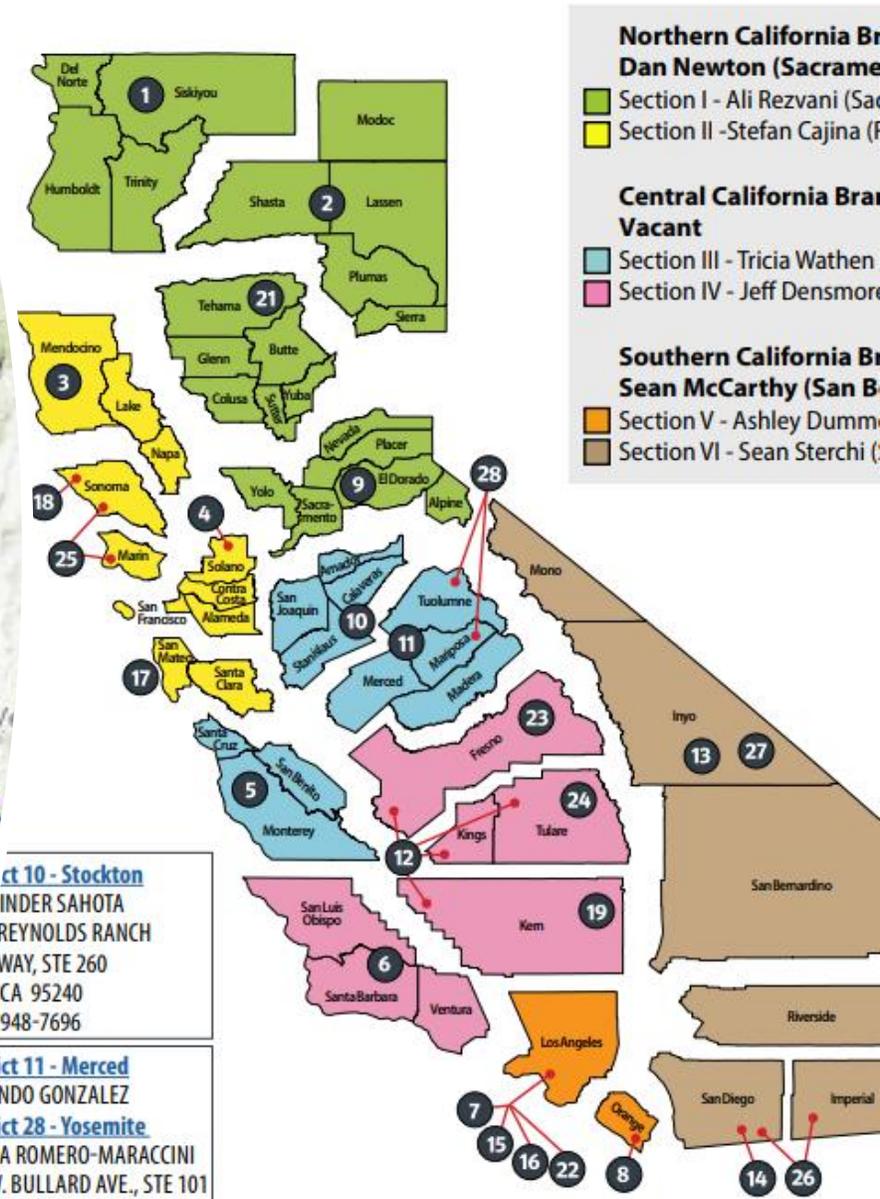
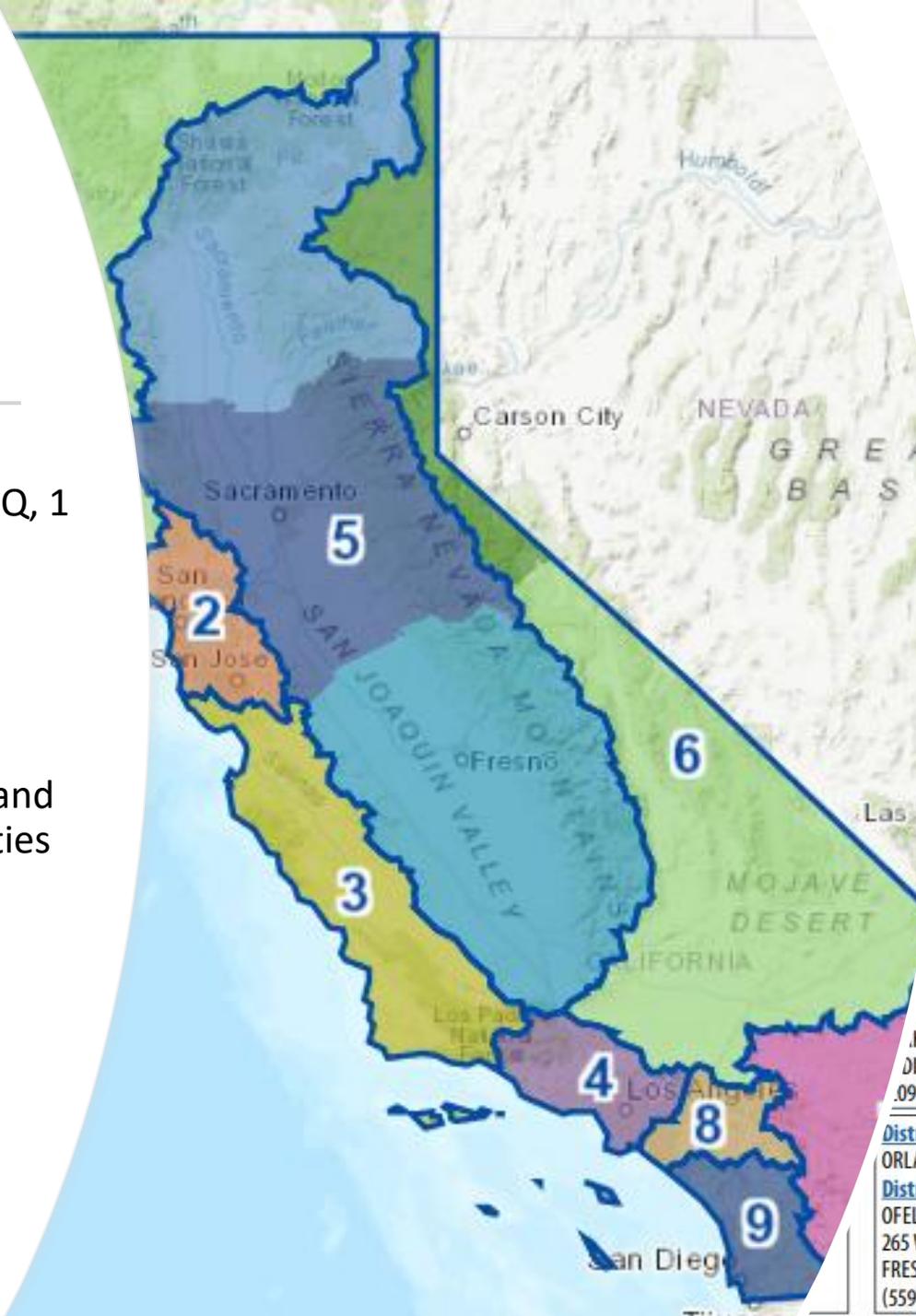
California Water and Environmental Modelling Forum  
CWEMF May 12, 2025

[Rafael Maestu](#)

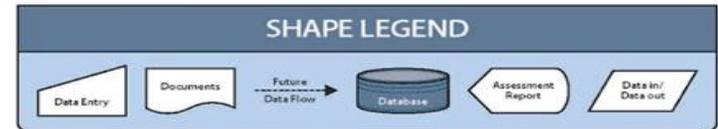
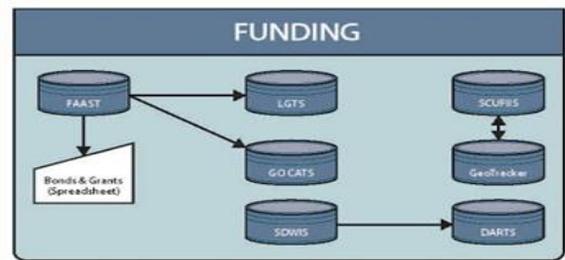
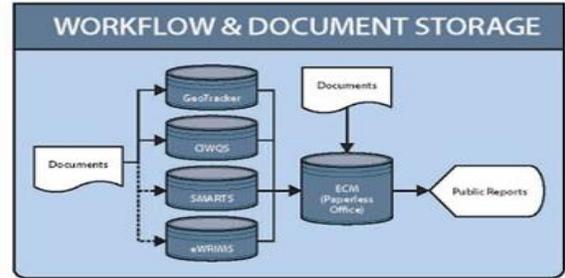
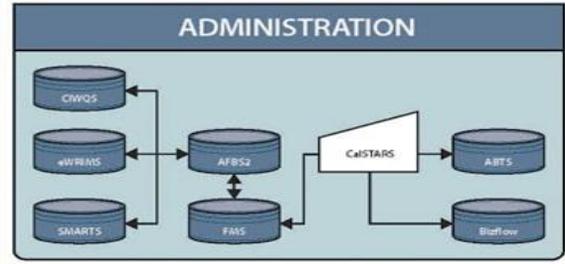
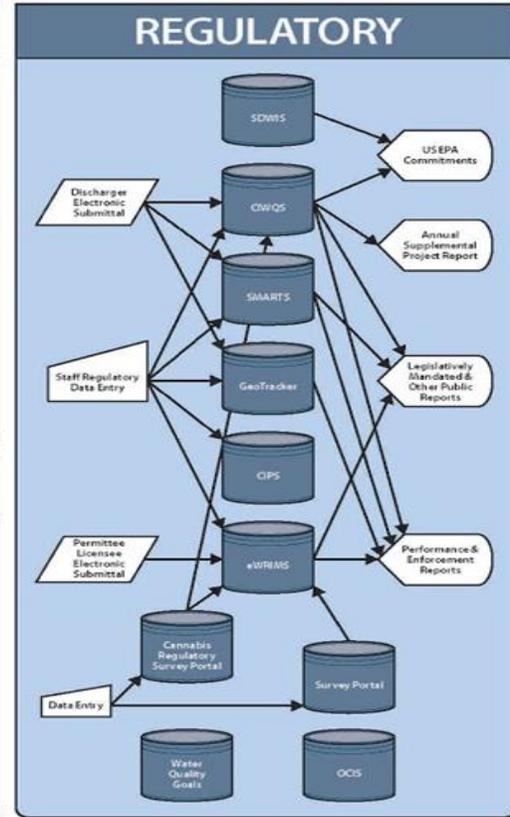
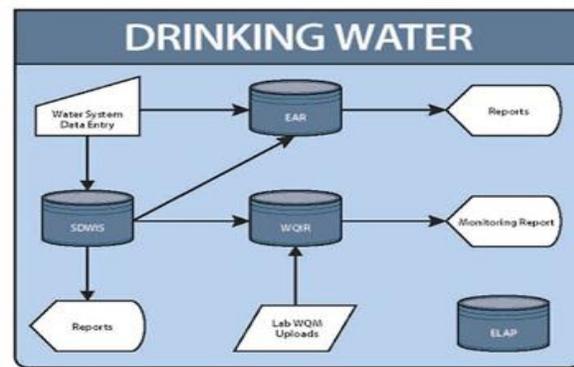
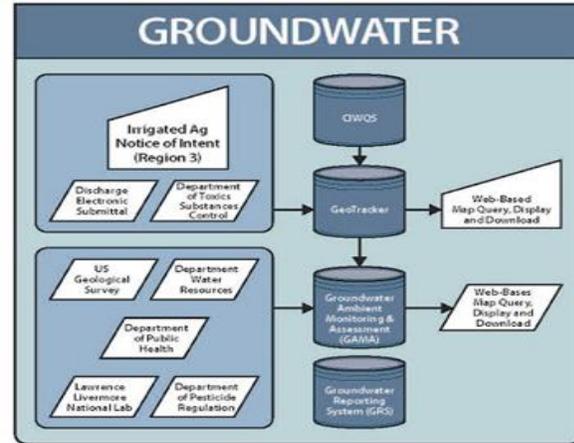
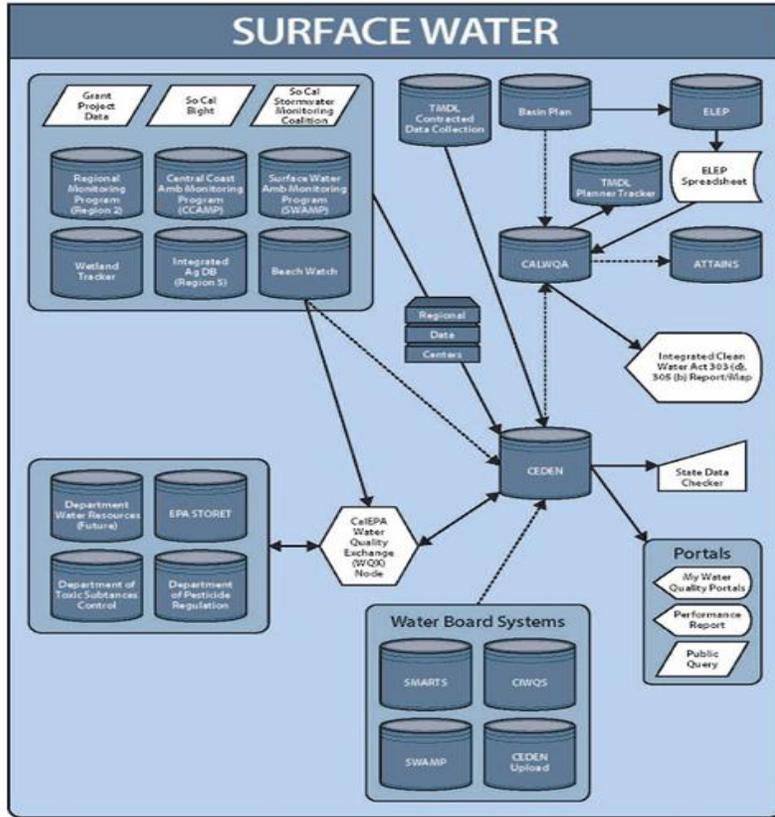
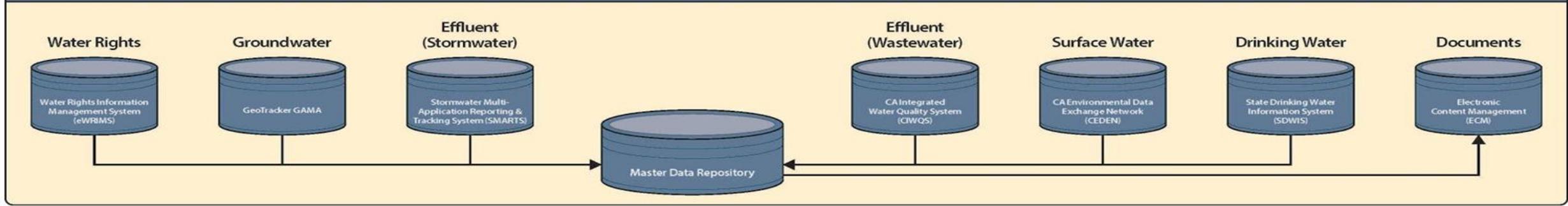
Office of Information Management & Analysis  
California State Water Resources Control Board



- 10 Boards (9 Regional WQ, 1 State WR)
- 27 Water Districts
- >3000 staff
- State Board has water quality, water rights, drinking water, funding and fiscal/administration duties
- More than 25 core programs..
- Many databases and datasets



# WATER BOARDS' ENTERPRISE TECHNOLOGY APPLICATIONS AND SYSTEMS INFRASTRUCTURE



# OPEN DATA

- AB1755 Open and Transparent Open Data Act (2016)
- State Water Board Open Data Resolution 2018-0032
- SWRCB-Office of Information Management and Analysis- Chief Data Scientist (Open Data Lead)

www.waterboards.ca.gov/board\_decisions/adopted\_orders/resolutions/2018/rs2018\_0032.pdf



## STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2018-0032

ADOPTING PRINCIPLES OF OPEN DATA AS A CORE VALUE AND DIRECTING PROGRAMS AND ACTIVITIES TO IMPLEMENT STRATEGIC ACTIONS TO IMPROVE DATA ACCESSIBILITY AND ASSOCIATED INNOVATION

### WHEREAS:

1. Effective water resource management demands that California better integrate existing water and ecological data into an authoritative open-access platform to help water managers operate the State of California's (State) water system more effectively and help water users make informed decisions based on water availability and allocation.
2. The State Water Resources Control Board (State Water Board) recognizes that a wide range of activities and projects require data for management, including problem quantification, prioritization, implementation of strategies, and evaluation of results.
3. Data life cycle management involves managing the flow of information from the initial identification of data needs through the stages of data collection, data storage, data accessibility, and the final process of turning data into information and knowledge. Data life cycle management often requires the development and/or enhancement of information systems to address various life cycle stages, including functions that ensure quality data are collected, managed, reformatted, and made accessible to users (including machine readability). The data and information systems (data ecosystem), that the State Water Board is a steward of, is part of the critical infrastructure needed by all Californians to best address the State's current and future water priorities.
4. The State Water Resources Control Board and the California Regional Water Quality Control Boards (collectively Water Boards) collect data to:
  - a. Inform critical decisions regarding our mission(s) and water management responsibilities including those related to water allocation and use, water quality planning, policy development, permitting, program prioritization, and more;
  - b. Inform our data-driven management and planning activities through performance report cards, workplans, resource assignment/augmentation, program evaluation, and more; and
  - c. Provide transparency to our many partners and stakeholders.



## AB 1755: Open and Transparent Water Data Platform for California

### What is the Open and Transparent Data Act?

The Open and Transparent Water Data Act (AB 1755, DodD) requires the Department of Water Resources, in consultation with the California Water Quality Monitoring Council, the State Water Resources Control Board, and the California Department of Fish and Wildlife, to create, operate, and maintain a statewide integrated water data platform; and to develop protocols for data sharing, documentation, quality control, public access, and promotion of open-source platforms and decision support tools related to water data.

A team of partner agencies is collaborating with and learning from others – including State and federal agencies, data experts, data providers, and data consumers – to chart a successful path forward.

Open Data Strategic Plan Protocols Use Cases Data Portals Governance and Funding

### Why is an open data platform important?

- Integration of existing water and ecological/fisheries data will: support analysis across datasets and disciplines; help water managers operate more efficiently, and help water users make informed decisions based on water availability and allocation.
- State agencies should promote openness and interoperability of water data
- Increased transparency of public data is good government
- Water data and information technology tools and applications developed and gathered using state funds should be made publicly accessible and open-source, whenever possible
- Increased access to data will support better-informed decisions and cost-effective investments
- AB 1755 will support greater use of data collected and increase awareness of the importance of data in water management
- Making information accessible, discoverable, and usable by the public can foster entrepreneurship, innovation, and scientific discovery
- More comprehensive and interoperable datasets will provide unique opportunities to develop data-search and data-packaging products and services

### Contact Us

For questions or to subscribe for project updates and related announcements, please contact us at via the button below.

### Contact Us

A list of contacts for the California state agencies involved in the AB 1755 open data programs is available in the directory.

### Resources

- AB 1755 Implementation Journal (Updated 1/2023)
- Letter from CNRA and CalEPA Secretaries related to the Water Data Consortium
- Water Data Advisory Council Recommendations
- Strategic Plan for AB 1755
- Protocols for AB 1755
- Open Water Information Architecture - System Requirements Document
- Open Water Information Architecture - Standard Operating Procedures
- Exploration of Governance and Funding for Open Water Data in California
- Data for Water Decision Making - Use Cases
- Aspen Dialog Series - Internet of Water

### Tags

## The Office of Information Management and Analysis (OIMA)

The Office of Information Management and Analysis was established in 2008 to serve as an advocate for data management, a bridge between data collectors and users, as well as, provide transparency of the Water Board's information management infrastructure. Our goal at OIMA is to collaborate monitoring efforts, accurately analyze data, make our data easily accessible, and create visualizations and reports that make data understandable across all audiences.

The following four values are at the core of who we are as an office within the Water Boards, and how we work:

- We build trust:** we strive to be a trusted source of water data, information, and processes, and we invest the time and space required to build, rebuild, and maintain trusting relationships.
- We adapt:** we strive to be adaptable and innovative in how we work and the products, services, and resources we develop.
- We work in partnership:** collaboration and partnerships are key to who we are and how we work. We believe the way we work directly impacts what we produce.
- We drive quality:** we strive to produce quality information, data, products, and services. We know the quality of the systems and processes we use determine the outcomes we are able to achieve.

See the OIMA Values Statement for how each of these values have been operationalized into behaviors that we are all empowered, expected, and held accountable to demonstrating.

### Programs Managed by OIMA

Surface Water Ambient Monitoring Program (SWAMP)	Data and Data Management
<ul style="list-style-type: none"><li>• SWAMP Data Dashboard</li><li>• Bioaccumulation Monitoring Program</li><li>• Bioassessment Monitoring Program</li><li>• Freshwater Harmful Algal Bloom Program</li></ul>	<ul style="list-style-type: none"><li>• Strategic Data Management Action Plan</li><li>• Data Literacy Strategy</li><li>• Water Boards Data and Databases</li><li>• California Open Data Portal</li></ul>

# Office of Information Management and Analysis



- Goal: Help RB and Divisions get more value from their data
  - Manage and coordinate change (Cultural change-Using Information to Manage)
  - **Data Accessibility**: Central repository (data warehouses)
  - Credibility and trust data for decision making (reliable)
  - Change how staff work together and how they understand the role of data in their organizations (Innovation)
  - Change the way organizations (RB and Divisions) use data and deploy technology
    - Performance Report
    - Tableau, PowerBI, R, Shiny, MS SQL, SSRS..

# OPEN DATA – F.A.I.R.



## •FINDABLE

- The first step in (re)using data is to find them. Metadata and data should be easy to find for both humans and computers. Machine-readable metadata are essential for automatic discovery of datasets and services

## •ACCESIBLE

- Once the user finds the required data, she/he/they need to know how they can be accessed, possibly including authentication and authorization

## •INTEROPERABLE

- The data usually need to be integrated with other data. In addition, the data need to interoperate with applications or workflows for analysis, storage, and processing

## •REUSABLE

- Metadata and data should be well-described so that they can be replicated and/or combined in different settings.

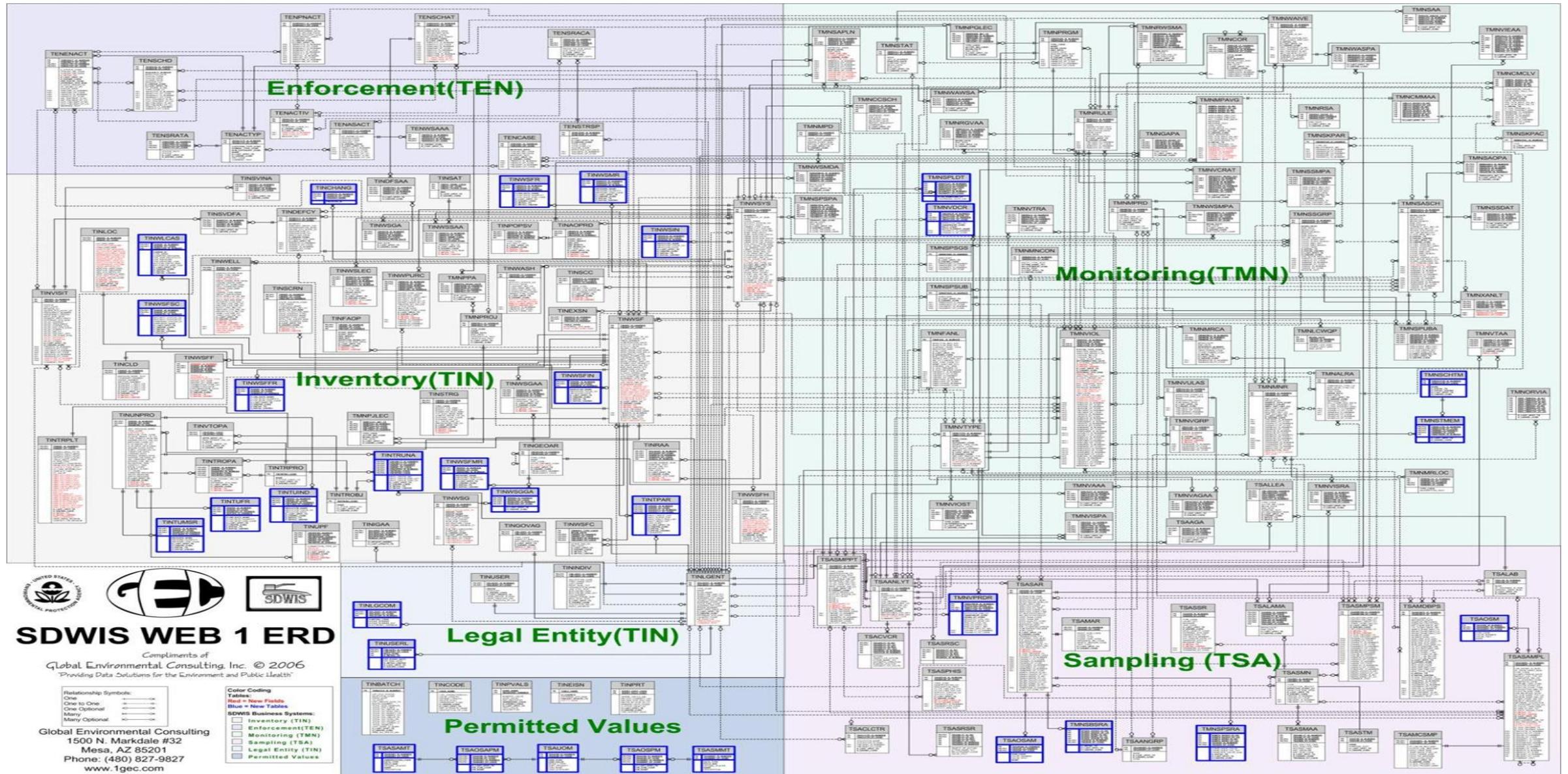
## Data Democratization

- Need Data to be:
  - Reliable
  - Up to date
  - Trusted
  - Governed
  - Curated
  - Accessible
- USEFUL
- USED

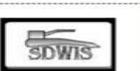
# Data Users Questions ??????????????

- What Data?
- Where is It?
- What Format?
- Can I download or connect to it? (APIs..)
- Can I use it? Reuse it?
- Is it “Live Data”? Can I build visualizations connecting to it?
- Is it a permanent link?
- What if I have more questions?

# From Relational Databases to “Machine Readable” OPEN Data







**SDWIS WEB 1 ERD**

Compliments of  
Global Environmental Consulting, Inc. © 2006  
"Providing Data Solutions for the Environment and Public Health"

Relationship Symbols:  
 One to One: —|—  
 One to One Optional: —|—○  
 One to Many: —|—>  
 One to Many Optional: —|—>○

Color Coding Tables:  
 Red = New Fields  
 Blue = New Tables

SDWIS Business Systems:  
 Inventory (TIN)  
 Enforcement (TEN)  
 Monitoring (TMN)  
 Sampling (TSA)  
 Legal Entity (TIN)  
 Permitted Values

Global Environmental Consulting  
 1500 N. Markdale #32  
 Mesa, AZ 85201  
 Phone: (480) 827-9827  
 www.1gec.com



CALIFORNIA  
**OPEN DATA PORTAL**

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# California Open Data

We believe in the power of unlocking government data

***IMPORTANT***

[Home](#) / [Organizations](#) / [California State Water ...](#)

 California State Water  
 Resources Control  
 Board

Followers Datasets

7

51

## Organizations

California State Wa... (51)

## Topics

Water (40)

COVID-19 (1)

Government (1)

## Tags

[Datasets](#) [Activity Stream](#) [Data Requests](#) [About](#)



## 51 datasets found

Order by: Relevance 

## Surface Water Ambient Monitoring Program

The SWAMP mission is to provide resource managers, decision makers, and the public with timely, high-quality information to evaluate the condition of all waters throughout...

CSV

## California Water Rights LIST (Detail Summary List)

This list includes detail information about every water rights record in the State Water Resources Control Board's "Electronic Water Rights Information Management System"...

CSV DOCX

## Surface Water - Indicator Bacteria Results

\_\_1/20/23\_\_: Daily weekday refreshes for the Safe to Swim interactive map ([https://mywaterquality.ca.gov/safe\\_to\\_swim/interactive\\_map/](https://mywaterquality.ca.gov/safe_to_swim/interactive_map/)) and associated datasets on data.ca.gov...

CSV PDF

## Stormwater - Regulatory (including Enforcement Actions) Information and Water...

This dataset looks at all aspects of storm water management in California as managed and regulated by the State Water Resources Control Board, from the Stormwater Multiple...

CSV



Drinking Water - SAFER Dashboard Failing and At-Risk Drinking Water Systems

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Email Address

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Organization



California State Water Resources Control Board

Website: https://www.waterboards.ca.gov/ To preser

Dataset Topics Showcases Activity Stream

Drinking Water - SAFER Dashboard Failing and At-Risk Drinking Water Systems

The Division of Drinking Water (DDW) identifies Failing and At-Risk community water systems and K-12 non-transient, non-community schools. This information is displayed online in the Safe and Affordable Funding for Equity and Resilience (SAFER) Dashboard. The data utilized for this assessment is derived from multiple sources: self-reported from water systems, data generated by DDW staff, other California state agencies, and U.S. Census. The data sources, calculation methods, Failing and At-Risk criteria, etc. are fully documented in the annual Drinking Water Needs Assessment report which is published annually on the State Water Board's website.

Data and Resources

Risk Assessment Data Dictionary (PDF) This file contains the definitions of the data displayed in the SAFER Dashboard.

Preview Download

Risk Assessment Data Dictionary (Excel) This file contains the definitions of the data displayed in the SAFER Dashboard.

Preview Download

Drinking Water Risk Assessment Public Flat File

Preview Download

2024 Drinking Water Needs Assessment The Drinking Water Needs Assessment, required to be carried out by SAFER...

Preview Download

Drinking Water Needs Assessment Risk Assessment SAFER

Failing	At-Risk	Potentially At-Risk	Not At-Risk	Not Assessed
Water Systems <b>404</b>	Water Systems <b>580</b>	Water Systems <b>444</b>	Water Systems <b>1,605</b>	Water Systems <b>185</b>
Population <b>887,993</b>	Population <b>1,541,236</b>	Population <b>1,486,790</b>	Population <b>11,476,734</b>	Population <b>24,435,055</b>
Funding Since 2017 <b>\$270,833,665</b>	Funding Since 2017 <b>\$115,947,659</b>	Funding Since 2017 <b>\$184,710,076</b>	Funding Since 2017 <b>\$692,702,499</b>	Funding Since 2017 <b>\$1,947,561,078</b>

Search

SAFER Status

- (All)
- Failing
- At-Risk
- Potentially At-Risk
- Not At-Risk
- Not Assessed

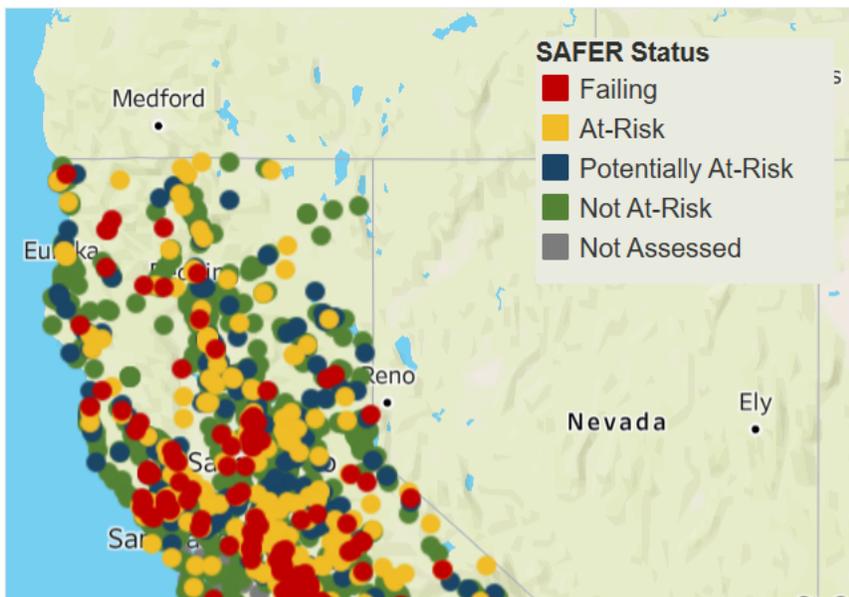
Service Connections

Population

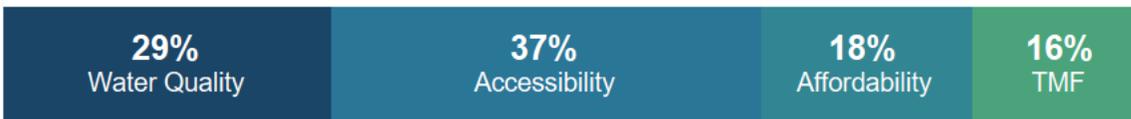
County

Legislative District

Total Count of Systems: **3,218**. Total Population: **39,827,808**



Drivers of Risk



Number of Systems Exceeding Risk Indicator Thresholds

CATEGORY	SUBGROUP	Count
Water Quality	Increasing Presence of Water Quality Trends Toward MCL	988
	Percentage of Sources Exceeding an MCL	573
	Past Presence on the Failing List	549
	Constituents of Emerging Concern	306
	History of E. coli Presence	90
	Treatment Technique Violations	56
Accessibility	Absence of Interties	1,252
	Number of Water Sources	1,252

Exit full



**Drinking Water - Public Water System Annually Reported Water Production and Delivery Information 2013-2022**

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📄 Organization



**California State Water Resources Control Board**

Website: <https://www.waterboards.ca.gov/> To preserve, enhance, and restore the quality of California's water resources and protect...

👤 Dataset 🗂️ Topics 🏆 Showcases 🔄 Activity Stream

# Drinking Water - Public Water System Annually Reported Water Production and Delivery Information 2013-2022

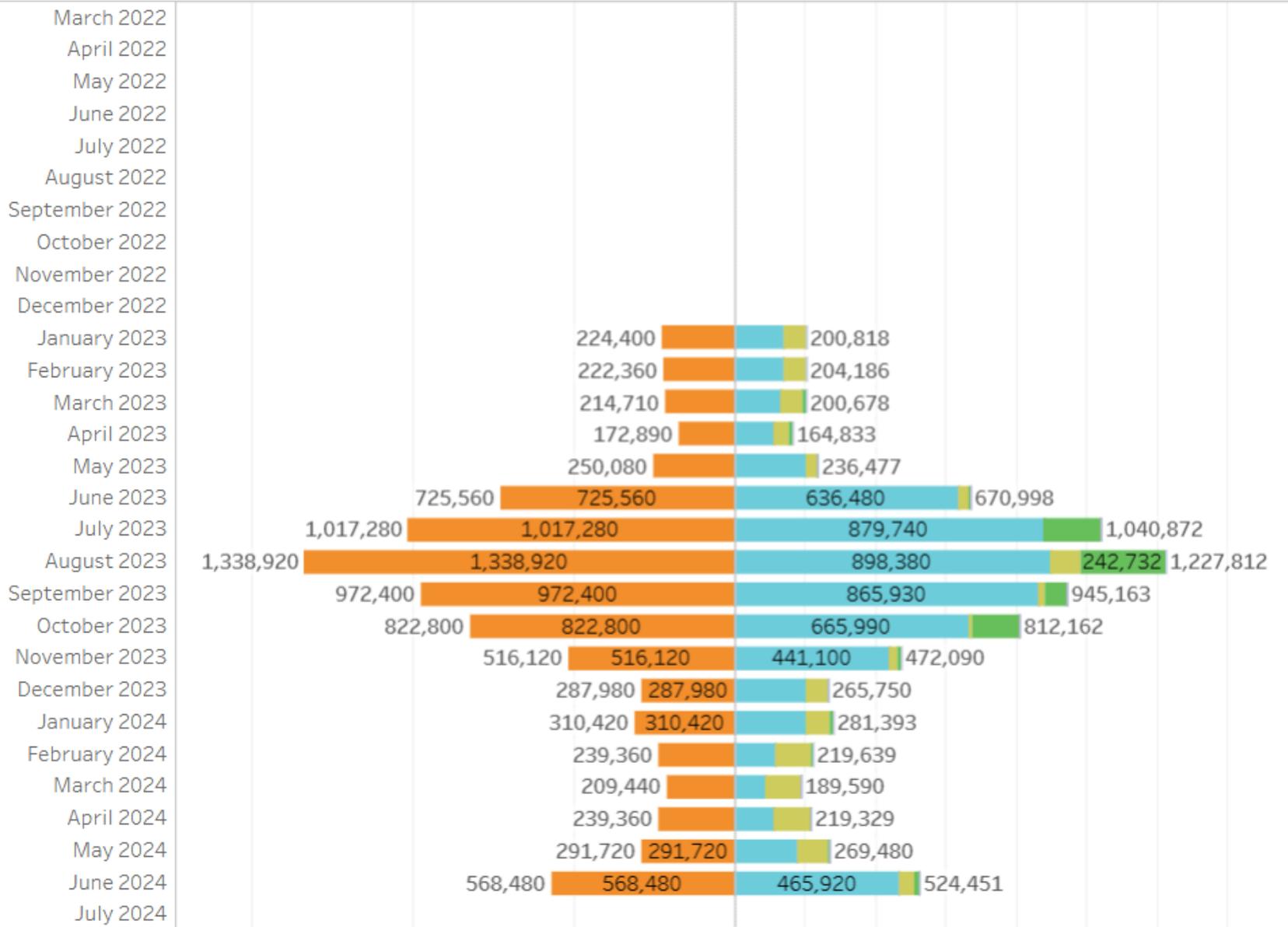
Amount of water produced by month and by source and the water delivered by type of use and by month for every Public Water System (PWS) reporting. Public Water Systems submit their annual inventory information using the electronic Annual Report (eAR) submission process. The electronic Annual Report (eAR) is a survey of public water systems, currently required annually, to collect critical water system information intended to assess the status of compliance with specific regulatory requirements such as source water capacity, provides updated contact and inventory information (such as population and number of service connections). The specific dataset is section 6 of the eAR for the years 2013-2022 (both included) that collects the water produced by month and by source and the water delivered by type of use and by month for every water system reporting. It also includes facility public information details from the SDWIS database as metadata associated to the dataset. More information about the eAR required reporting here: [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/ear.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/ear.html) . A "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

## Data and Resources

-  **Urban Water Reporting - DATA DICTIONARY**  
This is the data dictionary for the Urban Water Reporting Electronic Annual... 📄 Preview 📄 Download
-  **Urban Water Produced and Delivered – YEARS 2013-2022 by Month and Water Source type and...** 🔥  
Includes the produced and delivered urban water combined for each calendar... 📄 Preview 📄 Download
-  **Urban Water Produced and Delivered – YEARS 2013-2022 by Month and Water Source type and...** 🔥  
Includes the produced and delivered urban water combined for each calendar... 📄 Preview 📄 Download
-  **Produced Water – YEAR 2013 by Month and Water Source**  
Includes the produced water by source for each calendar month for 2013. The... 📄 Preview 📄 Download

# CA0400091 Gallons (G)

Month of REPORTING\_PERIOD\_ST..



1500K 1000K 500K 0K0K 200K 400K 600K 800K 1000K 1200K 1400K

PRODUCTION

Use

- (All)
- Null
- AGRICULTURE
- COMMERCIAL\_INSTITUTIONAL
- INDUSTRIAL
- NONRESIDENTIAL\_METERED\_IRRIGATION
- OTHER
- RESIDENTIAL\_MULTIFAMILY
- RESIDENTIAL\_SINGLEFAMILY
- Total Potable Demand not reported as Type
- TOTAL POTABLEDEMAND

CID

CA0400091

Production Type

- Null
- GROUNDWATER\_PRODUCTION
- GWUDI\_PRODUCTION
- HAULEDWATER\_PURCHASED\_RECEIVED
- SPRING\_PRODUCTION
- SURFACEWATER\_PRODUCTION

DEMAND TYPE

- Null
- AGRICULTURE
- COMMERCIAL\_INSTITUTIONAL
- INDUSTRIAL
- NONRESIDENTIAL\_METERED\_IRRIGATION
- OTHER
- RESIDENTIAL\_MULTIFAMILY
- RESIDENTIAL\_SINGLEFAMILY
- Total Potable Demand not reported as Type
- VOLUMESOLD\_DELIVERED\_OTHER\_WATERSY...

Surface Water - Freshwater Harmful Algal Blooms

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Website: https://www.waterboards.ca.gov/ To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment

- Dataset Topics Showcases Activity Stream

Surface Water - Freshwater Harmful Algal Blooms

Freshwater harmful algal bloom (HAB) data from the Freshwater Harmful Algal Bloom (FHAB) data system. The FHAB data system is the California State Water Resources Control Board's data system for data and information voluntarily reported to the agency. Bloom reports are voluntary reports submitted by the public or organization to identify a POTENTIAL HAB for evaluation. Bloom Reports may or may not include a report that is confirmed to be a HAB, regardless, all bloom reports are published. Due to the voluntary basis of information and data included in the database, data and information may include: waterbody name and location, potential algal bloom location and observed characteristics, observed field observations and/or analytical sampling results, waterbody and/or land management, general information, recommended advisory status (if any), and updates regarding bloom status. Refer to Data Dictionary and Data Disclaimer for additional information about this dataset. Please visit the Water Boards FHABS web site for more information and data visualizations https://mywaterquality.ca.gov/habs/index.html.

Data and Resources

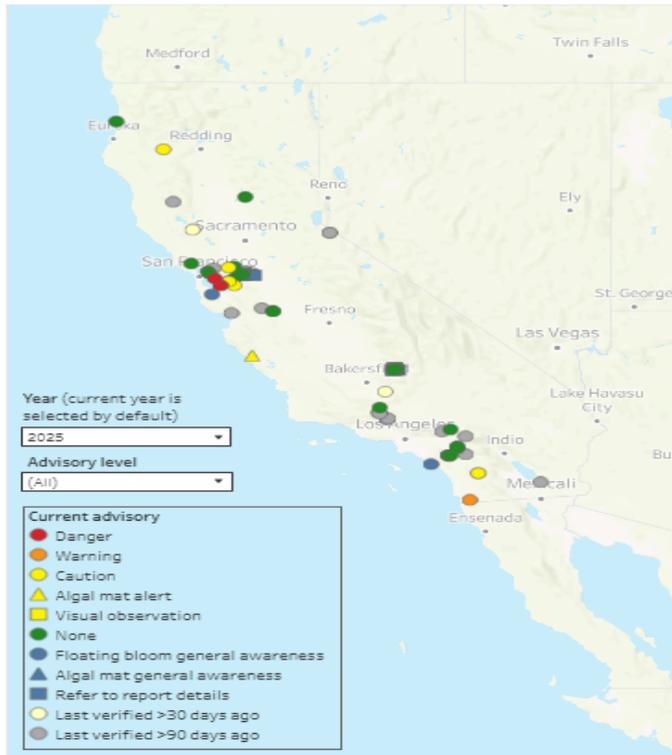
- FHABS Data Disclaimer and Additional Information (PDF) - This is important information data users have to look at it before going to... [Preview] [Download]
FHABS DATA DICTIONARY (PDF) - This is a detailed description of all the data elements included in all... [Preview] [Download]
FHABS BLOOM REPORT (CSV) - Includes information from individual reports submitted to the agency. Reports... [Preview] [Download]
FHABS CASES (CSV) - Includes information from manually created cases to group similar reports.... [Preview] [Download]
FHABS RESPONSES (CSV) [Preview] [Download]




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[Report a Bloom](#)

[Harmful Algal Blooms \(HABs\)](#) / HAB Reports Map

# HAB Reports Map



Updated: 5/1/2025 4:43:45 PM UTC (-7 hours for PT)

County	Water_Body_N..	Landmark	Advisory Level	Advisor..		
Alameda	Dyer Reservoir	Outlet	None	4/25/25	<a href="#">Detail</a>	
	Lago Los Osos	Lago Los Osos ar..	Caution	4/23/25	<a href="#">Detail</a>	
	Lake Chabot	lake-wide	Danger	4/23/25	<a href="#">Detail</a>	
	Lake Del Valle	boat launch	Caution	4/28/25	<a href="#">Detail</a>	
	Lake Temescal	Lake Temescal	None	4/28/25	<a href="#">Detail</a>	
	Quarry Lakes	Horseshoe Lake (. .		Danger	4/28/25	<a href="#">Detail</a>
		Rainbow Lake		Caution	4/23/25	<a href="#">Detail</a>
		Shinn Pond		Caution	4/23/25	<a href="#">Detail</a>
	Shadow Cliffs Arroyo	dog access area	None	4/23/25	<a href="#">Detail</a>	
	Shadow Cliffs Lake	Shadow Cliffs Ra..		Caution	4/28/25	<a href="#">Detail</a>
Alpine	Indian Creek Reservoir	Auxiliary Dam (IC..		Last verified >90 d..	12/13/24 <a href="#">Detail</a>	
		South End Neare..		Last verified >90 d..	12/13/24 <a href="#">Detail</a>	
Butte	Lake Oroville	near dam	None	5/1/25	<a href="#">Detail</a>	
Contra Costa	Big Break Regional ..	Boat launch	None	4/11/25	<a href="#">Detail</a>	
	Briones Regional P..	Briones Regional ..		Last verified >90 d..	1/13/25 <a href="#">Detail</a>	
	Clifton Court Foreb..	Inlet	None	4/25/25	<a href="#">Detail</a>	
	Contra Loma Reser..	Contra Loma Res..	Caution	4/18/25	<a href="#">Detail</a>	
	Lake Anza	Lake Anza	None	4/28/25	<a href="#">Detail</a>	
	Old River	at Clifton Court l..		Refer to report det..	4/18/25 <a href="#">Detail</a>	
	West Canal	at Clifton Court l..		Refer to report det..	4/18/25 <a href="#">Detail</a>	
	Big Lagoon	Lagoonwide	None	5/1/25	<a href="#">Detail</a>	
Humboldt	Wiest Lake	Rutherford Rd		Last verified >90 d..	12/17/24 <a href="#">Detail</a>	
Imperial	Four Island Lake	Bear Valley sprin..		Last verified >30 d..	2/5/25 <a href="#">Detail</a>	
	Lake Isabella	Auxiliary Dam Bo..		Refer to report det..	4/11/25 <a href="#">Detail</a>	
		Boulder Gulch Ca..		Refer to report det..	4/11/25 <a href="#">Detail</a>	
	Camp 9 North (7)		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	Camp Nine South ..		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	French Gulch Ca..		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	French Gulch Ca..		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	French Gulch Mar..		None	4/11/25 <a href="#">Detail</a>		
	Kissack Bay (13)		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	Old Isabella Road..		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	Paradise Cove (14)		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	South Fork Marin..		Refer to report det..	4/11/25 <a href="#">Detail</a>		
	Stine Cove (9)		None	4/11/25 <a href="#">Detail</a>		
	Tillie Creek boat l..		Refer to report det..	4/11/25 <a href="#">Detail</a>		



### California Water Rights Water Use Reported

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Website: <https://www.waterboards.ca.gov/> To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment,...

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## California Water Rights Water Use Reported

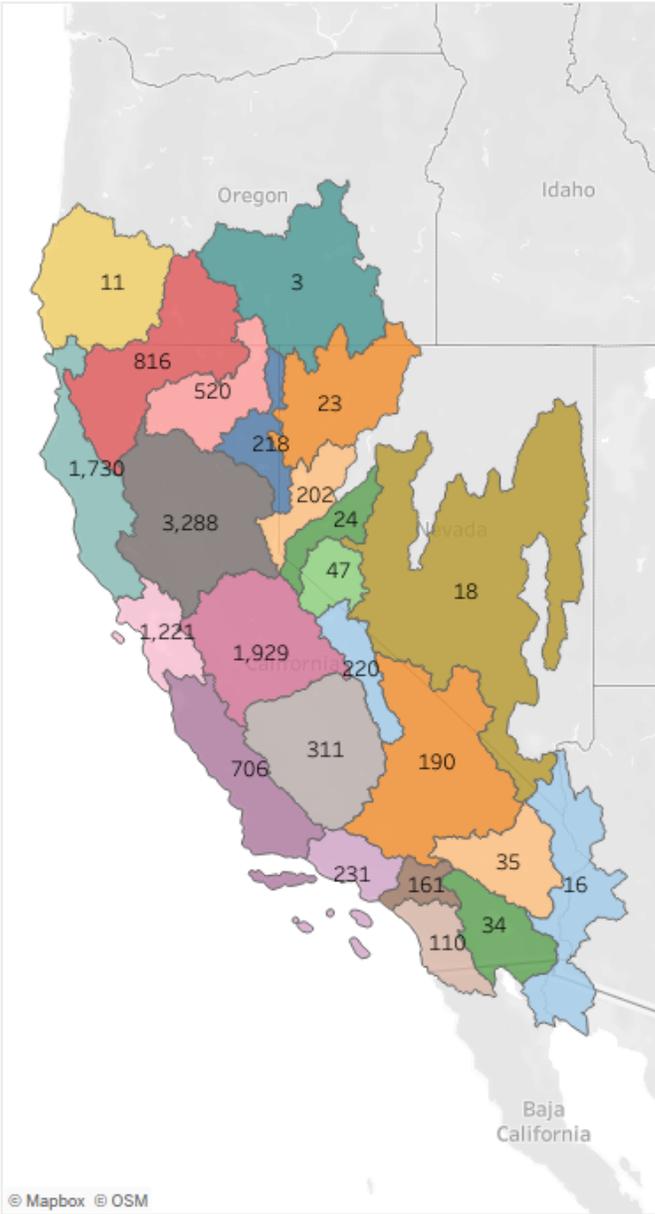
This list includes detail information for WATER USE as reported annually under each water right as stored in the State Water Resources Control Board's "Electronic Water Rights Information Management System" (EWRIMS) database. All water right holders are required to submit an online report of water diversion and use detailing their monthly water diversion, storage and use (even if no water was diverted or used during the period). The information is required pursuant to Title 23, Sections 847 and 925, of the California Code of Regulations. The annual report contains information about the water diversion and use. Each row correspond with a unique annual report-water right id, month and diversion type combination and its associated data. The list include basic summary information about the Water Right record, such as the type and status, the location of the Points of Diversion, the amount of water allowed (Face Value), and summary data associated with the electronic Water Right record. This file is in flat file LONG format and may not include all information associated to a water right such all uses and seasons. The information associated with crop irrigation is not included in this list but is included on a separate file. Other information may be available in the associated flat files for each category. Examples of annual reports templates are provided as supporting information. The dataset is also available in "Wide Format" by reporting year using the eWRIMS public report system here <https://ciwqs.waterboards.ca.gov/ciwqs/ewrims/reportingDiversionDownloadPublicSetup.do>

### Data and Resources

-  **California Water Rights Water Used Reported** 🔥  
This list includes detail information for WATER USE as reported annually... [Preview](#) [Download](#)
-  **California Water Rights Water Use Reported (1914 to 2015)** 🔥  
This list includes detail information for WATER USE for reports from 1914 to... [Preview](#) [Download](#)
-  **California Water Rights Water Use Reported 2016-2018** 🔥  
This list includes detail information for WATER USE for reports from 2016 to... [Preview](#) [Download](#)
-  **California Water Rights Water Use Reported 2019-on** 🔥  
This list includes detail information for WATER USE for reports from 2019. [Preview](#) [Download](#)

## California Active Water Rights by Watersheds (HUC6)

(Numbers represent the number of different types of water rights in the watershed)



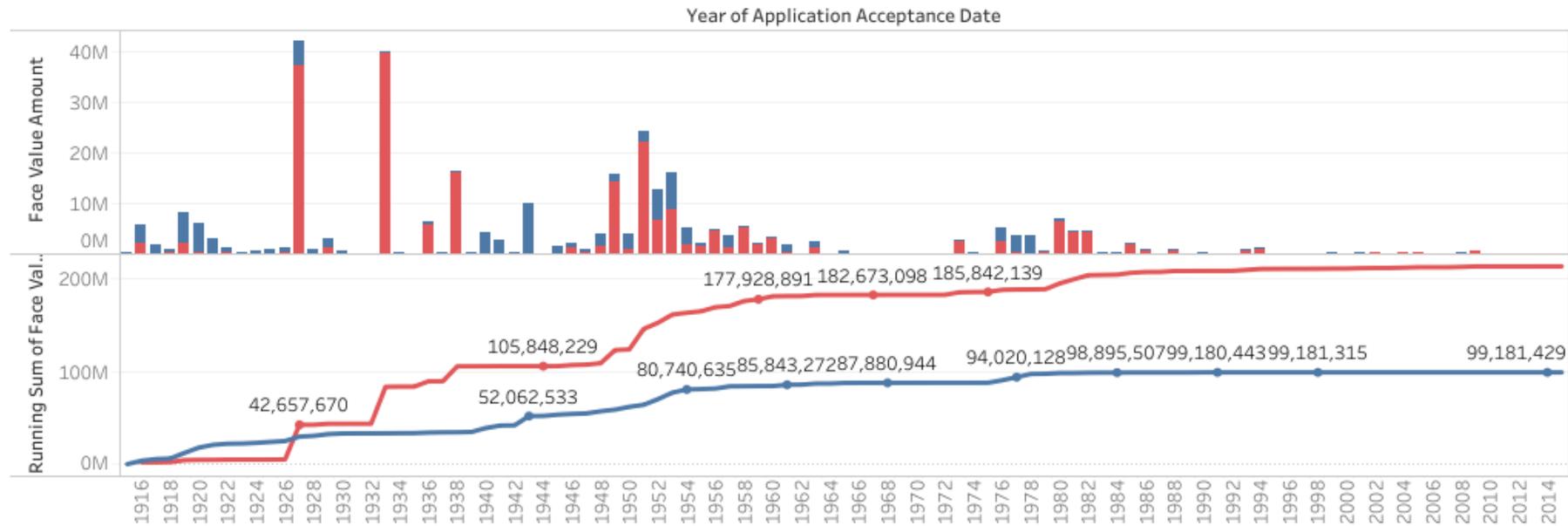
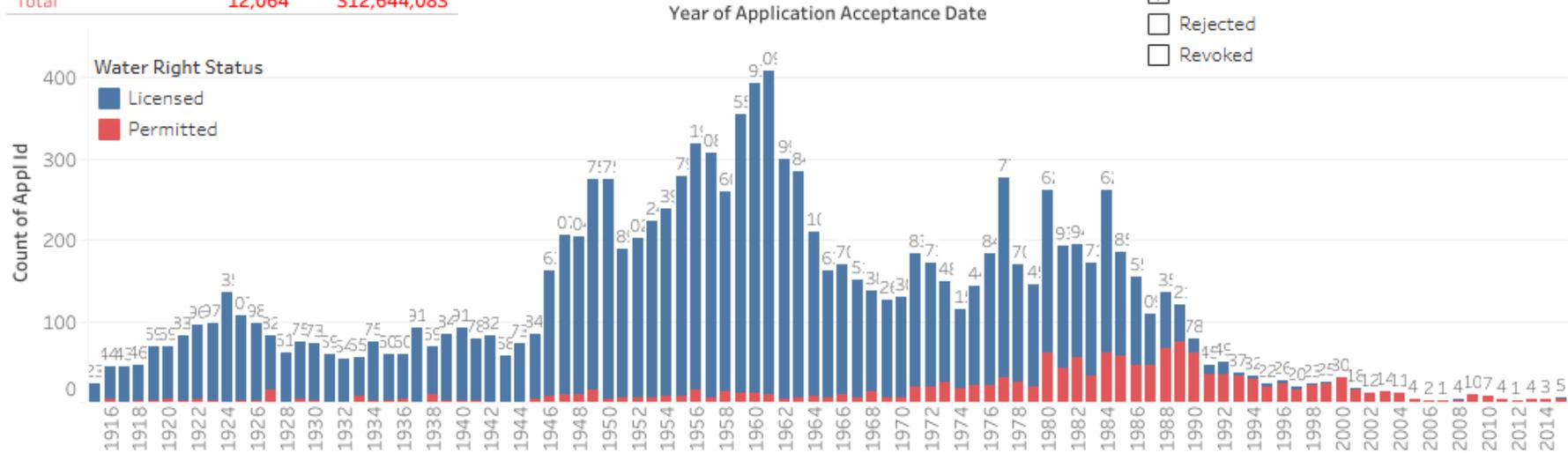
### Total Water Rights For Watershed

Water Right Status	# Water Rights	Face Value Amount AF
Licensed	10,626	99,203,487
Permitted	1,438	213,440,595
<b>Total</b>	<b>12,064</b>	<b>312,644,083</b>



### Water Right Status

- (All)
- Cancelled
- Licensed
- Pending
- Permitted
- Rejected
- Revoked





**Urban Retail Water Supplier - Water Conservation, Supply, and Demand (June 2014 onwards)**

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**Organization**



**California State Water Resources Control Board**

Website: <https://www.waterboards.ca.gov/> To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection

- Dataset
- Topics
- Showcases
- Activity Stream

# Urban Retail Water Supplier - Water Conservation, Supply, and Demand (June 2014 onwards)

Monthly reports of water use and conservation activities by urban retail water suppliers, which are generally defined as agencies serving over 3,000 service connections or deliveries 3,000 acre-feet of water annually for municipal purposes.

The most recent reporting period generally lags by about 2 months, due to the reporting deadline and the necessary subsequent dataset preparation. The full dataset that spans June 2014 to the most recent reporting period is the Per-Supplier Water Supply and Demand resource, which is an updated version of the dataset previously released on the Water Board's [Water Conservation Portal](#). Other datasets include the per-water-system supply and demand, representing a subset of the SAFER Clearinghouse dataset, and the conservation actions datasets.

See the documentation PDF for data dictionaries and an explanation of the data flag methodology.

## Data and Resources

- Dataset Documentation** 🔥  
Data dictionaries and description of data flag/modified z-score methodology... [Preview](#) [Download](#)
- Guidance to Update Population**  
A document created by the Department of Drinking Water that explains the... [Preview](#) [Download](#)
- Per-Supplier Water Supply and Demand** 🔥  
Per-supplier reports of selected production and deliveries fields, comprising... [Preview](#) [Download](#)
- Per-Water-System Supply and Demand, Jan2023 onwards** 🔥  
Per-water-system data from the Clearinghouse for urban retail water... [Preview](#) [Download](#)
- Conservation Actions Listed Subsystem Format** 🔥



- [Urban Water Suppliers at 15 Percent Conservation or Above, January 2023](#)
- [Definitions and Data Dictionary for the Urban Water Supplier Monthly Reports Dataset \(applies to June 2014-September 2020 dataset onwards\)](#)
- [Definitions and Data Dictionary for the Water Shortage Drought Response Actions Dataset](#)

**i** For questions about data, or to report a problem, please contact us.

**📁 Archived Datasets: [Monthly Report](#) | [Small Supplier Annual Conservation Reports](#)**

accounted for.

[🔍 Learn more about the factors](#)

Average monthly residential gallons per capita daily (R-GPCD)

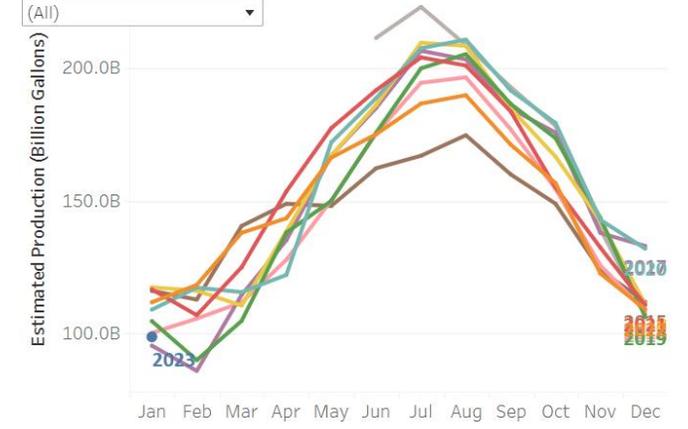
Region Type:  | Select Years to Display:  | Select Month:

Region	2016	2017	2018	2019	2020	2021	2022	2023
Central Coast	49	48	56	50	49	60	56	50
Colorado Riv..	99	93	120	116	116	132	134	125
North Coast	50	50	53	48	51	61	52	51
North Lahon..	54	60	59	60	55	61	57	60
Sacramento ..	68	69	69	66	68	72	70	64
San Francisc..	48	49	52	49	52	53	49	44
San Joaquin ..	62	63	71	66	65	75	72	67
South Coast	62	56	73	64	67	72	69	58
South Lahon..	68	60	77	67	67	76	74	67
Tulare Lake	69	72	82	75	75	85	72	69
Statewide	61	58	70	62	65	70	66	58

Hydrologic Regions: <https://tinyurl.com/hydrereg>  
Climate Zones: <https://tinyurl.com/climatzone>

Last dashboard edit:  
March 8th, 2023

Statewide Urban Water Production



Estimated total production is obtained by substituting the most recent corresponding monthly total production into missing reports.





conservation team at ORPP-WaterConservation@Waterboards.ca.gov.

## Water Use Objective Exploration Tool

Tool Data Inputs Glossary

**Supplier**  
(All)

**Data From Year(s)**  
2019

**Units**  
Gallons Per Capita Per Day

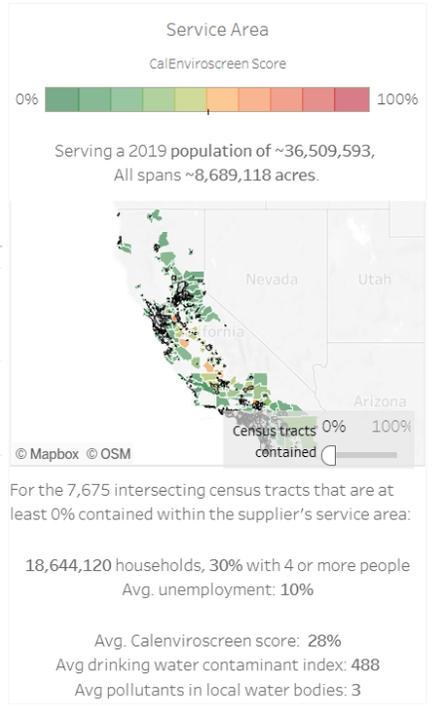
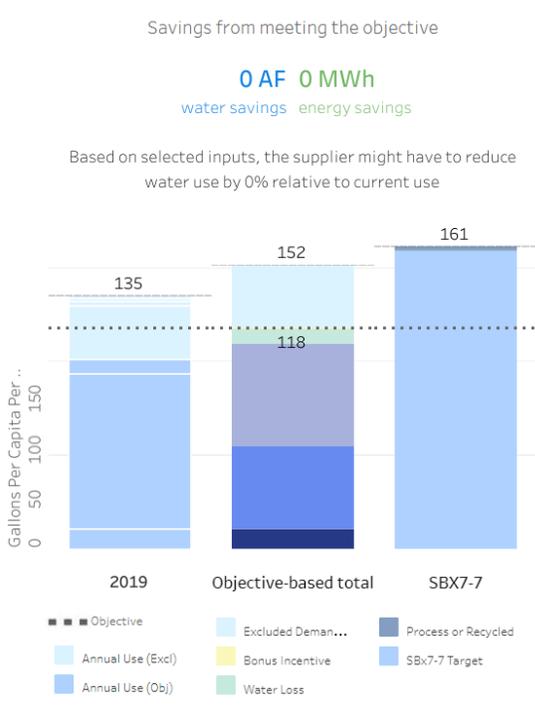
**Residential Indoor Use (GPCD)**  
Res. indoor budget=Population\*365\*GPCD  
55

**Residential Outdoor Use (ETF & LA)**  
Res. outdoor budget=LA\*ETF\*(ETO-Peff)\*0.62  
Specify the ETF value:  
80%

**Landscape Area (LA)**  
LA = Irrigable Irrigated (II) area + % of Irrigable Not Irrigated (INI) area  
Specify the percent of INI:  
20%

**CII Landscape Irrigation associated with Dedicated Irrigation Meters (DIMs)**  
(Coming soon)  
In interim, assumed to be equal to Landscape Irrigation deliveries reported in the eAR

**Bonus Incentive**  
As a % of the objective, not to exceed 15%  
0%



## Using the Tool

### Dashboard Tabs

**Tool:** Allows users to explore how adjusting different parameters could affect the resulting objective for any given urban retail water supplier.

**Data Inputs:** Summary of all data displayed in the "Tool" tab. The "Download Summary" button allows the user to print one or more of the tabs to PDF. Choose "Specific sheets from this workbook" to select more than one tab.

**Glossary:** Defines tool terms and provides data sources.

### Help Tips

Hover over the question mark icon to view simple explanations of each tool parameter.

## Making Conservation a California Way of Life

The Water Conservation legislation of 2018 (SB 606 and AB 1668) established a new foundation for long-term improvements in urban water supplier conservation and drought planning in order to adapt to climate change and the longer more intense droughts in California.



## Rafael Maestu



### **Rafael Maestu**

Economist and Chief Data Scientist - CA State Water Resources Control Board

Rafael (Rafa) Maestu is an Economist and Chief Data Scientist with the Office of Information Management and Analysis at the State Water Resources Control Board. Prior to joining the Water Board in 1999, he worked for the Spanish Ministry of Environment and for the European Union. Rafa is a data liberator and believes that information-based management and science-based decisions require the right data, in the right format at the right time. Transparency in data and information also improves the efficiency and effectiveness of government organizations and holds agencies accountable for their results. His career emphasis has focused on water management and water markets. His experience includes economic analysis, program evaluation, statistical analysis, water management, water conservation, organizational performance management, environmental indicators, performance reporting, strategic planning and information systems development. He holds a B.S. in Economics and a M.S. in Environmental Economics from the University of Madrid (Spain), he also holds a M.S. in Finance from the University of London, an M.A. in Environmental Management from the University of London and M.S. in Environmental Studies from the University of Southern California.

# Questions?



Rafael Maestu

[rafael.maestu@waterboards.ca.gov](mailto:rafael.maestu@waterboards.ca.gov)

SWRCB- Office of Information  
Management and Analysis

<https://www.waterboards.ca.gov/resources/oima/>



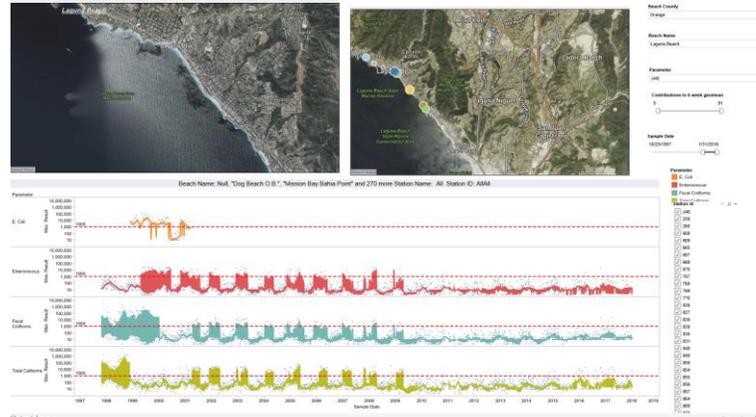
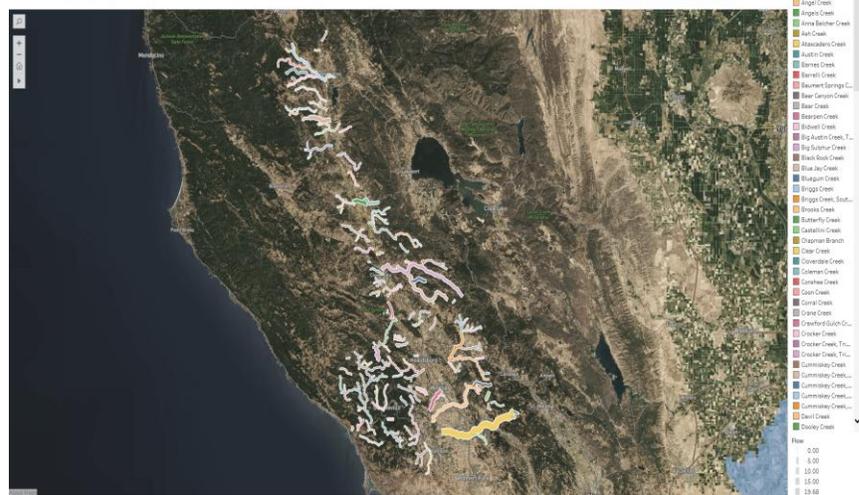
# Data Visualization/BI Tools, TABLEAL



California Water Boards  
DATA CENTER



Stream Habitat Reach Summary - Russian River  
Results of a stream habitat survey (Dunne et al 1998 method), summarized by stream reach, for DFG surveys conducted between 1994 and 2001 (inclusive) in the Russian River Basin (CalWater 2.2.1 hydrologic unit), Central Coast Region. Sampled habitat parameters, including pool type, frequency and depth, substrate class, bank vegetation composition and canopy closure, and in-stream cover, were measured at the unit scale and summarized to stream reach. <https://www.dfw.ca.gov/waterdata/46077.html>



Water Quality Report Card (TMDL): Diazinon and Chlorpyrifos in the Sacramento-San Joaquin Delta

### Water Quality Improvement Strategy

Diazinon and chlorpyrifos are organophosphorus pesticides that are used primarily in agricultural settings. In the early 1990s, these pesticides were detected in the Delta at levels that exceeded the State Water Quality Objectives. Since then, efforts have been undertaken by a variety of agricultural, agricultural, and other stakeholders, including water purveyors and other agencies, to reduce the amount of these pesticides in the Delta. The California Water Resources Board adopted a TMDL for Diazinon and Chlorpyrifos in the Delta, which established the maximum allowable loads for these pesticides in the Delta.

The TMDL is implemented in conjunction with the statewide TMDLs for the Delta's two major tributaries, the Sacramento River and the San Joaquin River, which were adopted in 2002 and 2004, respectively. As a result of ongoing agricultural practices, changes are necessary to the TMDL targets and water quality objectives over the time. Such changes are all consistent with the goal of the State Water Quality Objectives. The original loads regulatory program (LRP) is working with agriculture to address these conditions, as well as agricultural research and development.

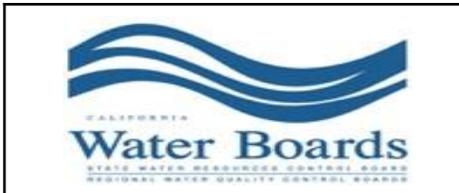
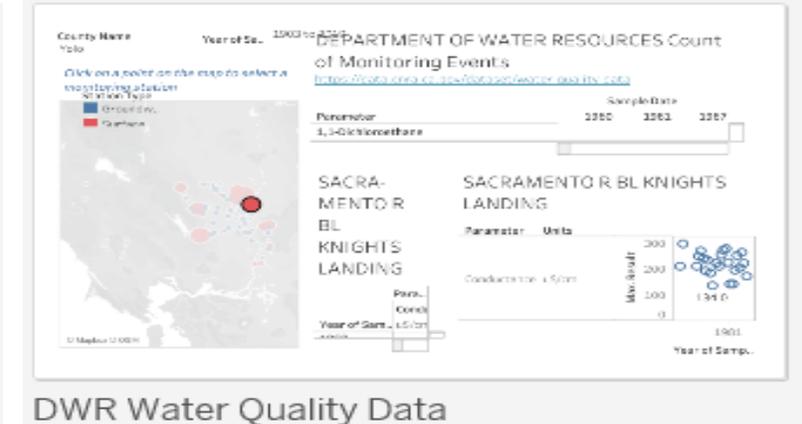
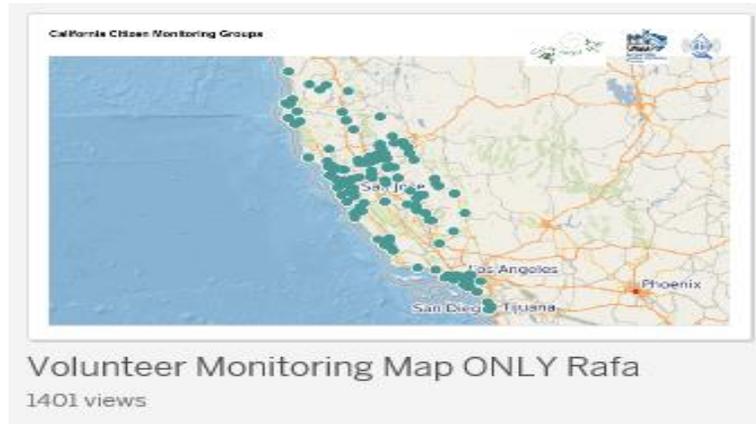
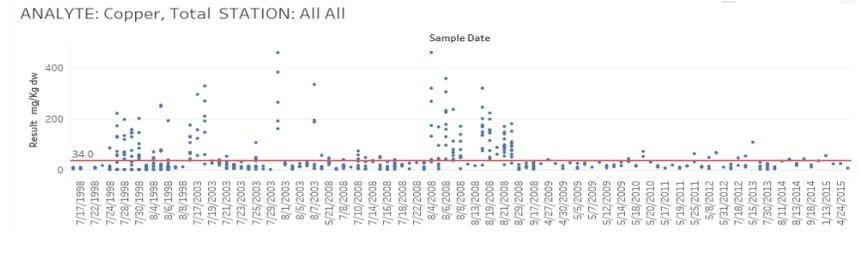
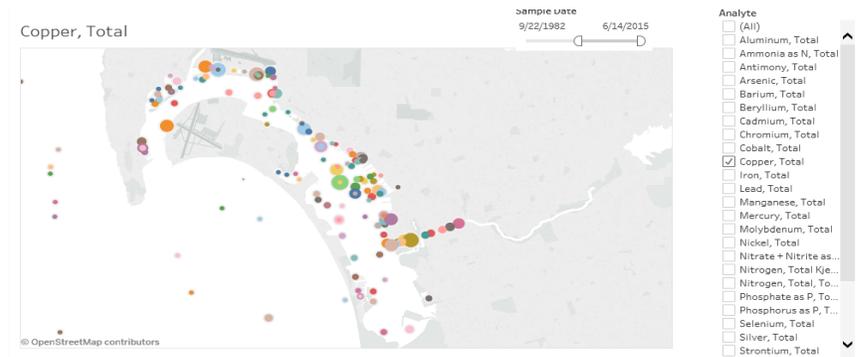
### Chlorpyrifos, Total Diazinon, Total Diazinon @ Brennan Rd & Lone Tree Creek @ Jack Tone



### Water Quality Outcomes

Water quality data demonstrate progress and achievement in the Delta's water quality objectives. Over time, concentrations and the number of violations for water quality objectives have decreased significantly. This is a result of the implementation of the LRP and working with the Department of Pesticide Regulation (DPR) and County Agricultural Commissioners.

Additional results of implementation include, particularly important, water is clean. They will be addressed through CE Board monitoring and reporting programs (1) working with agriculture to reduce agricultural pesticide use, and (2) development of additional Basin Assessments and TMDLs.



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# Office of Information Management and Analysis



- Resources OIMA related:
  - SWRCB 2018 Open Data Resolution [NO. 2018-0032](#)
  - AB1755 [Open and Transparent Water Data Act](#)
  - Data.Ca.Gov State of [CA Open Data Portal](#)
  - [Water Boards Data and Databases](#)
  - Water Boards [Strategic Data Management Action Plan](#)
  - [College of Water Informatics](#)
  - [SWRCB-Inventory of Datasets](#) (Public and not publicly available yet)