

User Manual for CA Water Board's Tribal Water Data Map

CA Water Board's Office of Information Management and Analysis (OIMA)

2023-08-24

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Welcome!

This is an online user manual for the [California Water Board's Tribal Water Data Map](#) (map), written by the California State Water Resources Control Board's ([State Water Board](#)) Office of Information Management and Analysis ([OIMA](#)).

The purpose of the [map](#) is to increase awareness of access to the Water Board's water data initiatives which intersect with Tribal matters and needs. The interactive map includes curated data that have been requested by and useful for California Native American Tribes (tribes).

The purpose of this User Manual is to provide guidance and context so it's easier for all audiences to use the map. Content in this user manual includes curated information that members of the OIMA and our tribal partners have found helpful in using the map.

This [Quarto book](#) is an open, living, and continuously iterating resource. If you have suggestions for additions or revisions you think should be incorporated into this book, please follow the guidance provided in the [Contributing](#) chapter.



1 About SWAMP

1.1 Overview: SWAMP

SWAMP sits within the Water Board's Office of Information Management and Analysis (OIMA), which serves as an advocate for data management, a bridge between data collectors and users, as well as, provides transparency of the Water Board's information management infrastructure.

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

SWAMP accomplishes this through carefully designed, externally reviewed statewide and regional surface water monitoring programs, and by assisting other entities state-wide in the generation of comparable data that can be brought together in integrated assessments that provide answers to current management questions. In addition to providing information and tools, SWAMP's vision is to help enhance monitoring, assessment and reporting activities throughout the Water Boards.

Statewide SWAMP Monitoring Programs include:

- [Bioaccumulation Monitoring Program](#)
- [Bioassessment Program](#)
- [Freshwater and Estuarine HABs Program](#)
- [Toxicology and Contaminants Program](#)

Note

Reminder to add icons and new links when ready

1.2 Overview: SWAMP IQ

SWAMP IQ strives to promote question-driven monitoring, and to ensure the highest quality data is used to evaluate the health of California's water bodies.

SWAMP IQ assists ambient monitoring projects and programs throughout the state by offering resources that support each stage of water quality monitoring, from sample collection to data entry, as well as providing quality assurance review, verification, and data storage.

1.3 SWAMP Resources

Purpose	Title & Weblink
Overview of SWAMP	SWAMP Website
Overview of SWAMP IQ	SWAMP IQ Website
Current SWAMP program priorities and strategies	SWAMP Strategic Action Plan, 2020-2023
Detailed overview of SWAMP monitoring standards and requirements	SWAMP Quality Assurance Program Plan (QAPP), 2022-2024
Overview of OIMA	OIMA Website
Strategic actions to improve the way the Water Boards use data and information about CA water resources	State Water Resources Control Board Strategic Data Action Plan (SDAP) , draft
Projects carried out in the SDAP	State Water Resources Control Board SDAP, project portfolio summaries

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4 Meet the SWAMP Team!

The SWAMP Team is composed of multiple team members at the State Water Board within the SWAMP Unit, SWAMP Information Management and Quality Assurance Center (SWAMP IQ), and others in the Office of Information Management and Analysis (OIMA).

4.1 SWAMP Unit

Name	Title	Program Area(s)
Josh Davenport	Stanford Fellow	Tribal Data Initiatives
Ali Dunn	Senior Environmental Scientist, Supervisor, Unit Lead	SWAMP Coordinator of statewide monitoring programs, plans and budgets
Anna Holder	Environmental Scientist	SWAMP Statewide Bioaccumulation Program Coordinator Data science, data visualization and programming (R [preferred], Python, Unix, SQL, GIS) Science communication Openscapes Tribal Coordinator Racial Equity Trainer
Leah Brosseau	CivicSpark Fellow	Tribal Data Initiatives
Mary Tappel	Environmental Scientist	Webpage updates
Michelle Tang	Environmental Scientist	Data science, data visualization and programming (JavaScript, Python)
Shuka Rastegar-pour	Environmental Scientist	SWAMP Statewide Bioassessment Program Coordinator
Sydney Rilum	California Sea Grant Fellow	Data science, data visualization (R) Science communication

4.2 SWAMP IQ

Name	Title	Program Area(s)
Tessa Fojut	Senior Environmental Scientist, Supervisor, Unit Lead	SWAMP Quality Assurance Officer Database Manager
Candace Levesque	Environmental Scientist	Bioassessment (algae) Data Manager
Cui (Scarlett) Li-Gherman	Scientific Aid	
Delany Broome	Environmental Scientist	Chemistry Data Manager
Jennifer Salisbury	Environmental Scientist	Tissue Data Manager CEDEN Vocabulary Manager
Kimberly Pham	Environmental Scientist	Chemistry Data Manager
Lindsey Metz	Environmental Scientist	Microbiology Data Manager Data science, data visualization and programming (R)
Tony Gill	Environmental Scientist	Toxicity Data Manager SPoT Program Coordinator
Toni Marshall	Environmental Scientist	Bioassessment (benthic macroinvertebrates) Data Manager

For more information, visit the [SWAMP IQ Wiki](#)

4.3 OIMA

Name	Title	Program Area(s)
Carly Nilson	Senior Environmental Scientist	SWAMP Statewide Freshwater and Estuarine Harmful Algal Bloom (FHAB) Program Coordinator
Chad Fearing	Associate Governmental Program Analyst	Contracts
Devan Burke	Associate Governmental Program Analyst	Contracts Openscapes Racial equity data projects and communication
Erick Burres	Senior Environmental Scientist	SWAMP Clean Water Team Coordinator
Marisa VanDyke	Senior Environmental Scientist	SWAMP Statewide Freshwater and Estuarine Harmful Algal Bloom (FHAB) Program Coordinator

4.4 Former Fellows & Interns

Table 4.4: *Fellows who have been hired on at the Water Boards

Name	Title	Year	Primary Project Area(s)
Badhia Yunes Katz	CivicSpark Fellow	2023	Tribal Data Initiatives
Lindsey Metz*	California Sea Grant Fellow	2022	
Gabriella Moran	CivicSpark Fellow	2022	Tribal Data Initiatives
Brook Thompson	Stanford Fellow	2021	Tribal Data Initiatives
Corey Clatterbuck*	California Sea Grant Fellow	2021	Healthy Watersheds
Ross Cooper	California Sea Grant Fellow	2020	Tribal Data Initiatives
Maraid Jimenez	CivicSpark Fellow	2020	
Anna Holder*	California Sea Grant Fellow	2019	
Nicole Hack	California Sea Grant Fellow	2018	

5 Contributing

5.1 Who can contribute

Currently, only members of the SWAMP Team are able to actively contribute to this manual.

5.2 How we contribute

We develop the content for this SWAMP Manual using RStudio, build the book using [Quarto](#) (via RStudio), and collaborate and publish using GitHub (also via RStudio).

If you are *NOT* a member of the SWAMP Team, but have suggestions for additions or revisions you think should be incorporated into this book, please **[TBD]**.

5.2.1 Setup

To contribute, SWAMP Team members must do the following, and it should only take about 20 minutes to complete:

1. **Install R and RStudio**

Both R and RStudio should be available in the Software Center (for Windows 10) or Company Portal (for Windows 11) – if you don't see them in your Software Center/Company Portal or you have issues/questions during the installation process, please send a request to the DIT HelpDesk and they can help you install them.

Also see these [step by step instructions on how to install these programs](#) – you will only need to go through steps 1 and 2

If you are new to R, it would also be helpful if you could review the [Getting Started Module](#) so you can begin to familiarize yourself with the fundamentals of the program.

2. **Install Quarto**

[Quarto download and install instructions](#)

3. Create a GitHub Account

[Create your free personal account](#) [GitHub account](#)

[Tips on choosing your username](#)

4. Download and Install Git

Follow your operating system's normal [Git installation process](#). Note: you will not see an application called Git listed but if the installation process completed it was likely successful, and we will confirm together.