SWAMP Manual

CA Surface Water Ambient Monitoring Program (SWAMP)

2023-02-03

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Welcome!

This is an online reference and resource written by and for the Surface Water Ambient Monitoring Program (SWAMP) at the California State Water Resources Control Board (State Water Board).

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).

Content in this manual includes curated information that members of the SWAMP Team have found helpful to support onboarding/offboarding, collaboration, communication, and our collective culture. It is a place to document institutional knowledge and provide references to available resources.

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

Part I

Culture

2 Values

What are our values, and what do we want our culture to be?

3 Code of Conduct

Let's write one & discuss!

Check out some Codes of Conduct from other places for inspiration:

- Openscapes
- Code for America
- Women in Data Science

4 Expectations

In addition to abiding by the SWAMP Code of Conduct, all SWAMP staff are expected to abide by the following:

4.1 Work schedule

Regular Work Hours: Please use your Outlook calendar to show your regular work hours to assist in scheduling meetings.

Teleworking: All staff are required to adhere to the provisions of the CalEPA Telework Policy, the Water Boards Telework Program, and Remote Access Security Standards and requirements of approved telework agreements. Also see the CA Telework Employee Guidelines

Notification of workday start*:* When you start your day, please send a Teams chat in the shared unit channel. This can be as simple as "Hello team!". The point is to let us know you're around and to share a moment of virtual connection with the rest of the team.

Scheduling and taking time off

- *To request time off:* Send your supervisor an email with the days/times you would like to take off and include if you would like to make up the time by staying late or coming in early. Otherwise it will be assumed that you are using leave time and that you have checked your leave balances and confirmed that you have adequate leave time available. Your supervisor will respond to your email approving your time off request, or if there is a conflict (only rare occurrences), your supervisor will notify you if it is not approved and will work with you to find an alternate time for you to take off.
- *Once time off has been approved:* Mark on your Outlook calendar when you will be out of the office (vacation, appointment, etc.)
- *Before you leave for your time off:* Turn on an "out of office" message in Outlook if you will be away for a day or more
- *If you are sick, late, or need to leave for an emergency*: Send your supervisor an email, Teams chat or text their mobile phone notifying them that you will not be in, will be more than 30 minutes late, or had to leave early. When you are able, mark that time on your Outlook calendar.

4.2 Communication

Keeping each other in the loop: Please include your supervisor on emails, in meetings, or other communications when necessary, so that they are aware of unit business.

Open door/chat policy: Our unit maintains an open door/chat policy, so please feel free to stop by or send a Teams chat or email if you need to talk, chat, consult, etc.

Communication response time: Please aim to reply to all emails or phone calls within 3 business days.

> **Note**
>
> Reminder to add norms regarding when to use email vs. Teams chat vs. Phone call vs video call vs zoom

DRAFT - SWAMP Unit to Review and revise as appropriate

Table 4.1: Table of communication tools and their respective recommended use and norms

Tool	When to Use	Response Time	Suggested Norms
MS Teams Chat	For short and simple conversations Daily check-ins When communicating with internal partners	Varies If urgent - note that in message	Avoid complicated questions or conversations
Email	For sending semi-complex content, updates, announcements. When you need a record of communication Recap of important conversations When communicating with external partners	Within 3 business days If urgent - note that in message	Use identifiers in subject line for urgency and response expectations

Tool	When to Use	Response Time	Suggested Norms
Meetings (MS Teams)	For detailed, nuanced, complex communications that require feedback and/or discussion When you have specific topics to discuss When communicating with internal and/or external partners	Schedule in advance Respect the availability of others and schedule as soon as you know a meeting is needed - for most folks scheduling meetings 2-weeks (or more!) in advance is normal	Make an agenda, share ahead of the meeting, and stick to it. The agenda can be formal or a few bullets - what's important is that there is a known purpose, priorities, and expected outcome for the meeting If the meeting is recurring, cancel it if there is no need to meet and follow-up with an email/chat instead.
Meetings (Zoom)	See above Use zoom meetings when communicating with external partners Use zoom webinar for large, publicly facing events Meeting vs webinar comparison	See above	Develop a formal agenda - send out at least 1 week prior to the meeting/webinar.
Co-working	For brainstorming, screen-sharing, skill building, problem solving	Schedule as needed	Can have a pre-determined agenda or be informally and organically developed during the co-working session
Phone Call	For time-sensitive, urgent communication	Respond to missed calls according to urgency, within 3 business days	If you don't reach the person, leave a voicemail and/or follow-up with email or chat.

4.3 Expectations of supervisors

SWAMP Supervisors commit to uphold the following:

1. Encourage each of you to lead in your own way
    - Create space to let you do your jobs, empower you to succeed and do what you're good at and interested in

COMMUNICATION CHANNEL USE AND NORMS

TOOLS	WHEN TO USE	RESPONSE TIME	SUGGESTED NORMS
CHAT / INSTANT MESSAGING (SLACK, TEAMS, YAMMER, PAGER, TEXT) (SKYPE ENDS MARCH 2022)	■ For time-sensitive, urgent messages ■ Quick questions or feedback ■ Short and simple conversations	■ ASAP	■ Use with fewer than 6 people ■ Set and show your availability ■ Respect the availability of others by avoiding sending after hours or when receiver(s) are in meetings ■ Avoid complicated questions or conversations
EMAIL (SEE EMAIL GUIDELINES FOR NORM SUGGESTIONS)	■ For important, timely information ■ Use when you need a record of all communication ■ To share attachment or direct the receiver to an online source ■ Confirm or schedule meetings or appointments ■ Recap important conversations ■ Send company or team-wide announcements	■ Expected within 24 hours, but dependent on priority (Team can develop norms around email timing and response time.)	■ Use identifiers in subject line for urgency and response expectations ■ Avoid when immediate response is required ■ Use SBAR (Situation, Background, Assessment, Recommendation) to both organize content and prompt a quick response
MEETINGS (ZOOM, TEAMS, OR IN PERSON) (SEE MEETING GUIDELINES FOR MORE SUGGESTIONS)	■ Consider when communicating with multi-disciplinary teams or with outside vendors, as they may need more context. ■ Call a meeting when communication can benefit from lengthy visuals (e.g., project status reports, presentation decks)	■ Schedule in advance ■ Determine priorities when scheduling ■ Make sure the right people are invited	■ Make introductions and use an agenda ■ For online meetings, use tools like mute and chat to keep focus on those talking or presenting ■ Record calls or take/share notes for those who miss meeting

MICHIGAN MEDICINE

Figure 4.1: Four our inspiration - need to review, discuss as a team and revise for SWAMP needs

- Allow you to make decisions, and provide guidance as needed

2. Listen to you and understand your skillsets, strengths and interests, and ensure your projects align with those skillsets, strengths and interests
3. Treat each of you respectfully, equitably, and fairly
4. Understand and get to know each of your individual styles and to meet you there
5. Be there for each of you, via regular 1:1 check-ins, specific project meetings, chat, phone, email to talk with you about projects, workload, interests, goals, inspiration, brainstorming, etc.
6. Show my appreciation and gratitude for your work and give recognition for accomplishments
    - Express gratitude regularly though words and actions for the good work each of you do
    - Share your work with others to highlight and showcase projects, including presentations to executive management, board members and regional colleagues
    - Provide public recognition for exceptional work through Superior Accomplishment Award nominations
7. Communicate in a consistent, professional, friendly, and meaningful manner
8. Clearly define roles and responsibilities
9. Provide feedback, mentorship and training
10. Create a safe space for failure (and innovation!)
11. Provide strong leadership and a clear vision
12. Create a dedicated and balanced work environment
13. Share information to reduce uncertainty about your job, OIMA, and Board activities
14. Give team members opportunities to participate in decisions that affect their jobs
15. Consult team members about scheduling
16. Clearly communicate work rules and job expectations
17. Hold staff and myself accountable to the work rules and job expectations
18. Ensure that workload is suitable and that deadlines are realistic given the resources
19. Clearly communicate when quality and quantity of work do not meet standards
20. Provide opportunities for career development
21. Provide opportunities for social interaction among employees
22. Maintain a positive attitude even when faced with challenging situations and tasks
23. Maintain a zero-tolerance policy for harassment

5 Professional Development

We are very supportive of individual and team professional development opportunities. Below are a couple of resources SWAMP Team members can tap into to advance their professional skills.

5.1 Individual Development Plan (IDP)

Staff can complete an IDP Form annually to articulate their performance objectives for the coming year as well as their plans for achieving those objectives. Once drafted, staff review the document with their supervisor, revise as appropriate, and submit. Completing the form can help prioritize which trainings and other opportunities the individual might request to attend in the coming year.

5.2 Training

Training Request Forms are required for all trainings, even Water Boards Academy trainings and required workplace trainings because they provide documentation needed in case of audits. See the Training Section of this Manual for more details.

5.3 Conferences

Attending conferences can help staff practice and develop their public speaking skills as well as provide opportunities to network and find and develop new partnerships (or nurture existing ones!). Being able to attend conferences requires lots of planning and paperwork, so it's a great idea to think about which conference(s) you might request to attend during your IDP process, and be ready to submit all of the required paperwork well in advance. See the Training Section of this Manual for more details.

See the table below for a list of conferences that may be of interest and usually have intersection with SWAMP and broader OIMA priorities.

Conference Name	Time Frame	Frequency
Earth Science Information Partners (ESIP)	Jan Jul	Twice a year
American Society of Limnology and Oceanography (ASLO) (Includes the Ocean Sciences Meeting & Aquatic Sciences Meeting)	Feb/Mar May/Jun	Twice a year
Women in Data Science (WiDS)	Mar	Annual
Salmonid Restoration Federation (SRF)	Mar/Apr	Annual
Code for America Summit	Mar-May	Annual
National Water Quality Monitoring Council (NWQMC)	Apr	Annual
Society for Freshwater Science (SFS) Also check out the California Chapter (CalSFS)	May/Jun	Annual
California Data Collaborative Water Data Summit	Aug/Sep	Annual
California Lake Management Society (CALMS)	Oct	Annual
Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology (SORTEE)	Oct	Annual
Tribal EPA & U.S. EPA Region 9 Annual Conference	Oct	Annual
North American Lake Management Society (NALMS)	Nov	Annual
Society of Environmental Toxicology and Chemistry (SETAC) Also check out Northern California Regional Chapter (NorCal SETAC)	Nov	Annual
American Geophysical Union (AGU)	Dec	Annual
American Fisheries Society (AFS)	Variable	Annual
National Forum on Contaminants in Fish (Fish Forum)	Variable	Variable

Part II

Administrative goodies

6 Onboarding

Here is a non-comprehensive, but hopefully informative guide to onboarding to the SWAMP Unit. The majority of this information in this section is aimed towards starting at SWAMP as a rank-and-file (non-supervisory) state employee. Please re-reference this page throughout your time at SWAMP!

Also see the New Employee Orientation Resources & make a note of state holidays on your calendar.

6.1 HR forms

On your starting day, you will receive a package of forms and documents from the HR department including your duty statement, tax forms, direct deposit forms, questionaires (diversity, military), CalPERS forms, leave forms, and medical insurance forms

You will also be asked to submit a photocopy of either your passport or a combination of your driver's license and social security card to the HR representative (currently Alicyn Chappelle). All forms apart from the medical insurance forms must be submitted within the first couple of days. Medical insurance forms must be submitted within the first 60 days for you to qualify for enrollment; however, the sooner you submit these forms the sooner you will have health coverage.

6.2 Bargaining units

Each classification within the SWAMP unit is associated with a bargaining unit. The bargaining units, with the State, determine many of the benefits & guidelines described here. For that reason, you should read the latest contract or Memorandum of Understanding (MOU) for your bargaining unit to determine benefits as applicable for you. Additional benefits specific to your bargaining unit may exist for you based on the MOU that are not described in this manual. Finally, supervisory positions may have varying benefits beyond those listed in this manual.

SWAMP Position Classification	Bargaining Unit	CBID
Scientific Aid	11	R11
Environmental Scientist (incl. Senior Specialist)	10	R10
AGPA	1	R01
Senior Environmental Scientist - Supervisory	10	S10

6.3 Leave types

When onboarded, employees in most classifications will be able to select a leave type: **annual leave** vs. **vacation/sick leave**. Comparisons of leave accrual and use between leave types are available in this chart.

Important FAQ for leave types:

- You are only allowed to switch leave types every 2 years. Check with our HR liaison about switching leave types.
- Leave types are also connected to different types of non-work-related disability leave, which may impact your income should you need to go on disability leave. Non-work-related disability leave types are compared for Unit 10 employees on this flyer. More information about non-work-related disability leave is also available on the EDD website.
- Leave accrual can be impacted by the number of days/hours you work in a month.

Need additional leave?

Under the Voluntary Personal Leave Program, you can exchange a percentage of your salary to accrue additional leave hours per month. See the link above for more information, and contact our personnel specialist for more details.

6.4 CalPERS

CalPERS is the California Public Employees Retirement System, which you will be enrolled in as a new employee. It provides benefits including medical coverage (health, dental, and vision insurance) and retirement for employees of the state of California.

6.4.1 Medical coverage

You should select health insurance by submitting the appropriate forms within 60 days of starting with the State. If you select health insurance, you will pay the difference between what the state provides for healthcare (a base amount monthly) and the monthly cost for your selected health insurance. This amount is removed from your monthly paycheck. Employees may elect to receive cash in lieu of their state-sponsored medical insurance and/or dental insurance plan through the FlexElect program. You must certify you have qualifying group health and/or dental insurance through a spouse, domestic partner, or other source. FlexElect cash is distributed monthly.

You can make changes to your health, dental, and vision insurance selections two ways:

1. Annually during open enrollment, which occurs in the fall of each year. Your new insurance selections begin the following January.
2. After a qualifying event in your life.

To learn more about the health coverage available to you, please visit the CalPERS website as well as the website for your bargaining unit to learn about costs specific to you. We include some helpful links below:

- CalPERS Health Program Guide (pdf) – broad overview of the health program
- CalPERS 2023 Health Benefits Summary (pdf) – description of different health plans and their statewide availability
- CalPERS 2023 Plans & Rates (web link)

6.4.2 Retirement benefits

6.5 Timesheets & Pay

Staff should complete and submit their timesheets by the 25th of each month. Direct deposit typically hits the last day of the pay period (end of the month), potentially earlier if you use a credit union like Golden 1.

It typically takes ~1 month for new staff to be entered in the electronic timesheet system (BizFlow), so the first timesheet is done by filling out an excel template.

6.5.1 Bizflow: Timesheets

Logging in: To login you must use MS Edge browser and be connected to VPN (or on the network at CalEPA building). Use your workstation username (waterboards email address) and password to login.

eTimesheets: From the menu, – click the eTimesheet tab –> eTimesheet Process –> Current eTimesheet to begin. Select the pay period (month) to load a timesheet. All work hours must be associated with a Task ID – your supervisor will provide this, and it will be saved on all future timesheets. Work hours go on page 1, leave hours go on page 2. Use the > and < symbols on the timesheet to navigate between pages. Make sure your total hours fit the expected hours at the bottom of the timesheet, both monthly and daily, unless otherwise directed by your supervisor. Once complete, sign the 1st page of the timesheet, change status in the upper left corner to "Submit to Supervisor", and click the green check box to complete the process.

BizFlow Tips

- For first-time users and info on how to change your settings, see Instructions on how to use BizFlow (intranet site; requires VPN login)
- Check out the FAQs

6.5.2 Electronic Paystubs

You can view and download your paystubs from the Cal Employee Connect portal. Your supervisor will request login information for you from HR (personnel specialist) after your first paycheck.

> Tip
>
> Leave balances are included on your paystubs and can be tracked in Cal Employee Connect, but they are always a month (or more) behind. You may want to track them in real-time in your own spreadsheet.

6.6 Office-centered and Remote-centered Work

All staff are required to fill out a work week agreement and telework plan that specifies where you will typically work on a given day of the week (office or remote) and your typical work hours. These plans must be completed even if the employee works in the office full time.

Your typical work schedule (Work Week Agreement) and Telework Plan need to be created in BizFlow within 2 months of starting work.

The Telework Policy for CalEPA and the Water Boards allows remote-centered work options for all staff as long as business needs can be met. As of January 2023, OIMA still maintains enough office space that staff will be assigned a cubicle or personal workstation in the CalEPA building whether or not they primarily work remotely.

6.6.1 Bizflow: Telework Agreement

Logging in: To login you must use MS Edge browser and be connected to VPN (or on the network at CalEPA building). Use your workstation username (waterboards email address) and password to login.

6.6.2 Bizflow: Work Week Agreement

Logging in: To login you must use MS Edge browser and be connected to VPN (or on the network at CalEPA building). Use your workstation username (waterboards email address) and password to login.

6.6.3 Telework Equipment

All staff are assigned a laptop (typically Dell or HP) that they can use at home and the office. The Water Boards only uses PCs and does not generally support any Mac-based hardware. Office workstations are set up with two wide screen monitors, keyboard, mouse and docking station where you plug in your laptop.

Equipment available to take home includes: laptop, laptop bag, standard monitor, keyboard, mouse, headset, adjustable monitor stand, adjustable tilting laptop stand. To request additional equipment or to report issues with any of your equipment, send an email to the IT Help Desk. This will log a ticket in their tracking system and they will respond typically the same day. Ergonomic equipment may be made available through a Reasonable Accommodation Request (intranet link requires VPN login). Work with your supervisor for guidance on preparing the request.

7 Travel

Exempt, excluded, and represented state employees may be eligible for the reimbursement of authorized out-of-pocket expenses that are reasonably, actually, and necessarily incurred as a result of conducting state business.

> **Note**
>
> Reminder to add things to remember when filling out forms (e.g. hotel $$ limits, which receipts to keep, all the other things that are handy – but not documented anywhere else)

7.1 Quick links

- Travel Reimbursements
- HR Allowances and Travel Reimbursements
- Water Board's Travel Page (Intanet) - can only access on VPN
- Travel Forms (Intranet) - can only access on VPN

7.2 Travel Overview

The Travel Help Desk can provide assistance or answer questions about making travel reservations, recommendations while traveling, and asking for reimbursement when you return. The Travel Help Desk for the Waterboards is comprised of the Travel Unit staff in the Accounting Office as part of the Division of Administrative Services.

Visit CalTravelStore, a self-serve site for all government business travel needs. Travelers are able to make reservations for lodging, airfare, rental car & rail fare through Concur which is personalized to meet the needs of State government travelers.

CalTravelStore New User Registration
For new users to be added to CalTravelStore to begin making reservations, contact the CalATERS Travel Help Desk.
Email: CalATERS-Travel@waterboards.ca.gov
Phone: (916) 341-5036

TIPS:

1. Receipts should be submitted for every item of expense of $25 or more. When receipts are not required to be submitted with a travel expense claim, it is the employee's responsibility to maintain receipts and records of their actual expenses. Read more information on reimbursement here.

2. Know your reimbursement rates! State employees may be eligible to receive reimbursement for expenses such as:

   - Method of travel (transportation)
   - Meals and incidentals
   - Short-term lodging
   - Out-of-state travel
   - Out-of-country travel
   - Personal vehicle mileage
   - Other actual and necessary business and/or travel costs incurred while conducting official state business

3. Airline reservations should be made **no more than 30 days** prior to the expected travel dates.

   - Department of General Services (DGS) recommends booking flights **between 21 to 30 days** prior to travel.
   - **Frequent travelers should book non-refundable fares** since there is a high probability that the unused funds will be used for future travel within the expiration period.
   - **Non-frequent travelers should book non-refundable fares** if the trips dates are fixed and there is a low probability of a change in plans.

7.3 Contacts

CalATERS Travel Help Desk
Phone: (916) 341-5036
Email: CalATERS-Travel@waterboards.ca.gov

8 Training

As a Water Boards employee, you have access to training and training-related services to support your personal and professional development, all in support of the Water Boards' mission. Training Services is comprised of the *Training Academy* and *Training Office*, which offer different types of training and which you access differently.

> **Note**
>
> Reminder to update when new training system is launched in Jul 2023

Water Board Training Academy

- Offers in-house virtual and in-person training courses
- Staff self-register for courses via the Academy Registration System (GSMU) - follow these instructions on how to attend Academy courses
- Works with staff to develop new classes

Water Boards Training Office

- Gives access to external events (trainings, conferences, PE/PG license preparation classes and higher education requests)
- Always submit a TRF to your Training Liaison - follow these instructions on how to attend external events
- **Never** pay for a class yourself, without explicit pre-approval from the Training Office (or you won't be eligible for reimbursement)

8.1 Internal Training

Internal Training refers to in-house training courses supported by the *Water Board Training Academy.*

How to sign up for Internal Water Board Training Academy Courses:

- Watch your inbox for course announcement emails
- Search the Academy Registration System
- Explore the FY 22/23 Academy Course Catalog (Excel) (PDF)

Approval Process:

- Self-register on the Academy Registration System
- Download the current TRF
- Fill out the TRF and obtain management approvals (digital signature)
- Email completed TRF to your **Training Liaison (please do not email to the Training Office)**

Attendance Reminder:

To receive attendance credit, you must be present and participate for the entirety of the course or you will receive a no-show. Although we understand that emergencies arise during training, missing more than 15-minutes of any course will result in a no-show with no attendance credit given. This is a Training Services guideline that cannot be overruled by the instructor. To ensure proper attendance, rename your video box to list your first and last name.

8.2 External Training

External Training refers to external events (training, conferences, PE/PG license preparation classes and higher education requests) supported by the *Water Boards Training Office*.

When is Training Office Approval Required?

- There is a registration/tuition cost
- There are travel costs (hotel, car rental, per diem, etc.)
- You want the event added to your training history

How to sign up for (non-Academy) External Training:

- Download the current TRF
- Fill out the TRF and obtain approvals (digital signature)
- Email completed TRF to your Training Liaison
- Training Liaison submits TRF to Training Office for processing, by submission deadline
- Training Office emails you the approved TRF when registration is complete

How to sign up for (non-Academy) Conferences:

- Be prepared to plan head when requesting to attend any Conference or External Training. Visit the FY 22/23 Training Submittal Deadlines to begin planning your request. The current submission deadline for Conferences is **35 business days prior to the registration deadline.**
- Download the current TRF and Conference Package
- Fill out the TRF and Conference Package and obtain approvals (digital signature)

- Attach copy of registration form, event agenda, meal or session preferences (if applicable), etc.
- Email completed TRF and Conference Package to your Training Liaison
- Training Liaison submits them to Training Services for processing
- Training Services emails you the approved TRF when approval is received

See the Professional Development Section for a list of conferences that may be of interest.

8.3 Resources

- Training Forms
- Water Board's Training Services Page (SharePoint)
- Training FAQ's
- Training Services Registration Guidelines (Visit if you're unsure of the training type you're wanting to attend)
- FY 22/23 Training Submittal Deadlines

8.4 Recommended On-demand Training Resources:

- College of Water Informatics (CoWI) Data Tool Kit
- Tribal Historical and Legal Foundations
- Tribal Cultural Resources
- Tribal Cultural Awareness and California Native American History
- CA Water Quality Law 101: foundational training in CA law including Porter Cologne Water Quality Control Act, Federal Clean Water Act, Basin Plans, etc.

8.5 Contacts

Training Liaison: Devan Burke

Backup Training Liaison: TBD

> **Note**
>
> Reminder to add backup when identified

9 Tech Access, Setup, & Support

Phew!

9.1 Need equipment?

See the Onboarding chapter for how to obtain your work computer & hardware. Your supervisor will help you with this process.

9.2 Remote desktop vs. VPN

9.3 Installing Printer(s)

Instructions on how to install printer(s) near your cubicle in the office.

9.4 Accessing & Downloading Software

Use your computer's Software Center to download most programs. You can also download & install some programs outside of the Software Center, such as Git, which may have a more recent version than what the Software Center provides. Some external software will not play nice with the VPN (e.g., Slack) so keep that in mind if you're unable to connect and use some software.

Also see this Business Intelligence Handbook for guidance on buisness intelligence tools (i.e., software) that are available to Water Boards staff.

If you have issues accessing or downloading any of the below software, email the IT Help Desk and they can help you download and/or troubleshoot.

9.4.1 ESRI Services (ArcGIS Pro/ArcGIS Portal)

- **ArcGIS Pro** is the main desktop GIS application available to Water Boards staff. ArcGIS Pro can be downloaded from the Software Center. If you do not see ArcGIS Pro in the Software Center, contact the Help Desk at help@waterboards.ca.gov so that they can add it your list of available applications. Future releases of ArcGIS Pro and other ESRI applications should be automatically added to the Software Center as they are approved by DIT. You can use the Software Center to update your installation.

- The **Water Boards ArcGIS Portal** (https://gispublic.waterboards.ca.gov/portal/) is an online platform for publishing and sharing ESRI-produced GIS resources with others at the Water Boards. These resources can also be shared with people outside of the Water Boards (with approval). For those familiar with ArcGIS Online, ArcGIS Portal is the enterprise version of ArcGIS Online. With ArcGIS Portal, you can:

  - Create and share maps, story maps, and other applications
  - Search for GIS content within the Water Boards
  - Create groups to share GIS information with colleagues
  - Download maps, layers, and GIS data for use in ArcGIS Pro and other applications

  To activate your Water Boards ArcGIS Portal membership (required for viewing, downloading, and publishing resources on the portal), email the DIT GIS Unit at gis@waterboards.ca.gov.

  To log into Portal, use the same username and password that you use for your state-issued laptop or computer.

  - Username: The default format is "[your work PC login]@EPA" (e.g. jsmith@EPA) OR "epa\[your work PC login]" (e.g. epa\jsmith)
  - Password: [your work PC password]

- Public sharing: Resources published on the ArcGIS Portal can be shared outside of the organization to the public (no Portal log-in required), but this requires approval from the DIT GIS Unit. See the Public Sharing Requirements on the GIS Unit wiki (start [gis] (ca.gov)) and ensure that you complete each one of the steps before you submit a completed Public Publishing Form to the GIS Unit. The approval process can take some time, depending on how complex your project is and how busy the GIS Unit staff are, so plan ahead if you are working against a deadline.

For more information about ArcGIS Pro and the Water Boards ArcGIS Portal, view the GIS Unit wiki.

9.4.2 R & RStudio

Both are available in the Software Center

Getting Access to R Shiny server

9.4.3 Git & GitHub

Signing up:

- You will need a GitHub account to access work-related & open-access projects in GitHub. Jenny Bryan (R developer and professor) provides some recommendations for signing up for a GitHub account.
- **We also strongly recommend setting up 2-factor authentication,** which is required for becoming a member of the official Water Boards GitHub organization (see below). To keep things simple, you can use the same authentication system (e.g., Microsoft Authenticator) as you do for logging into the VPN.

Getting access to the Water Boards Water Data Center GitHub

- Why join? So you can easily work with other GitHub users in the Water Boards, as well as have a central place to publish projects relevant to other Water Boards colleagues & the public. The Water Boards GitHub organization also has a "sandbox" team to test & process projects before pushing them to public access.
- Follow link above to learn more and connect with the WB GitHub organization managers to introduce yourself & request to join the WB GitHub organization

How do I connect my Water Boards computer to Git/GitHub?

- While there is plenty of work you can do in the browser in GitHub, the real power comes in using it as a version control system connected to your local computer.
- For **all users**, we recommend GitHub Desktop, which is available in the Software Center. There are lots of good resources on how GitHub Desktop works – here are a few of our favorites:
  - The "installing and configuring" section from GitHub docs. The other section is useful, but non-seasoned users can ignore information about forks, branches, and pull requests.
  - A ~22 minute Youtube video from Coder Coder introducing GitHub Desktop setup and workflow. For some of the workflow options, the instructor uses VS Code. If you do not use VS Code, I suggest writing a brief .txt file using Notepad instead (e.g., the text 'hello world!' saved as index.txt) and saving that file in the same place as your repository to continue with the walkthrough. Non-seasoned users can ignore the section on ignoring files, branching, and pull requests (though the explanation is good!)

- For **R users** who want to integrate a Git tab in their RStudio window, we recommend following Jenny Bryan's directions on Happy Git with R, sections 4-13. If you have any questions, the current R users in SWAMP are happy to chat with you.
- If you use the command line to access Git/GitHub, congratulations! You likely know more about using Git than many of the people currently in SWAMP - and we'd love to learn from you!

9.4.4 Tableau

Tableau is a business intelligence tool that can connect to and access data from a wide variety of data sources, perform data preparation and cleaning tasks, produce interactive visualizations and dashboards, and publish these products on the web.

Tableau Software for Desktop

- Tableau Desktop is the full (or unrestricted) version of Tableau that can be installed onto one's state-issued laptop or desktop computer. Once installed, it can be run as a desktop application and visualizations can be published on either Tableau Public or Tableau Server. A limited number of Tableau Desktop licenses are available to Water Boards staff. These licenses are named licenses only (not shared) and are tied to a specific user. Contact the DIT Help Desk at help@waterboards.ca.gov to request a license or contact Rafael Maestu (Rafael.Maestu@Waterboards.ca.gov) in OIMA for further guidance.

- Tableau Desktop Public Edition is the free version of Tableau Desktop that is available to all Water Boards staff. The software can be downloaded from the Tableau Public website (Tableau Public Product Download). If you run into any permissions issues trying to install the software package on your computer, you may need to request that the DIT Help Desk at help@waterboards.ca.gov install it for you. Compared to Tableau Desktop, Tableau Desktop Public Edition has a number of significant limitations (e.g., limited size and file type of data sources, inability to save Tableau workbooks to the desktop, inability to control access to the Tableau workbook or the underlying data), so it is likely only useful for evaluation purposes or projects with a very limited scope.

Tableau Server

- Tableau Server is an online platform for creating, publishing, and sharing Tableau data sources, visualizations, and dashboards. Tableau Server is a web-based platform, so it does not require an installation of Tableau Desktop or Tableau Desktop Public Edition, but its functionality is enhanced when the two are used together.

- **Access**: A Tableau Server account is required to create and publish resources on the platform. An account is also required to view non-public data visualizations hosted on the platform. Contact the DIT Help Desk at help@waterboards.ca.gov to request access or contact Rafael Maestu (Rafael.Maestu@Waterboards.ca.gov) in OIMA for further guidance. Once your account is activated, log in using your workstation username/email and password.

- **Advantages**:
  - Sharing data sources: Data sources published on Tableau Server can be shared with others on your team or with others in the organization.
  - Automation: Data visualizations and sources published on Tableau Server can be automatically refreshed on a time schedule.
- **Limitations**:
  - Tableau Server can be used to create data visualizations and dashboards like you would in Tableau Desktop or Tableau Desktop Public Edition.
  - Most of the functionality is the same; however, there are some differences. For example, Tableau Server does not provide as many options for customizing and formatting your visualization.
  - Related to this, transferring and viewing Tableau files between Tableau Desktop software and Tableau Server can result in formatting issues.

Publishing Tableau Visualizations

- Visualizations created in Tableau Desktop or Tableau Desktop Public Edition can be published on Tableau Server or Tableau Public. Visualizations created in Tableau Server are automatically published on Tableau Server (sharing permissions can be changed in Tableau Server).
  - Tableau Server: Requires a Tableau Server account. See the Tableau Server section above.
  - Tableau Public: Requires a Tableau Public account. Free (self-registration). https://public.tableau.com/
- Once a visualization is published on Tableau Server or Tableau Public (and configured for public sharing), then that visualization can be embedded into a Water Boards web page.

> **Note**
>
> Reminder to add recommendations section once we hear about what RM recommends (i.e. Tableau Desktop Public or Tableau Server)

9.4.5 PowerBI

9.4.6 Zoom

- Getting access to the OIMA Zoom Account (or requesting a meeting)

9.5 Community

10 Procurement

How do we get the items we need?

Frequency of procurement process? (I.e. we all need to plan/think WAY ahead!)

10.1 Technical

10.2 Office supplies

10.3 Monitoring supplies?

11 Offboarding

You're moving on and up – here's what you need to know & do before we wish you a fond farewell.

11.1 HR forms

11.2 CalPERS

11.3 Bargaining Units

11.4 Timesheets & Pay

11.5 Equipment

Returning tech (laptops, etc.)

Returning supplies

Returning ID Badges

12 SWAMP Life Cycle

All SWAMP activities align with some component of the data life cycle, which consists of the seven phases outlined below. Here, we provide resources the SWAMP Team uses to effectively implement each phase.

12.1 Plan and Prepare

The SWAMP Team, and all of the individuals within it, tend to have a number of co-occurring projects that are meant to help us advance and ultimately achieve our Mission. Managing multiple projects at once, given our limited resources – time, funding, capacity (i.e. on person can only do so much in a day!) can be challenging – so we like to make time to review all of our projects and prioritize them. This helps us focus our efforts and resources so that we can continue to make progress while also maintaining balance and preventing staff burnout.

Here are some opportunities to plan & prepare SWAMP projects and activities which serve our mission:

SWAMP Strategic Planning: Every three years or so, the SWAMP Team reviews and updates the SWAMP Strategic Plan to account for changes in priorities and bandwidth.

Program Work Plans: Every three years or so, SWAMP Program Leads review and update their program's Work Plans to account for changes in priorities and bandwidth.

Individual Work Plans: In December/January of each year, we recommend taking time to update individual work plans to account for changes in priorities and bandwidth. This is also a good time to review and update Individual Development Plans, if staff have them!

12.2 Collect and Process

For SWAMP Statewide Monitoring Programs, data collection and processing generally occurs sometime between March and October each year. This time frame can vary for each Statewide Monitoring Program so it's best to review each Program's Quality Assurance Project Plan (QAPP) for specific sampling and processing timelines.

The SWAMP Team does so much more than manage and coordinate SWAMP Statewide Monitoring Programs! For those projects, data collection and processing can look very different.

Usually it comes in the form of engagement with internal and external partners, listening to the needs of communities that can most benefit from SWAMP data, information, and products, and figuring out how to operationalize and evolve our products and systems to better serve those communities and our partners. This process tends to be ongoing, although there may also be focused and concentrated periods where this listening and learning occurs.

12.3 Assure and Analyze

For SWAMP Statewide Monitoring Programs, data analysis and quality assurance and quality control (QAQC) procedures are coordinated by SWAMP IQ, and specific components of the QAQC process can be found on the SWAMP IQ website or in each Program's QAPP.

For SWAMP projects that are separate from statewide monitoring efforts, we work with our partners to test, "ground truth", and explore the efficacy of our products and services. This can be separate from or simultaneous to the engagement and learning described in the "Collect and Process" step above. Similarly, this process tends to be ongoing, although there may also be focused and concentrated periods where this listening and learning occurs.

12.4 Preserve and Store

Currently, data and information generated by SWAMP are stored in a number of different places. The SWAMP Team is working on developing a standard and consistent data and document retention system. Until then, the information below is meant to help increase transparency on where things are currently stored.

> ℹ Note
>
> Many of the links below require special access or for the user to be securely connected to the Water Boards network (via VPN or Remote Desktop)

Microsoft SharePoint & OneDrive

- Online storage site used for documents that will be shared and edited with **people internal to Water Boards** – avoids version control issues
- SWAMP SharePoint, SWAMP IQ SharePoint, OIMA SharePoint

Network Drives

- SWAMP: S:\OIMA\SHARED
- SWAMP IQ: S:\OIMA\SHARED\QA&DM

- **Used to store core, static materials** dated back to SWAMP IQ's start in 2014.
- Archive for old documents and storage for documents we want backed up.

Google Drive

- Online storage site used for documents that will be posted to the SWAMP and SWAMP IQ Wiki pages
- Shared and edited with **people external to Water Boards**

FTP Site

- The SWAMP FTP Site is used to share large files and to submit field data through data entry shell databases
- Request the username and password from OIMA-helpdesk@waterboards.ca.gov

12.5 Publish and Share

12.5.1 SWAMP Data

After SWAMP Data are assessed and processed by SWAMP IQ, they are published and stored in the California Environmental Data Exchange Network (CEDEN), which is also pushed to and available on the California Open Data Portal.

12.5.2 SWAMP Information & Products

Water Boards Website: our main way of sharing information and products to the public

SWAMP Wiki: what we use to share information with our external contractors and collaborators

SWAMP Data Dashboard: the primary SWAMP data visualization tool

GitHub: used to develop and share select SWAMP products (like this Manual!)

12.5.3 SWAMP Meetings & Events

Meeting or Event	Frequency	Audience
SWAMP Roundtable	Quarterly	Internal SWAMP Regional and Statewide Program Coordinators, external contractors, invited guests
California Aquatic Bioassessment Workgroup (part of the Statewide Bioassessment Monitoring Program)	Quarterly Meetings Annual Meeting (CABW)	Quarterly meetings: Bioassessement partners Annual meeting: Open to the public
Safe to Eat Workgroup (STEW) (part of the Statewide Bioaccumulation Monitoring Program)	Quarterly	Open to the public
California Cyanobacteria and Harmful Algal Bloom (CCHAB) Network (part of the Statewide Freshwater and Estuarine Harmful Algal Bloom (FHAB) Program)	Quarterly	Open to the public

12.6 Discover and Integrate

As we discover new things and/or opportunities to improve the data, products, or services we generate, we integrate them into the project or process. Sometimes this can occur quickly, other times we make note and incorporate things into the next strategic planning opportunity. See the Plan and Prepare section above for more details.

12.7 Describe

For SWAMP Statewide Monitoring Programs, data are described through metadata and data dictionaries that are available on the SWAMP IQ website, via the database where data are downloaded (e.g. CEDEN, CA Open Data Portal).

For SWAMP Projects that are separate from statewide monitoring efforts, information and context about the project can be found in specific project documentation. Examples of documentation we use include GitHub repositories and the tools within them (e.g., ReadMes and GitHub issues), data flow diagrams, and reproducible workflows.

The SWAMP Team is also using this Manual to document the more nuanced parts of how we do what we do so that it's easier for folks to find what they need to do their work.

13 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).

13.1 SWAMP Unit

Name	Title	Program Area(s)
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
Badhia Yunes Katz	CivicSpark Fellow	Tribal Data Initiatives
Corey Clatter-buck	Environmental Scientist	Healthy watersheds assessment and data integration lead Data science, data visualization and programming (R) Science communication Openscapes
Mary Tappel	Environmental Scientist	Webpage updates
Michelle Tang	Environmental Scientist	Data science, data visualization and programming (JavaScript, Python)

Name	Title	Program Area(s)
Shuka Rastegarpour	Environmental Scientist	SWAMP Statewide Bioassessment Program Coordinator
Sydney Rilum	California Sea Grant Fellow	Data science, data visualization (R) Science communication

13.2 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

13.3 OIMA

Name	Title	Program Area(s)
Carly Nilson	Senior Environmental Scientist	SWAMP Statewide Freshwater and Estuarine Harmful Algal Bloom (FHAB) Program Coordinator

Name	Title	Program Area(s)
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

13.4 Former Fellows & Interns

Table 13.4: *Fellows who have been hired on at the Water Boards

Name	Title	Year	Primary Project Area(s)
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	
Ross Cooper	California Sea Grant Fellow	2020	
Maraid Jimenez	CivicSpark Fellow	2020	Tribal Data Initiatives
Anna Holder*	California Sea Grant Fellow	2019	
Nicole Hack	California Sea Grant Fellow	2018	

14 Contributing

14.1 Who can contribute

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

14.2 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].**

14.2.1 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 instillation 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.

15 Inspiration

The impetus for developing this manual began in 2022 when members of the SWAMP Team participated in the inaugural and pilot Water Boards Openscapes Champions Cohort. Since then the team has been developing material and adding to the manual as time and bandwidth allow.

This SWAMP Manual is inspired by many sources, including:

- Openscapes and their Approach Guide
- NOAA Fisheries (NMFS) Open Science Resource Book
- The Fay Lab Manual

16 References