Executive Board Meeting
AGENDA
Friday, September 19, 2025 9:00 AM - 12:30 PM (PDT)
Central San
5019 Imhoff Place, Martinez, CA
To attend the meeting via Zoom or submit a comment please request access.

Agenda Item		Time	
ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE		**9:00 AM**	
PUBLIC COMMENT	Guidelines	**9:05 AM**	
CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER		**9:06 AM**	
CONSENT CALENDAR		**9:07 AM**	
1 August 15, 2025 BACWA Executive Board meeting minutes			**3-10**
2 September 3, 2025 BACWA NST Special Executive Board meeting minutes			**11-12**
3 July 2025 Treasurer's Report			**13-21**
APPROVALS AND AUTHORIZATIONS		**9:15 AM**	
4 Approval: FY26 NMS Reviewer Contract with Joe Dillon, $30K			**22-26**
POLICY/STRATEGIC		**9:20 AM**	
5 Discussion: SFPUC assistance in SRF loan application			**27-31**
6 Discussion: RMP Update prior to multi-year planning meeting			
7 Discussion: Pretreatment Committee Update to BACWA Board			
8 Discussion: Air District Engineering Program Manager Pilot	Link to Air District Webinar		**32-41**
BREAK		**10:30 AM**	
9 Discussion: Debrief from Special Seminar with R2 in SF	Dave Clark's national nutrient presentation		**42-43**
10 Discussion: Future meetings and collaborative opportunities with Water Board	Link to Board update on Nutrients (1:23:50)		
11 Discussion: Compliance schedule amendment - proposed BACWA edits and staff report			**44-60**
12 Informational: Trading Feasibility Assessment Update			**61-70**
13 Discussion: NMS Update	9/12 Steering Committee Folder		
14 Informational: EPA Region IX SF Bay Program Office funding update			
15 Informational: Impact of TST finding by 5th Appellate District Court	Link to Court Opinion		
16 Discussion: Communications update - Exploratorium After Dark request for participation			**71-72**
17 Discussion: OneWater Network reboot			**73-76**
18 Informational: Updated Regulatory Matrix			**77-94**
19 Discussion: Pardee Oct 9-10 - Program			**95**
OPERATIONAL		**11:40 AM**	
20 Discussion: BACWA Holiday Lunch			
21 Discussion: BACWA ASC/SFEI Board Representative			
22 Informational: BACC Update			
REPORTS		**12:10 AM**	
23 Committee Reports			**96-101**
24 Member highlights			
25 Executive Director Report			**102-104**
26 Board Calendar and Action Items			**105-106**
27 Regulatory Program Manager Report			**107**
28 Other BACWA Representative Reports			
a. RMP Technical Review Committee	Samantha Engelage, Alicia Chakrabarti, Blake Brown		
b. RMP Steering Committee	Karin North; Amanda Roa; Eric Dunlavey		
c. Summit Partners	Lorien Fono; Jackie Zipkin		
d. ASC/SFEI	Lorien Fono; Amit Mutsuddy; Lori Schectel		
e. Nutrient Governance Steering Committee	Amit Mutsuddy, Eric Dunlavey; alternates: Lori Schectel, Jackie Zipkin		
e.i Nutrient Planning Subcommittee	Eric Dunlavey		
e.ii MERHAB MaTAG	Amit Mutsuddy		
f. SWRCB Nutrient SAG	Lorien Fono		
g. BAIRWMP	Cheryl Munoz; Florence Wedington; Jackie Zipkin		
h. CASA State Legislative Committee	Lori Schectel		
i. CASA Regulatory Workgroup	Lorien Fono; Mary Cousins		
j. RMP Microplastics Liaison	Jesse McDermott		

k. Bay Area Regional Reliability Project	Jackie Zipkin		
l. San Francisco Estuary Partnership	Lorien Fono; Jackie Zipkin		
m. CPSC Policy Education Advisory Committee	Colleen Henry		
n. California Ocean Protection Council	Lorien Fono		
o. California Water Quality Monitoring Council	Lorien Fono		
p. CASA Air Toxics Steering Committee	Lorien Fono, Jason Nettleton		
29 **SUGGESTIONS FOR FUTURE AGENDA ITEMS**		**12:25 PM**	
NEXT MEETING			
The next regular meeting of the Board is scheduled for December 12, 2025, at EBMUD Downtown, Oakland.			
ADJOURNMENT		**12:30 PM**	

Executive Board Meeting Minutes

Friday August 15, 2025, 9:00 AM - 12:00 PM (PDT)

Executive Board Representatives: Amy Chastain (San Francisco Public Utilities Commission); Amit Mutsuddy (East Bay Municipal Utility District); Eric Dunlavey (City of San Jose); Jackie Zipkin (East Bay Dischargers Authority); Greg Norby (Central Contra Costa Sanitary District).

Attendees

Name	Agency/Company
Alicia Chakrabarti	EBMUD
Amanda Roa	Fairfield-Suisun Sewer District
Blake Brown	Central San
Brian Thomas	Delta Diablo
Charlie Hammond	HDR
Dave Clark	HDR
Diane Griffin	DSRSD
Francis Rooney	SVCW
Irene Chu	Hazen and Sawyer
Jared Voskuhl	CASA
Jennie Pang	SFPUC
Jennifer Dyment	BACWA
Khae Bohan	Central San
Lorien Fono	BACWA
Mary Cousins	BACWA
Tim Lewis	Dublin San Ramon Services District
Vince De Lange	Delta Diablo

Jackie called the meeting to order at 9:00 am.

Agenda Item

ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE

PUBLIC COMMENT Guidelines

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER - Item 16 The Asset Management Committee presentation will be taken out of order.

CONSENT CALENDAR

1 June 20, 2025, BACWA Executive Board meeting minutes

2 June 2026 Treasurer's Report

Consent Calendar items 1 thru 2: A motion to approve was made by Amy Chastain (San Francisco Public Utilities Commission) and seconded by Eric Dunlavey (City of San Jose). EBMUD abstained. Remaining were in favor. None opposed.

APPROVALS AND AUTHORIZATIONS

3 Resolution: Resolution Honoring Michael Connor - BACWA ED recognized Michael Connor's contribution and dedication to the wastewater community and described the resolution prepared by BACWA and SFEI.

4 Authorization: CAR The Freshwater Trust Trading Feasibility SOW#1 $9,890

- BACWA ED described the process and the two scopes of work for The Freshwater Trust. Item 4 is the contract for Phase 1 of the Scope, while Phase 2 is included within HDR's contract amendment (Item 5, below).

5 Approval: HDR Regional Study for Watershed Permit #3, $444,137 - BACWA RPM described the contract in the packet. This is an amendment to an HDR contract approved in December 2024. The SOW for the total Regional Planning Study contract includes the original contract for simplicity moving forward. HDR staff attended meeting to answer any questions.

Approvals and Authorizations item 5: A motion to approve was made by Amit Mutsuddy (EBMUD) and seconded by Eric Dunlavey (City of San Jose). All were in favor. None opposed.

6 Approval: Contribution to CASA Coastal Nutrients modeling support $35,000

- BACWA ED described a California Central Coast nutrient management fact-finding and modeling project organized by CASA, with engineering support from HDR. Meeting attendees discussed the project, whose geographic scope extends to the coastal ocean near the Golden Gate. Discharges being modeled include central coast rivers, POTW ocean dischargers, and fluxes from the Golden Gate. BACWA's contribution will support our ocean discharger members, and give us a seat at the table as part of the modeling effort.

Approvals and Authorizations item 6: A motion to approve was made by Eric Dunlavey (City of San Jose) and seconded by Amy Chastain (San Francisco Public Utilities Commission). All were in favor. None opposed.

7 Approval: BABC and City of Santa Rosa Contribution to National Biosolids Collaborative at UAZ, $60,000 – BACWA ED explained the research being done by University of Arizona to characterize the movement of PFAS from biosolids into groundwater and crops. BABC has a reserve to fund science related to the safety and benefits of biosolids. BABC is contributing $50,000 and Santa Rosa is contributing $10,000 through BACWA.

Approvals and Authorizations item 7: A motion to approve was made by Amit Mutsuddy (EBMUD) and seconded by Eric Dunlavey (City of San Jose). All were in favor. None opposed.

8 Approval: SFEI contract for risk reduction surveys, $50,000 - BACWA RPM explained the contract with SFEI to perform fishing surveys that will inform efforts to reduce risk for subsistence fishing in San Francisco Bay.

Approvals and Authorizations item 8: A motion to approve was made by Eric Dunlavey (City of San Jose) and seconded by Amit Mutsuddy (EBMUD). All were in favor. None opposed.

9 Approval: NMS Payment #1 for FY26 $1.1M – BACWA ED explained the annual payments to SFEI for the science research. This is the first of two payments to the NMS for FY26.

Approvals and Authorizations item 9: A motion to approve was made by Amit Dunlavey (City of San Jose) and seconded by Amit Schectel (Central Contra Costa Sanitary District). All were in favor. None opposed.

POLICY/STRATEGIC

10 Discussion: BACWA collaborative PFAS Strategy - BACWA ED shared background information, including recent news articles, highlighting the need for coordination on PFAS science, source control, and communication. BACWA ED shared that the Water Boards staff plan to meet internally to discuss PFAS strategy in late September.

Action item: BACWA to meet with Regional Water Board staff in early September to discuss opportunities to coordinate on PFAS source control, science, and communication.

11 Discussion: PFAS limits in R2 groundwater discharge permit - BACWA RPM shared a slide summarizing the PFAS limits in the region 2 general permit for groundwater, which are based on a similar framework to the drinking water PFAS MCLs. This is a tentative order that is scheduled for consideration at a September 10th Regional Water Board meeting. Group discussed concerns about precedent and monitoring costs.

Action items: BACWA RPM is going to prepare draft talking points and share them with BACWA community.

12 Discussion: Communications update - Wastewater 101 Video and PFAS Media Strategy - BACWA ED shared a slide that summarized the schedule for the Wastewater 101 video. The video will be 2-3 minutes long and it will be editable so segments can be used on social media. She is also working with the communications team on a museum exhibit and a possible PFAS media strategy.

13 Discussion: Nutrient Science Update

i. BACWA NMS Review position - BACWA ED has reached out to previous NMS Steering Committee participants who have since retired to gauge their interest in this position. She will work with the nutrient technical team to potentially bring a contract to the Board in September.

ii. NMS Deliverables - the list is in the packet.

iii. Central Coast Ocean Modeling - BACWA ED shared there is a link in the packet to an article submitted to a scientific journal regarding California central coast ocean modeling (article link). BACWA ED provided a summary of key and important topics from the article. The key take away is that anthropogenic nutrient dischargers are unlikely to be having a large effect on OAH, but may contribute to the likelihood of HABs. BACWA ED shared several possible comments on the article.

Action Item: BACWA ED to share comments on journal article with SCCWRP.

14 Informational: EPA Region IX SF Bay Program Office funding update - BACWA ED shared that $30m is available in the FY25 SF Bay Program budget of USEPA Region IX. A notice of funding opportunity will be released in November 2025. BACWA ED said it was a competitive grant opportunity and that EPA staff recommended seeking a grant for a group nutrient trading program.

15 Discussion: Collective advocacy to electeds on funding support - BACWA ED shared there is coalition letter in the packet addressed to the Bay Area congressional delegation that expresses support for maintain funding for the SF Bay Program. BACWA ED noted that SFPUC government affairs staff have suggested an outreach and collaborative

strategy to work with elected officials and on maintaining this funding. Attendees also suggested outreach to other forums where electeds may be present (e.g., ABAG, League of CA Cities)

16 Discussion: BACWA Committee update - Asset Management - Khae Bohan (Central San), co-chair of the Asset Management committee, shared the committee's accomplishments for the last three years. The committee leaders thanked BACWA RPM and board for their continued support, and requested the board's support in identifying new co-chairs for the committee.

BREAK

17 Informational: Onsite Reuse Regulations Response to Comments - BACWA RPM provided an update on regulations by the State Water Board. A revised draft was recently released and addresses some of BACWA's previously submitted comments. The regulations are expected to be finalized by spring 2026.

18 Informational: Impact of TST finding by 5th Appellate District Court - BACWA RPM shared that a court opinion was recently issued on the Test of Significant Toxicity in response to a wastewater coalition lawsuit regarding the statewide toxicity provisions. A group discussion followed.

Action item: BACWA RPM to continue tracking outcome of TST court opinion on NPDES permits in the region.

19 Discussion: Potential BACWA events

i. PFAS forum - BACWA ED shared that there will be an online forum in October 2025 to cover general introduction, regulatory overview, outreach materials and discussions on the type of support BACWA member agencies need on PFAS.

Action item: BACWA ED to continue to work on PFAS forum.

ii. AI Infoshare - Members discussed possible topics for an AI Infosuare. Central San offered to present on a topic related to machine learning, predictive analytics, and maintenance contracts.

Action item – BACWA ED will begin compiling information about member agencies that may be able to present on their AI-related projects at a future infoshare event.

iii. Climate Adaptation and RFI - BACWA RPM shared that the Regional Water Board wants to update a 2021 survey regarding agencies' climate adaptation plans. BACWA RPM will be working with the Permits Committee on this. Group provided feedback on the surveys.

iv. Nutrient Removal Emerging Technologies - BACWA ED shared that when agencies are implementing innovative nutrient removal projects we ask if BACWA can host a tour at their plant. EBMUD offered to host a tour of their split stream project.

20 Discussion: Air District Engineering Program Manager Pilot - Webinar Aug 20 - BACWA ED has gathered feedback & questions from BACWA agencies on the proposed engineering program manager pilot which will be funded by permittees. BACWA ED encouraged agencies to attend the August 20th webinar. There is a link to the zoom meeting in the packet. Group discussed permitting issues at the air board.

Action item: BACWA ED to obtain additional details about the Air District's pilot program from the webinar, and share at September BACWA Board Meeting for a discussion on whether BACWA will fund one of the positions.

21 Discussion: September 4 Joint Special Seminar with R2 on Klamath - BACWA ED shared a draft agenda for event and group discussion followed. There

Action items: Schedule and NST meeting prior to this event to review Water Board's proposed Basin Plan Amendment language and review content for lessons learned from other watersheds program item.

22 Discussion: Pardee Oct 9-10 - Invitations and outreach - BACWA ED shared a draft agenda for event and group discussion followed.

OPERATIONAL

23 Discussion: End of fiscal year 2025 financial overview - BACWA AED provided a summary of income and expenses in FY25.

24 Discussion: Succession planning update - BACWA RPM and ED shared a list of the BACWA Committees representation.

Action items: BACWA ED to consider representation on SFEI/ASC Board when Amit and Lori are both present at Sept Meeting.

25 Informational: BACC Update - Annual meeting August 27 - BACWA AED shared meeting date, time and a summary of the agenda.

REPORTS

26 Committee Reports - in the packet.

27 Member highlights - A few agencies shared updates.

28 Executive Director Report - in the packet.

29 Board Calendar and Action Items- in the packet.

30 Regulatory Program Manager Report - in the packet.

31 Other BACWA Representative Reports

a. RMP Technical Review Committee Samantha Engelage, Alicia Chakrabarti, Blake Brown

b. RMP Steering Committee Karin North; Amanda Roa; Eric Dunlavey

c. Summit Partners Lorien Fono; Jackie Zipkin

d. ASC/SFEI Lorien Fono; Amit Mutsuddy; Lori Schectel

e. Nutrient Governance Steering Committee Amit Mutsuddy, Eric Dunlavey; alternates: Lori Schectel, Jackie Zipkin

e.i Nutrient Planning Subcommittee Eric Dunlavey

e.ii MERHAB MaTAG Amit Mutsuddy

f. SWRCB Nutrient SAG Lorien Fono

g. BAIRWMP Cheryl Munoz; Florence Wedington; Jackie Zipkin

h. CASA State Legislative Committee Lori Schectel

i. CASA Regulatory Workgroup Lorien Fono; Mary Cousins

j. RMP Microplastics Liaison Jesse McDermott

k. Bay Area Regional Reliability Project Jackie Zipkin

l. San Francisco Estuary Partnership Lorien Fono; Jackie Zipkin

m. CPSC Policy Education Advisory Committee Colleen Henry

n. California Ocean Protection Council Lorien Fono

o. California Water Quality Monitoring Council Lorien Fono

p. CASA Air Toxics Steering Committee Lorien Fono, Jason Nettleton

32 SUGGESTIONS FOR FUTURE AGENDA ITEMS

NEXT MEETING

The next regular meeting of the Board is scheduled for September 19, 2025, at Central San, Martinez.

ADJOURNMENT 12:51 pm.

Nutrient Strategy Team
September 3, 2025 Meeting Summary

ATTENDEES:

Executive Board Representatives: Amit Mutsuddy (EBMUD), Jackie Zipkin (East Bay Dischargers Authority), Jennie Pang (SFPUC), and Eric Dunlavey (San José).

Other Attendees:

Name	Agency/Company
Lorien Fono, Mary Cousins	BACWA
Linda Sawyer	Brown and Caldwell
Andre Gharagozian	Carollo
Blake Brown, Lori Schectel*	Central San
Sven Edlund	City of San Mateo
Peter Kistenmacher	CMSA
Vince DeLange	Delta Diablo
Dan Gill, Tim Lewis	DSRSD
Alicia Chakrabarti	EBMUD
Tom Hall	EOA
Amanda Roa, Jordan Damerel	FSSD
David Donovan	Hayward
Irene Chu	Hazen and Sawyer
Mike Falk, Mallika Ramanathan	HDR
Sven Edlund	San Mateo
Mark Neumann	SASM
Arvind Akela, Francis Rooney, Jane Kao, Kim Hackett, Matt Zucca	SVCW
Armando Lopez, Gus Carillo	USD
Jennifer Harrington	Vallejo FWD
Dave Richardson	Woodard & Curran

*Attended remotely as a non-voting member without invoking AB 2449.

Jackie Zipkin called the meeting to order at 1:05 pm and led introductions. The meeting was conducted in hybrid format, with participants joining virtually and in-person at EBMUD's downtown Oakland office. There was no public comment.

Review of Informal Draft of Basin Plan Amendment

Lorien Fono provided background information about a proposed Basin Plan amendment that is being developed by Regional Water Board staff for the Nutrients Watershed Permit. The amendment would supersede specific portions of the statewide Compliance Schedule Policy, thereby allowing compliance schedules longer than 10 years for qualifying nutrient reduction projects. The Regional Water Board shared an informal draft of the Basin Plan amendment in late August 2025, and this draft was circulated to the Nutrient Strategy Team in advance of the meeting.

The informal draft identifies four types of qualifying projects: (a) nature-based solutions, (b) water recycling projects, (c) innovative technologies, and (d) projects that would reduce nutrient loads significantly beyond what the permit requires. The Regional Water Board staff have shared that the definition of "qualifying projects" should be kept as narrow as possible. Before the draft Basin Plan amendment is circulated for public comment, Regional Water Board staff will also need to develop an accompanying Staff Report. BACWA plans to submit two types of comments on the informal draft amendment: specific markup

language, and requests for content to include in the staff report.

Attendees provided the following feedback for BACWA to consolidate into a unified set of comments:

- Early actors were excluded from the list of qualifying projects, but should be included.
- Clarification that the definition of recycled water projects includes both potable and nonpotable recycled water projects. Also, some members are pursuing treatment upgrades that would facilitate recycled water projects to be built later or by another agency, so the definition should be sufficiently broad to capture interjurisdictional projects.
- Clarification that pilot projects to test out innovative treatment technologies would qualify for an extended compliance schedule regardless of whether they succeed or fail.
- The concept of individual compliance schedules that distinguish between "qualifying" and "non-qualifying" projects could be difficult to interpret or negatively impact project phasing / implementation.
- Other innovative technology benefits beyond those identified in the informal draft (e.g., energy usage) may also be worth consideration (e.g., affordability, space savings, greenhouse gas emissions).
- Members are worried about project sequencing, permitting, constructability, inflation, and construction delays due to labor shortages. This applies to all types of projects, not just those identified as qualifying projects.

Preparation for Engagement with Regional Water Board Staff
Attendees discussed key feedback on the informal draft Basin Plan amendment to share with Regional Water Board staff at an upcoming joint technical workshop scheduled for September 4th in San Francisco. The group also previewed information about long-term regional nutrient management strategies used in other watersheds around the US, which HDR plans to share during the workshop.

Action items/next steps
- BACWA's Executive Board will meet with Regional Water Board on September 4 to discuss the informal draft Basin Plan amendment and other items.
- BACWA's Executive Board will also discuss the informal draft Basin Plan amendment at its regular meeting scheduled for September 19.
- BACWA staff will compile draft comments on the informal draft Basin Plan amendment, including requests related to the draft staff report. BACWA will circulate this comment document to the NST in late September or early October.
- The NST will convene again on October 9th to discuss the draft comments. After that, BACWA will finalize the comments and share with Regional Water Board staff.

Meeting adjourned at approximately 2:40 pm.

BACWA
BAY AREA
CLEAN WATER
AGENCIES

August 29, 2025

MEMO TO: Bay Area Clean Water Agencies Executive Board

MEMO FROM: Phoebe Grow, Treasurer, East Bay Municipal Utility District

SUBJECT: First Month FY 2026 Treasurer's Report

As required by section eight of the Joint Powers Agreement establishing the Bay Area Clean Water Agencies (BACWA) and California Government Code Sections 6500 et seq., attached is the BACWA Treasurer's Report for the period covering **July 1, 2025 through July 31, 2025** (One month of Fiscal Year 2026). This report covers expenditures, cash receipts, and cash transfers for the following BACWA funds:

- Bay Area Clean Water Agencies (BACWA),
- BACWA Legal Reserve Fund (Legal Rsrv),
- Water Quality Attainment Strategy (WQA CBC),
- Bay Area Biosolids Coalition (BABC),
- Bay Area Chemical Consortium (BACC),
- BACC Legal Reserve Fund (BACC Legal Rsrv),
- Water/Wastewater Operator Training (WOT),

Houck, Matt

From: Grow, Phoebe
Sent: Tuesday, September 9, 2025 2:55 PM
To: Houck, Matt
Subject: Re: July 2025 Treasurer's Report

Apologies for the delay! Approved

Phoebe Grow, P.E. (she/her) | **Principal Management Analyst** | 510.287.0205 | phoebe.grow@ebmud.com

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From: Houck, Matt <matt.houck@ebmud.com>
Sent: Tuesday, September 9, 2025 12:46 PM
To: Grow, Phoebe <phoebe.grow@ebmud.com>
Subject: FW: July 2025 Treasurer's Report

Hi Phoebe,

Just wanted to follow up on the July TR approval.

Thanks,

Matt Houck
Accountant III
East Bay Municipal Utility District
375 11TH St, MS 402, Oakland, CA 94607
P 510-287-0238

From: Houck, Matt
Sent: Thursday, August 21, 2025 10:23 AM
To: Grow, Phoebe <phoebe.grow@ebmud.com>
Subject: July 2025 Treasurer's Report

Hi Phoebe,

Please approve BACWA – July 2025 Treasurer's Report for distribution.

Let me know if you have any questions.

Thanks,

Matt Houck

Fund Balances

In FY25 BACWA has three operating funds (BACWA, Legal, and CBC) and one pass-through fund for which BACWA provides only contract administration services (BACC). As of October 31st, 2021, revenues are recognized when billed, not when payments are received.

BACWA Fund: This fund provides resources for BACWA staff, its committees, and other administrative needs. The ending fund balance on July 31, 2025, was $806,294, which is significantly higher than the target reserve of $280,414 which is intended to cover 3 months of normal operating expenses based on the BACWA FY26 budget. $949,991 is encumbered to meet ongoing operating line-item expenses for BAPPG Committee Support, Legal services, IT services, Board meeting expenses, accounting services and BACWA staff support, which leaves negative $142,697 unobligated.

CBC Fund: This fund provides the resources for completing special investigations as well as meeting regulatory requirements. The ending fund balance on July 31, 2025, was $3,658,917 which is higher than the target reserve of $1,000,000. $325,916 of the ending fund balance is encumbered to meet line-item expenses for completion of the Group Annual Report contract, completion of the NBS Study, Recycled Water Evaluation, and the PFAS Regional Study. This leaves an actual unencumbered reserve balance of $2,333,001 (i.e., actual fund balance of $3,333,001 less target reserves) as of July 31, 2025. As directed by the BACWA Executive Board, the CBC fund has diminished over time due to BACWA's ongoing funding of the NMS program to comply with the Nutrient Watershed Permit.

Legal Fund: This fund provides for needed legal services. The ending balance was $300,000 which is at the target reserve of $300,000.

Budget to Actual

The BACWA Annual Budget includes all expected revenues as well as budgeted expenses. Transfers are made from the BACWA Fund and/or the CBC Fund to balance the Annual Budget if expenses exceed revenues and vice versa. It is therefore important to achieve the anticipated revenues and not exceed the budgeted expenses on an annual basis to maintain the BACWA and CBC Fund balances at the levels projected in the 5 Year Plan.

Revenues as of July 31, 2025 (0.08% of the FY) are at 54%

Expenses as of July 31, 2025 (0.08% of the FY) are at 0%

BACWA BAY AREA CLEAN WATER AGENCIES

BACWA FY26 BUDGET	*Line Item Description*	FY26 Budget	Projected Rev as of July 2025	Actual July 2025	Acutal % of Budget July 2025	Variance	FY26 NOTES
REVENUES & FUNDING							
Dues	Principals' Contributions	$581,626	$581,626	$581,626	100%	$0	FY26: 5% increase 5 @ $116,325
	Associate & Affiliate Contributions	$260,064	$260,064	$0	0%	-$260,064	FY26: 5% increase. 12 Assoc: $9599.47 Affiliate: $1922.55; UC Berkeley $515 (3% increase from FY25)
Fees	Clean Bay Collaborative	$675,000	$675,000	$450,000	67%	-$225,000	Same as FY25. Prin: $450,000; Assoc/Affil: $225,000
	Nutrient Surcharge	$1,750,000	$1,750,000	$1,162,377	66%	-$587,623	See Nutrient Surcharge Spreadsheet
	Member Voluntary Nutrient Contributions						
Other Receipts	Non R2 Affiliate Members	$5,768	$5,768	$0	0%	-$5,768	Santa Rosa, Sac Reg'l, Vacaville,Ironhouse $1922.55 / each
	BACC Admin Fees	$40,468	$40,468	$0	0%	-$40,468	400 hours of AED support $101.17/hr
Air Toxics	CASA Passthrough	$620,125	$620,125	$0	0%	-$620,125	New in FY25
Interest Income	LAIF	$160,000	$160,000	$30,729	19%	-$129,271	BACWA, Legal, & CBC Funds invested in LAIF
	Total Revenue	**$4,093,051**	**$4,093,051**	**$2,224,732**	**54%**	**-$1,868,319**	

BACWA FY26 BUDGET	*Line Item Description*	FY26 Budget	Projected Expense as of July 2025	Actual July 2025	Actual % of Budget July 2025	Variance	FY26 NOTES
EXPENSES							
Labor							
	Executive Director	$229,612	$233,199	$0	0%	-$229,612	(incl 2.4% CPI SF Bay Metro Area Dec 2024), updated to 4% in May 2025
	Assistant Executive Director	$96,682	$98,193	$0	0%	-$96,682	(incl 2.4% CPI SF Bay Metro Area Dec 2024); $81/hour; Reflects 1200 hours, updated to 4% in May 2025
	BACC Administrator	$40,468	$40,468	$0	0%	-$40,468	400 hrs AED support at $101.17 per hr
	Regulatory Program Manager	$159,875	$162,373	$0	0%	-$159,875	(2.4% CPI SF Bay Metro Area Dec 2024); $118.43/hour, Reflects 1350 hours, updated to 4% in May 2025
	Total	**$526,636**	**$534,233**	**$0**	**0%**	**-$526,636**	
Administration							
	EBMUD Financial Services	$44,596	$44,596	$0	0%	-$44,596	3% increase in FY26
	Auditing Services	$5,672	$5,672	$0	0%	-$5,672	Financial Auditors through EBMUD; per auditor rate schedule
	Administrative Expenses	$4,059	$4,059	$287	7%	-$3,772	No change from FY25
	Insurance	$12,366	$12,366	$0	0%	-$12,366	15% increase from FY25 (10-15% est. increase per Alliant)
	Total	**$66,693**	**$66,693**	**$287**	0%	**-$66,406**	
Meetings							
	EB Meetings	$4,200	$4,200	$0	0%	-$4,200	20% increase from FY25
	Annual Meeting	$14,369	$14,369	$0	0%	-$14,369	No change from FY25
	Pardee	$4,000	$4,000	$0	0%	-$4,000	reduced from FY25 to align with actual expenses
	Misc. Meetings and conferences	$10,000	$10,000	$0	0%	-$10,000	No change from FY25
	Total	**$32,569**	**$32,569**	**$0**	**0%**	**-$32,569**	
Communication							
	Website Hosting / Domain registration	$758	$758	$0	0%	-$758	2% increase from FY25, Go Daddy website hosting and domain registration
	File Storage	$828	$828	$0	0%	-$828	2% increase from FY25, box.net

EXPENSES							
	Website Development/Maintenance	$1,656	$1,656	$0	0%	-$1,656	2% increase from FY25
	IT Support (As Needed)	$2,870	$2,870	$0	0%	-$2,870	2% increase from FY25
	BACWA Value of Wastewater Communication	$50,000	$50,000	$0	0%	-$50,000	New line item in FY24, no change from FY24 - TBD
	Other Communication	$1,932	$1,932	$0	0%	-$1,932	2% increase from FY25; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile
	Total	**$58,044**	**$58,044**	**$0**	**0%**	**-$58,044**	
Legal							
	Regulatory Support	$20,000	$50,000	$0	0%	-$20,000	Decrease from FY25, Contract with Duane Morris - increased PO at Board's direction
	Executive Board Support	$2,403	$2,403	$0	0%	-$2,403	No increase from FY25
	Total	**$22,403**	**$52,403**	**$0**	**0%**	**-$22,403**	
Committees							
	AIR	$94,750	$94,750	$0	0%	-$94,750	$93,750 consulting support, $1k misc expenses - TBD
	BAPPG	$148,060	$148,060	$0	0%	-$148,060	Includes Pest. Reg Spt. @ $70; Pest. Prof Outreach @$19K; Media Consultant @ $50K; website/unplanned
	Asset Management Committee	$500	$500	$0	0%	-$500	No change from FY25
	BABC	$120,000	$120,000	$0	0%	-$120,000	Formerly BACWA Biosolids, now BABC program management contract
	Collections System	$1,000	$1,000	$0	0%	-$1,000	SSS WDR Support
	O&M Committee	$1,500	$1,500	$0	0%	-$1,500	No change from FY25
	Laboratory Committee	$500	$500	$0	0%	-$500	No change from FY25
	Permits Committee	$500	$500	$0	0%	-$500	No change from FY25
	Pretreatment	$500	$500	$0	0%	-$500	No change from FY25
	Recycled Water Committee	$500	$500	$0	0%	-$500	No change from FY25
	Misc Committee Support	$45,000	$45,000	$0	0%	-$45,000	No change from FY25
	Manager's Roundtable	$1,000	$1,000	$0	0%	-$1,000	No change from FY25
	Total	**$413,810**	**$413,810**	**$0**	**0%**	**-$413,810**	
Collaboratives							
	Collaboratives						
	State of the Estuary (SFEP-biennial)	$20,000	$20,000	$20,000	100%	$0	Biennial in Even Fiscal Years
	Arleen Navarret Award	$0	$0	$0		$0	Next Award will be disbursed in FY27
	BayCAN	$5,000	$1,500	$1,500	30%	-$3,500	
	Bay Area One Water Network	$5,000	$2,000	$2,000	40%	-$3,000	Donation due in FY26 - Support for lunch at kickoff meeting
	Bruce Wolfe Scholarship	$4,000	$4,000	$0	0%	-$4,000	FY22, FY23, FY24, FY25 FY26
	Our Water Our World Program	$10,000	$10,000	$0	0%	-$10,000	Previously included in BAPPG Budget
	National Stewardship Action Council	$10,000	$10,000	$0	0%	-$10,000	Previously included in BAPPG Budget
	California Product Stewardship Council	$10,000	$10,000	$10,000	100%	$0	Previously included in BAPPG Budget
	Passthrough to CASA for air toxics	$620,125	$620,125	$0	0%	-$620,125	New line item in FY24
	Misc	$1,500	$1,500	$0	0%	-$1,500	NBWA
	Total	**$685,625**	**$679,125**	**$33,500**	**5%**	**-$652,125**	
Other							
	Unbudgeted Items						
	Other						
Tech Support							
	Technical Support						
	Nutrients						
	Watershed Permit NMS Contribution	$2,200,000	$2,200,000	$0	0%	-$2,200,000	Permit required funding for 3rd Watershed Permit Science Studies
	NMS Voluntary Contributions			$0			
	Additional work under permit	$100,000	$100,000	$0	0%	-$100,000	Discretionary work including trading

FY 2026 Budget

EXPENSES							
	Nutrient Workshop(s)	$0	$0	$0			Pilot Studies/Plant Review/Innovative Technologies; Might change
	NMS Reviewer	$50,000	$50,000	$0	0%	-$50,000	No change from FY25 - will need new contractor
	Regional Nutrient Compliance Support	$250,000	$250,000	$0	0%	-$250,000	New item in FY25
	General Tech Support	$100,000	$100,000	$0	0%	-$100,000	Eg. Nutrients, biosolids
	CEC Investigations	$50,000	$50,000	$0	0%	-$50,000	PFAS Study Phase 3
	Risk Reduction	$12,500	$12,500	$0	0%	-$12,500	Will plan new risk reduction tasks for current Hg/PCB Watershed Permit
	Total	**$2,762,500**	**$2,762,500**	**$0**	**0%**	**-$2,762,500**	
	TOTAL EXPENSES	**$4,568,281**	**$4,599,377**				
	NET INCOME BEFORE TRANSFERS	**-$475,230**					
	TRANSFERS FROM RESERVES	**$475,230**					aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS	**$0**					
	TOTAL OPERATING BUDGET	**$1,121,656**					
	OPERATING RESERVE	**$280,414**					

BACWA Fund Report as of July 31, 2025

BACWA FUND BALANCES - DATA PROVIDED BY ACCOUNTING DEPT.

DEPTID	DESCRIPTION	FISCAL YEAR BEGINNING FUND BALANCE	TOTAL BILLED REVENUE TO-DATE	TOTAL DISBURSEMENTS TO-DATE	MONTH-ENDING FUND BALANCE	OUTSTANDING ENCUMBRANCES	MONTH-END UNOBLIGATED FUND BALANCE
600	BACWA	244,541	589,868	28,115	806,294	949,991	(143,697)
604	LEGAL RSRV	300,000	-	-	300,000	-	300,000
605	CBC	2,024,054	1,634,863	-	3,658,917	325,916	3,333,001
	SUBTOTAL 1	*2,568,595*	*2,224,731*	*28,115*	*4,765,211*	*1,275,907*	*3,489,304*
602	BABC	*293,689*	-	-	293,689	-	293,689
606	BACC	*42,532*	*1,371*	*30,000*	13,903	*40,468*	(26,565)
607	BACC LEGAL RSRV	*120,000*	*30,000*	-	150,000	-	150,000
610	WOT	*259,176*	-	-	259,176	-	259,176
612	CASA Air Toxics	-	418,500	-	418,500	-	418,500
	SUBTOTAL 2	*715,397*	*449,871*	*30,000*	*1,135,268*	*40,468*	*1,094,800*
	GRAND TOTAL	**3,283,992**	**2,674,602**	**58,115**	**5,900,479**	**1,316,375**	**4,584,104**

Top Chart: Reflects CASH on the Books — Includes Encumbrances
Bottom Chart: Reflects CASH in the Bank — Includes Payables (bills received but not paid)
Allocations: Priority for non-liquid investments

BACWA INVESTMENTS BALANCES - DATA PROVIDED BY TREASURY DEPT.

DEPTID	DESCRIPTION	FISCAL YEAR BEGINNING FUND BALANCE	TOTAL BILLED REVENUE TO-DATE	TOTAL DISBURSEMENTS TO-DATE	MONTH-ENDING FUND BALANCE	RECONCILIATION TO FINANCIAL STATEMENTS A/R	RECONCILIATION TO FINANCIAL STATEMENTS A/P	MONTH-END RECONCILED FUND BALANCE	UNINVESTED CASH BALANCES	LAIF INVESTMENTS AMOUNTS	LAIF INVESTMENTS PERCENTAGE	ALTERNATIVE INVESTMENTS AMOUNTS	ALTERNATIVE INVESTMENTS IDENTIFIERS	ALTERNATIVE INVESTMENT INSTRUCTIONS AND NOTES
600	BACWA	244,541	589,868	28,115	806,294	(581,825)	12,286	236,755	236,755	-	0%	-		priority # 6 for allocation
604	LEGAL RSRV	300,000	-	-	300,000	-	-	300,000	-	300,000	12%	-		priority # 1 for allocation
605	CBC	2,024,054	1,634,863	-	3,658,917	(1,612,377)	-	2,046,540	-	2,046,540	81%	-		priority # 3 for allocation
	SUBTOTAL 1	2,568,595	2,224,731	28,115	4,765,211	(2,194,202)	12,286	2,583,295	236,755	2,346,540	93%	-		
602	BABC	293,689	-	-	293,689	-	-	293,689	260,916	32,773	1%	-		priority # 4 for allocation
606	BACC	42,532	1,371	30,000	13,903	-	-	13,903	13,903	-	0%	-		
607	BACC LEGAL RSRV	120,000	30,000	-	150,000	-	-	150,000	-	150,000	6%	-		priority # 2 for allocation
610	WOT	259,176	-	-	259,176	-	-	259,176	259,176	-	0%	-		priority # 5 for allocation
612	CASA Air Toxics	-	418,500	-	418,500	(418,500)	-	-	-	-	0%	-		
	SUBTOTAL 2	715,397	449,871	30,000	1,135,268	(418,500)	-	716,768	533,995	182,773	7%	-		
	GRAND TOTAL	**3,283,992**	**2,674,602**	**58,115**	**5,900,479**	**(2,612,702)**	**12,286**	**3,300,063**	**770,750**	**2,529,313**	**100%**			
							-	-	-	-				

To be used to cover Reconciliation to Financial Statements ($0)

Reconciliation to Trial Balance

Per Report above:	
General	2,224,731
WOT, BABC, & BACC	449,871
PROP	-
subtotal	**2,674,602**

STB	29020	-	
STB	14930	2,529,313	
STB	15050	770,750	
		3,300,063	-
STB	16300	2,612,702	
STB	21350	(12,286)	
		5,900,479	-

Trial Balance Revenue Accounts

40100	Interest	(32,100)
40101	Mem Contrib	(1,450,125)
40102	Transfer	(30,000)
40103	Assoc Contrib	-
40104	Other	(1,162,377)
47310	State Grant	-
47320	Grant Retention	-
subtotal		**(2,674,602)**
Difference		**-**

BACWA Revenue Report as of July 31, 2025

Cost Center Code	Cost Center Description	Program Segment Description	Program Segment Value	Amended Budget	Current Period	FY26 - Year to Date	Unobligated
600	Bay Area Clean Water Agencies	BABC - AED and RPM Support	6200	-	-	-	-
		BACC - AED Support	6199	(40,468.00)	-	-	40,468.00
		BDO Affil/CS/Assoc Dues	6104	-	-	-	-
		BDO Affiliate/Associate Dues	6103	-	-	-	-
		BDO Assoc.&Affiliate Contr	6102	(260,064.00)	-	-	260,064.00
		BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	(581,626.00)	(581,625.00)	(581,625.00)	1.00
		BDO Non-Member Contr AIR	6136	-	-	-	-
		BDO Other Receipts	6105	-	-	-	-
		BDO Other Receipts (Misc)	6140	-	-	-	-
		BDO- Interest Income from LAIF	6142	-	(8,242.99)	(8,242.99)	(8,242.99)
		BDO-Alternative Investment Inc	6143	(160,000.00)	-	-	160,000.00
		Non R2 Affiliate Members	6135	(5,768.00)	-	-	5,768.00
600 Total				**(1,047,926.00)**	**(589,867.99)**	**(589,867.99)**	**458,058.01**
602	Bay Area Biosolids Coalition	BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	-	-	-	-
602 Total				**-**	**-**	**-**	**-**
605	Clean Bay Collaborative	BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	(675,000.00)	(450,000.00)	(450,000.00)	225,000.00
		BDO Other Receipts	6105	(1,750,000.00)	(1,162,377.00)	(1,162,377.00)	587,623.00
		BDO- Interest Income from LAIF	6142	-	(22,485.87)	(22,485.87)	(22,485.87)
605 Total				**(2,425,000.00)**	**(1,634,862.87)**	**(1,634,862.87)**	**790,137.13**
606	Bay Area Chemical Consortium	BDO Member Contributions	6101	-	-	-	-
		BDO- Interest Income from LAIF	6142	-	(1,371.09)	(1,371.09)	(1,371.09)
606 Total				**-**	**(1,371.09)**	**(1,371.09)**	**(1,371.09)**
607	BACC Legal RSRV	BDO Fund Transfers	6141	-	(30,000.00)	(30,000.00)	(30,000.00)
607 Total				**-**	**(30,000.00)**	**(30,000.00)**	**(30,000.00)**
612	CASA Air Toxics	BDO Member Contributions	6101	(620,125.00)	(418,500.00)	(418,500.00)	201,625.00
612 Total				**(620,125.00)**	**(418,500.00)**	**(418,500.00)**	**201,625.00**
Grand Total				**(4,093,051.00)**	**(2,674,601.95)**	**(2,674,601.95)**	**1,418,449.05**

BACWA Treasurer's Report Expenses and Encumbrances

Period Covering July 1, 2025 through July 31, 2025

Cost Center Code	Program Segment Description	Program Segment Value	Amended Budget	Obligated Fiscal Year to Date	Unobligated
600	AIR-Air Issues&Regulation Grp	6153	94,750.00	93,750.00	1,000.00
	AS-Assistant Executive Directo	6175	98,193.00	98,193.00	-
	AS-Audit Services	6180	5,672.00	(5,672.00)	11,344.00
	AS-BACWA Admin Expense	6173	4,059.00	287.25	3,771.75
	AS-EBMUD Financial Services	6176	44,596.00	43,297.00	1,299.00
	AS-Executive Director	6174	233,199.00	233,199.00	-
	AS-Insurance	6177	12,366.00	-	12,366.00
	AS-Regulatory Program Manager	6179	162,373.00	162,373.00	-
	Administrative Support	6178		-	-
	Asset Management Committee	6213	500.00	-	
	BABC	6147	120,000.00	120,000.00	-
	BACWA Value of Wastewater Communication	6211	50,000.00	2,925.48	47,074.52
	BC-BAPPG	6152	148,060.00	140,500.00	7,560.00
	BC-Collections System	6144	1,000.00	-	1,000.00
	BC-Laboratory Committee	6149	500.00	-	500.00
	BC-Manager's Roundtable	6154	1,000.00	-	1,000.00
	BC-Miscellaneous Committee Sup	6150	45,000.00	5,753.75	39,246.25
	BC-Permit Committee	6145	500.00	-	500.00
	BC-Pretreatment Committee	6151	500.00	-	500.00
	BC-Water Recycling Committee	6146	500.00	-	500.00
	Bay Area One Water Network	6209	5,000.00	2,000.00	3,000.00
	Bruce Wolf Scholarship	6210	4,000.00	-	4,000.00
	CAR-BACWA File Storage	6165	828.00	-	828.00
	CAR-BACWA IT Software	6167	1,932.00	-	1,932.00
	CAR-BACWA IT Support	6166	2,870.00	-	2,870.00
	CAR-BACWA Website Dev/Maint	6163	1,656.00	-	1,656.00
	CAR-BACWA Website Hosting	6164	758.00	-	758.00
	CAS-Arleen Navaret Award	6160	-	-	-
	CAS-BayCAN	6204	5,000.00	1,500.00	
	CAS-Misc Collaborative Sup	6162	1,500.00	-	1,500.00
	CAS-PSSEP	6157	20,000.00	20,000.00	-
	CAS-Stanford ERC	6159		-	-
	California Product Stewardship Council	6216		10,000.00	(10,000.00)
	GBS-Meeting Support-Annual	6170	14,369.00	-	14,369.00
	GBS-Meeting Support-Exec Bd	6169	4,200.00	-	
	GBS-Meeting Support-Misc	6172	10,000.00	-	
	GBS-Meeting Support-Pardee	6171	4,000.00	-	
	LS-Executive Board Support	6156	20,000.00	-	20,000.00
	LS-Regulatory Support	6155	2,403.00	50,000.00	(47,597.00)
	O&M Committee	6148	1,500.00	-	1,500.00
	WQA-CE-Nature Based Solutions	6196		-	-
	Write-Off Doubtful Accounts	6208		-	-
600 Total			**1,122,784.00**	**978,106.48**	**122,477.52**
602	AS-Assistant Executive Directo	6175	-	-	-
	AS-Regulatory Program Manager	6179	-	-	-
	Academia Research & Development	6203	-	-	-
	Administrative Support	6178	-	-	-
	BDO Contract Expenses	6186	-	-	-
	Collateral Development	6197	-	-	-
	Program Manager Expense	6202	-	-	-
	Technology Research & Development	6206	-	-	-
602 Total			**-**	**-**	**-**
605	Recycled Water Evaluation	6198	-	-	-
	WQA - CEC Investigations	6201	50,000.00	-	50,000.00
	WQA-CE Addl Work Under Permit	6191	100,000.00	325,915.62	(225,915.62)
	WQA-CE Risk Reduction	6190	12,500.00	-	12,500.00
	WQA-CE Voluntary Nutr Contrib	6193	-	-	-
	WQA-CE-Nature Based Solutions	6196	-	-	-
	WQA-CE-Nutrient WS Permit Comm	6188	2,200,000.00	-	2,200,000.00
	WQA-CE-Technical Support	6181	100,000.00	-	100,000.00
	WQA-NMSReviewer	6205	50,000.00	-	50,000.00
605 Total			**2,512,500.00**	**325,915.62**	**2,186,584.38**
606	AS-BACWA Admin Expense	6173	-	-	-
	AS-Regulatory Program Manager	6179	-	-	-
	Administrative Support	6178	40,468.00	40,468.00	-
	BDO Fund Transfers	6141	-	30,000.00	(30,000.00)
	CAR-BACWA IT Support	6166	-	-	-
	GBS-Meeting Support-Misc	6172	-	-	-
606 Total			**40,468.00**	**70,468.00**	**(30,000.00)**
610	Administrative Support	6178	-	-	-
	BDO Contract Expenses	6186	-	-	
610 Total			**-**	**-**	**-**
612	Passthrough to CASA for air toxics	6212	620,125.00	-	620,125.00
612 Total			**620,125.00**	**-**	**620,125.00**
Grand Total			**4,295,877.00**	**1,374,490.10**	**2,899,186.90**

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 4
MEETING DATE: September 19, 2025

TITLE: Contract with Joseph Dillon for Review of NMS Work Products, Fiscal Year 2026.

☐ **RECEIPT** ☐ **DISCUSSION** ☐ **RESOLUTION** ☒ **APPROVAL**

RECOMMENDED ACTION
Approve Agreement with Joseph Dillon in the amount of $30,000 to provide Review of NMS Work Products in FY25.

SUMMARY
The Nutrient Management Strategy (NMS) is the structure directing scientific studies that will inform nutrient policy decisions in the San Francisco Bay. Although BACWA has several volunteers who are engaged in monitoring the technical work being undertaken by the NMS science team, all of the BACWA volunteers have their regular workload at their agency or city and lack the time to immerse themselves in thoroughly reviewing all of the technical documents that have been produced or are in production. An independent review helps inform the BACWA membership on key aspects of the scientific reports as they relate to a public utility, pointing out areas of study or conclusions that have the potential to impact future management or policy decisions and assessing the scientific underpinnings of those conclusions and recommendations.

Michael Connor previously provided this service for BACWA, and terminated the contract in early 2025 due to personal reasons. The BACWA Executive Director conducted an informal solicitation among local scientists with previous involvement in the NMS and expertise in environmental management. Joseph Dillon was selected to provide this service after the Executive Director conferred with BACWA's Nutrient Technical Team members.

FISCAL IMPACT
Funds for the agreement were approved in the BACWA FY26 Budget.

ALTERNATIVES
1. Do not fund the position: This alternative is not recommended since the BACWA Board has identified the need for this support, and this consultant was selected through an informal process consistent with BACWA's Contracting Policy.

Attachments: FY26 Contract with Joseph Dillon
Letter Proposal and CV

Approved:

_____ Date: _____

Jackie, Chair
BACWA

Date: September 19, 2025

BAY AREA CLEAN WATER AGENCIES

CONSULTING AGREEMENT

TO:	Joseph Dillon Earth Friendly Sustainability Services 199 Yates Drive, Santa Rosa, CA. 95405	joed@earthfriendlysustainability.com
FROM:	Lorien Fono, Executive Director BACWA PO Box 24055, MS702 Oakland, CA 94623	lfono@bacwa.org

RE: BACWA Agreement for FY26 with Joseph Dillon to provide technical review of Nutrient Management Strategy work products.

This Agreement covers professional services to be performed by Joseph Dillon in order to develop a Communication Plan for BACWA. The work under this contract will be carried out under the supervision and direction of Lorien Fono, BACWA Executive Director. The total cost of professional services to be performed by Joseph Dillon is not to exceed $30,000 This contract will be funded by the BACWA Budget under the NMS Reviewer line item. The term of this contract shall expire on June 30, 2026.

This Agreement may be terminated by either party at any time for convenience with 30 day notice. In the event of termination by BACWA, BACWA shall pay Joseph Dillon for professional and competent services rendered to the date of termination upon delivery of assigned work products to BACWA.

Joseph Dillon shall submit invoices to the BACWA Assistant Executive Director via e-mail. Invoices shall indicate hours associated with a description of work performed. Invoices will be paid within thirty (30) days of receipt.

BACWA AED E-mail: Jennifer Dyment jdyment@bacwa.org

Approved:

By _____
Jackie Zipkin
Chair, BACWA Executive Board

By _____
Joseph Dillon

Date_____

Date_____

BACWA EIN: 94-3389334

August 21, 2025

Lorien Fono
Executive Director
Bay Area Clean Water Agencies

Re: Statement of Interest and Proposal to Provide Technical Support to BACWA

Lorien,

Thank you for reaching out to me to gauge my interest in staying involved with the SFEI Nutrient Management Strategy (NMS) project by providing technical support to BACWA. I am interested in conducting as-needed technical review of documents produced by the NMS process, and providing analysis of those documents to BACWA. I have read the 2020 Request for Proposals (RFP) document you provided to me to describe in more detail what you are looking for and I believe I can meet your needs in addition to the other consulting work I am currently doing. As described in the document, I understand you are looking for someone to:

1. Review key assumptions, critical referenced reports, conclusions and recommendations.
2. Provide a summary of the work product from the POTW perspective
3. Identify major issues and important questions
4. Identify where additional explanations from the authors are needed.
5. Discuss policy and permit ramifications.
6. Develop comments, critiques, and/or questions for the Science Team.
7. Develop charge questions for expert advisory panels convened through the NMS

I have reviewed the example consulting agreement that you sent me and find the format acceptable. I would charge a flat rate of $125.00 per hour for this project plus materials, if any. I have the list of newly released SFEI documents and could begin to review them for you as soon as the week of September 1, 2025.

Thank you for considering me for this opportunity. I am also sending an abbreviated CV for your use in making this decision.

Sincerely,

Joe Dillon

JOSEPH DILLON

199 Yates Drive, Santa Rosa, CA. 95405
Email: joed@earthfriendlysustainability.com

EDUCATION

University of California, Riverside
Bachelor of Science, Environmental Sciences, 1996
GPA 3.75/4.0 Cum Laude, Phi Beta Kappa

EXPERIENCE

Consultant/Proprietor – Earth Friendly Sustainability Services

March 2025 – Present
Projects:

- Interpret general discharge permit for agriculture from the San Francisco Bay RWQCB, work with landowners to bring them into compliance and improve their sustainability practices, conduct inspections focused on erosion, pesticide and nutrient pollution control projects and practices
- Interpret new general discharge permit of agriculture from the North Coast Regional Board, work with non-profit organization to adjust their program in response, work with landowners to bring them into compliance

Physical Scientist/Water Quality Specialist

National Oceanic and Atmospheric Administration, National Marine Fisheries Service, West Coast Region
December 20, 1999 to February 28,2025

Duties Included:
Conserve and Restore Endangered Species Act (ESA) listed salmonids and other listed marine species, and Essential Fish Habitats (EFH) –

- Conduct water quality (WQ) consultations and project analyses to protect and recover ESA listed salmonids, EFH and other ESA protected aquatic resources, independently and with minimal supervision;
- ESA Section 7 consultations related to pollution and biological impacts on regional and statewide scales, on WQ standards, NPDES permits and Total Maximum Daily Load plans proposed by US EPA or the Regional Water Quality Control Boards, examine pesticide use proposals and registrations, and work on CERCLA related projects;
- identify collaborative outreach opportunities to build community-based plans that promote regional partnerships and ecosystem management projects, and

- write summary reports, briefing materials and internal guidance for staff on WQ and ecotoxicology subjects.

Notable Projects:

- San Francisco Bay Nutrient Management Steering Committee (2014-present), SFEI Nutrient Technical Review committee, and SFEI South Bay Low Dissolved Oxygen Assessment Framework Subcommittee
- ESA consultations for Southern California bight wastewater treatment plants and harmful algal blooms evaluations for Hyperion/Los Angeles, Point Loma/San Diego, and Orange County Sanitation District facilities,
- USMCA Transboundary Flows project consultation,
- San Francisco Oceanside WWTP consultations,
- San Francisco Bay Spartina Control Program,
- Klamath Dams evaluation and removal projects,
- Programmatic ESA consultation on stormwater effects from highway projects,
- Suisun Marsh Dissolved Oxygen and Mercury TMDL and WQ Objectives,
- Technical Advisory Committees for Agricultural Discharge general permit development for the San Francisco and North Coast Regional Water Boards,
- California Oil Spill Dispersant consultation,
- SF Bay Maintenance Dredging Programmatic and individual ESA and EFH consultations, and
- 2024 NMFS West Coast Region Herbicide Use white paper.

Notable Awards:

NOAA Administrator's Award (2017) – Dry Creek Safe Harbor Agreement
U.S. Department of Commerce Silver Medal (2011) – Klamath Basin Restoration Agreement and Klamath Hydroelectric Settlement Agreement
NOAA Administrator's Award (2010) – Development of the Treated Wood Guidelines for the Southwest, Northwest and Alaska Regions

EXPERIENCE BEFORE NOAA

Staff Research Assistant - USDA/University of California Cooperative Extension Water Quality Program
University of California, Riverside, June 1996 to December 1999

United States Army – Highest Rank, Sergeant (E-5)
Voice Lingual Interceptor - Russian, 07/1988 -07/1992, Sergeant June, 1991
Awards: the Southwest Asia Service Medal with three clusters, National Defense Service Medal, the Kuwait Liberation Medal, two Army Commendation Medals, Army Achievement Medal, and the Good Conduct Medal.

State Revolving Fund for Nutrients Reduction Projects

September 19, 2025

Alexandra Gunnell, Loans & Grants Director

State Revolving Fund Overview

- The SRF program is a US EPA financing program administered in California by the State Water Resources Control Board
- Provides low-cost loans and grants for qualified water and wastewater projects
  - Loan interest rate set at ½ the State of California 30-year General Obligation Bond rate; estimated grant equivalent of $20M for every $100M loan
  - Additional grant / principal forgiveness funding for eligible water recycling and stormwater projects and disadvantaged communities
- Annual Intended Use Plan (IUP) identifies projects to be funded
  - Projects are scored, ranked and funding cutoff score is based on funding capacity

SFPUC's Recent SRF Loan

Folsom Area Stormwater Improvements Project

- November 2021 – SFPUC identifies project as SRF candidate
  - Water Quality Control Plan or Permit Corrective Score = 8 out of 9 possible points
  - Could be paired with WIFIA Loan
- Dec 2022 – application submission
  - Readiness Score = 4 out of 4 possible points
  - Total Score = 15 of 16 possible points
- Sept 2023 – included on CWSRF FY2023/24 Fundable List
  - 44 new project applications requesting $2.3B in funding
  - 17 selected for funding with a cutoff score of 13 out of 16 total possible points for a total $1.3B in financing
- June 2025 – executed $50 million loan at 1.8% + $5M grant
  - partial funding for $391M total project costs; to be combined with WIFIA loan

CWSRF Policy Revision May 2025

- Priority Score = Project Score + Secondary Score + Affordability Score + Readiness Score

Table 1 – Project Score

Resource or Impact	Purpose		
	Corrective	Preventive	Improvement
Drinking Water Source	10	9	6
Nutrient Removal	8		6
Water Recycling	-	-	8
Water Quality Control Plan or Permit, or Impaired Water Body	8	7	4

- Readiness Score (max score of 2)
  - ≥ 90% P&S or advertised RFP for Design-Build = 2
  - ≥ 50% P&S = 1
- Complete Application is Required

CWSRF Funding Considerations

- Funding is limited and competitive
  - Annual funding capacity ~$600M/yr
  - $50M per project max
- Federal Compliance
  - DBE outreach, domestic materials (BABA) must be implemented during bid process and included in contract specs
  - Environmental consultations (SHPO, USFWS, etc.) prior to construction (ground disturbance)
  - Reimbursement basis; bridge funding cannot be tax exempt
- Dec 31 deadline for consideration in upcoming FY funding plan (IUP Fundable List)
  - Ineligible if completed 25% construction or anticipated to complete construction by June 15 of upcoming year

Bay Area Air District

Engineering Program Manager Pilot Program

Presented by Meredith Bauer

August 20, 2025

Addressing Challenges in Complex Permitting

- Complex applications often require extensive back-and-forth
- Evolving regulations and technical uncertainties slow approvals
- Facilities need more support navigating the process
- Goal: Improve efficiency, transparency, and predictability

Program Overview

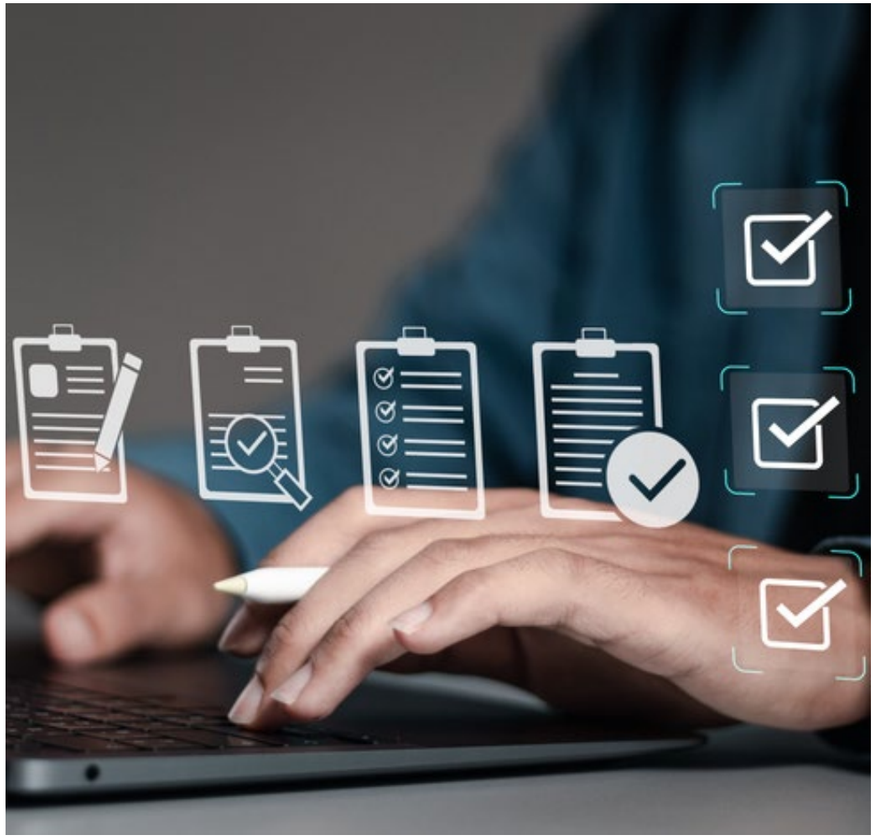
- Dedicated engineering program managers (EPMs) assigned to facilities with complex applications
- Pre-application guidance to streamline review of submitted applications
- Focus on problem-solving and faster processing
- Pilot phase: Three-year implementation and evaluation

Eligibility & Participation

- Open to facilities with complex permit applications
- Voluntary participation with funding agreements
- Selection based on project complexity, overdue permits, and resource availability

Key Benefits

- **Faster Permit Processing**: Dedicated staff focus on complex applications
- **Improved Communication**: Clearer expectations and better collaboration
- **Pre-Application Support**: Identifies and resolves issues early
- **Technical Expertise**: Guidance on emerging technologies and compliance
- **Prevents Project Delays:** Helps facilities avoid unnecessary permitting bottlenecks.



Step-by-Step Process

- **Expression of Interest** – Facilities reach out to the Air District
- **Program Setup** – establish guidelines, metrics, job duties, timekeeping protocols, and other operational needs
- **Initial Consultation** – Discuss scope, challenges, and funding agreement
- **Selection of Participating Facilities** – Air District completes funding agreements, hires staff, and initiates program
- **Pre-Application Assistance** – Engineering program managers provide early guidance
- **Streamlined Review** – Focused support throughout the permitting process
- **Feedback & Evaluation** – Continuous improvements based on facility input

Pilot Program Funding & Long-Term Vision

EPM Program launch – supported by Air District

- 3-month contract for program setup
- 6-month Air District funded EPM for initial roll-out

3-year facility-funded EPMs through funding agreements – 2 positions and limited participation

Potential transition to a voluntary fee-based model in FY 2030 with more EPMs and open participation

Ongoing evaluation to refine and expand program benefits

Measuring Program Effectiveness

- Reduction in processing times for complex permits
- Facility satisfaction and feedback surveys
- Number of application issues resolved
- Adaptability to emerging technologies and regulatory changes

How to Participate

- Contact the Engineering Division for more information
- Participate in an informational session
- Express interest and discuss funding agreement details
- Air District selects pilot facilities
- Selected pilot facilities establish funding agreement with Air District
- Begin working with an Engineering Program Manager

Questions & Discussion

Bay Area Air District
Engineering Division
415.749.4990
permits@baaqmd.gov

BACWA SPECIAL SEMINAR

Summary of Discussion from September 4, 2025, on the Klamath Ferry, San Francisco

Suggested follow-up items are highlighted

Attendees included representatives from the BACWA Executive Board, BACWA member agencies, BACWA staff, BACWA consultants (HDR), Regional Water Board, and SFEI.

Topic	Summary of Discussion
Agency Updates	• Regional Water Board managers shared updates about staffing, Board composition, and budget. • BACWA members shared updates related to nutrient management and other topics. SFPUC shared that the new Treasure Island plant will be starting up in the 2025-2026 wet season, and a design-build RFP has been issued for nutrient-related upgrades at Southeast Plant. EBMUD has continued to optimize the secondary treatment process for nutrient removal thanks to the tireless work of operators, laboratory staff, and others. San Jose plans to start up mechanical biosolids dewatering in November 2025, and is moving forward with aeration system upgrades for a portion of the plant. San Jose and Valley Water are negotiating an agreement for a demonstration facility for potable reuse. Union Sanitary District received bids for the next phase of their ETSU project that were $100M (58%) higher than expected, but will be moving forward nonetheless. Hayward's new laboratory is under construction and 100% design is complete for a nutrient removal project. Hayward also has a grant to explore a potential open cell wetland. Central San has completed design for a full demonstration of MABR technology, and has released an RFP for a PFAS adaptive management plan. FSSD awarded a contract for a Phase 1 nutrient reduction project in June 2025.
Joint PFAS Strategy	State and Regional Water Board staff are internally discussing ways to strategically address PFAS in wastewater. Seminar attendees agreed that proactive source control activities including education, pretreatment, and pollution prevention are key. BACWA plans to continue supporting wastewater source characterization efforts through Phase 3 of the regional PFAS study. This effort will be conducted in coordination with the ongoing *PFAS – Sources to Solutions* project led by SFEI. The Regional Water Board is also planning to include technology-based limits for PFAS in a general NPDES permit for discharge of treated groundwater.
Basin Plan Amendment	Regional Water Board staff are working on a proposed Basin Plan amendment related to the Nutrients Watershed Permit. The amendment would supersede specific portions of the statewide Compliance Schedule Policy, thereby allowing compliance schedules longer than 10 years for

Topic	Summary of Discussion
	qualifying nutrient reduction projects. Regional Water Board staff shared an informal draft of the Basin Plan amendment in advance of the seminar. BACWA staff and member agencies shared preliminary feedback on the informal draft Basin Plan amendment, particularly the need to address Early Actors, as well as the problems associated with differentiating "qualifying" and "non-qualifying" projects being carried out by an agency. Regional Water Board staff shared information about the project schedule, which will require about 6 months for CEQA substitute environmental documentation and another 6 months to prepare for Board adoption. After that, the Basin Plan amendment would require State Water Board and OAL approval, although it may not require EPA approval since the compliance schedule policy is not a water quality standard. Regional Water Board staff shared that they used this reference document in preparing the informal draft Basin Plan Amendment: Innovative Nutrient Removal Technologies: Case Studies of Intensified or Enhanced Treatment. BACWA plans to assemble member comments on the informal draft as well as recommendations for a staff report, and provide them to the Regional Water Board in October 2025.
Science to inform long-term policy on nutrients	Dave Clark (HDR) shared lessons learned from other US watersheds (e.g., Long Island Sound, Puget Sound, etc.) regarding effective water quality management strategies for nutrients, including TMDLs and alternative strategies. Some of the more successful outcomes have been achieved where funding was available (often federal funding), incentives for voluntary action existed, and where stakeholders outside of the wastewater and regulatory sectors were involved (e.g., drinking water, stormwater or recreation). Unfortunately, in many watersheds, progress has been impeded by legal battles, regulatory approaches based on unattainable water quality standards, and/or lack of funding. Link to slides.
NMS Science Update	Dave Senn (SFEI) shared details of a conceptual model for the 2022 algae bloom in SF Bay. Rapid expansion of the bloom was facilitated by light availability due to weak tidal mixing and the swimming ability of *Heterosigma*. Viruses may have contributed to the bloom's crash. The Nutrient Management Strategy (NMS) science team is continuing to investigate the 2022 bloom to answer relevant NMS management questions.

4.7.6 COMPLIANCE SCHEDULES

The Water Board is authorized to establish compliance schedules in accordance with State Water Board Resolution 2008-0025, "Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits" (Compliance Schedule Policy), as may be amended.

All the Compliance Schedule Policy provisions and requirements apply and must be met for a compliance schedule thereunder, except as provided herein. Specifically, to protect San Francisco Bay and its tidally-influenced tributaries from levels of biostimulatory substances that could promote aquatic growths to the extent that such growths adversely affect beneficial uses, the Water Board may establish longer compliance schedules than authorized by the Compliance Schedule Policy for an existing non-stormwater NPDES discharger subject to a more stringent effluent limitation from a new, revised, or newly interpreted biostimulatory substances water quality objective[1] (e.g., those regulated under NPDES Permit CA0038873) on or after July 10, 2024, for San Francisco Bay and its tidally-influenced tributaries when the discharger proposes to employ one or more qualifying projects to comply with the more stringent effluent limitation. A qualifying project as used in this section is a project that will take more than ten years to complete and ~~is~~ includes at least one of the following elements: (1) a nature-based solution (i.e., an action that uses natural processes [e.g., treatment wetlands] to improve water quality); (2) a water recycling project; (3) an innovative technology that requires extensive pilot testing and, when compared with conventional nitrogen removal technologies, would have a significantly lower carbon, economic, or physical footprint~~reduce energy usage, chemical usage, or sludge production~~~~increase~~; ~~or~~ (4) a project expected to achieve nutrient reductions significantly below the final effluent limitation; or (5) a supplemental nutrient reduction project implemented by a discharger that had ~~awarded contracts~~begun construction or implementation of ~~, committed fiscal resources, and was actively in design/construction on~~ an initial project to reduce total inorganic nitrogen discharges to San Francisco Bay by the effective date of the more stringent effluent limitation.

[1] This is in accordance with the Compliance Schedule Policy's compliance schedule authorization for an existing discharger to implement a "new, revised, or newly interpreted water quality objective or criterion in a water quality standard" (defined in the policy) that results in a permit limitation more stringent than the limitation previously imposed.

The discharger proposing one or more qualifying projects shall provide the following additional documentation beyond what the Compliance Schedule Policy requires:

(a) Feasibility analysis that demonstrates the qualifying project(s) can be implemented and the expected nutrient reduction from such project(s);

(b) Demonstration that the discharger needs more than ten years (from the date of the new, revised, or newly interpreted biostimulatory substances water quality objective resulting in a more stringent effluent limitation) to implement the qualifying project(s), ~~such as designing and constructing facilities or implementing new or significantly expanded programs and securing financing, to comply with the final biostimulatory substances effluent limitation or, if applicable, to achieve nutrient reductions significantly below the final effluent limitation~~; and

(c) Proposed schedule of tasks and reportable milestones to demonstrate diligent progress in implementing the qualifying project(s) to achieve compliance with final effluent limitation as soon as possible or, if applicable, to achieve nutrient reductions significantly below the final effluent limitation, with no more than one year between interim dates.

The Water Board will evaluate the information the discharger submits to ensure (1) that the proposed project is a qualifying project, (2) that the discharger has adequately demonstrated both the need for more time to implement the qualifying project(s) and its expected nutrient reductions, and (3) that compliance with the final effluent limitation interpreting the biostimulatory substances water quality objective, through the qualifying project, will be achieved as soon as possible. If the Water Board determines that the discharger has met all the requirements under the Compliance Schedule Policy (other than the ten-year maximum compliance schedule duration) and the requirements herein, then the Water Board may grant a longer compliance schedule in a permit to accommodate the qualifying project not to exceed XX years. Any such compliance schedule shall require compliance through the qualifying project as soon as possible, taking into account the amount of time reasonably required for the discharger to implement the qualifying project(s), and enforceable milestones, including interim effluent limits.

Where a discharger proposes a portfolio of qualifying and non-qualifying projects to comply with the final effluent limitation interpreting the biostimulatory substances water quality objective and the Water Board grants a longer compliance schedule in accordance with the preceding paragraph:

(a) Only the qualifying project(s) may take longer than ten years to complete.

(b) The Water Board shall include enforceable interim milestones, including interim limits, that require the discharger to complete both the non-qualifying and qualifying projects as soon as possible, and require the discharger to complete the non-qualifying project(s) in accordance with any compliance schedule granted under the Compliance Schedule Policy and its maximum compliance schedule length.

(c) Interim limits shall reflect the ~~expected~~ improved treatment performance until a discharger completes its full portfolio of projects to comply with final effluent limitation in the timeframe allowed.

DRAFT BASIN PLAN AMENDMENT with proposed BACWA markups

For discussion at BACWA 9/19/25 Executive Board meeting

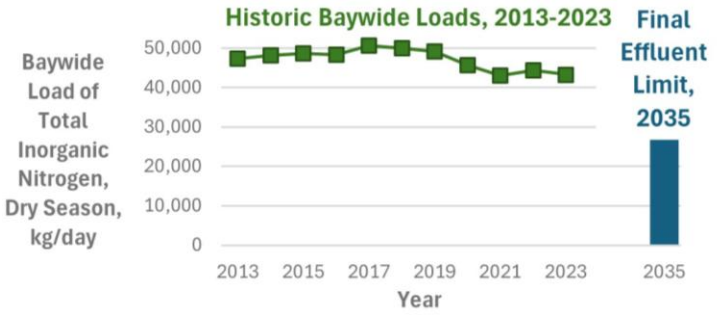
Proposed content for Staff Report*:

- List of agencies proposing a known qualifying project with qualitative explanations of why these projects need more time. Note that these projects are examples and are not an exhaustive list as agencies are still selecting compliance pathways.
- Description of innovative projects and what benefits may be achieved. These may include:
    - Direct ancillary environmental benefits such as reduced GHG emissions, energy, solids production, or chemical use
    - Reduce cost or footprint to free up funds or space for additional beneficial projects
    - Produce improved effluent quality, including for future recycled water
    - Others?
- Discussion that sometimes pilots are unsuccessful, which impacts timelines.
- Explanation of why early actors need more time. The project currently underway needs to wrap up prior to initiating new project to meet limits. This applies to projects currently underway. If the Water Board changes the limits in the future, this will apply to all projects underway at that time.
- Clarification of qualifying versus non-qualifying project. A traditional project that will need more time pending the completion of an innovative/NBS/RW project is part of the qualifying project.
- Updated version of 2024 memo on compliance timelines (see attached)

**We will gather as much info as is available via the Winter 2025/26 RFI for Compliance Milestones and the Regional Plan*

In 2024, the SF Bay Regional Water Board reissued the Nutrient Watershed Permit (R2-2024-0013), which profoundly impacts many Bay Area wastewater dischargers. The Permit contains an aggregate Total Inorganic Nitrogen (TIN) load for Publicly-Owned Treatment Works (POTWs) discharging to San Francisco Bay. These aggregate dry season limits are 40 percent lower than the 2022 dry season load. Some agencies will need to reduce loads by up to 70 percent, while others will not be impacted by the new limits.

The final load TIN load limits will be in effect starting in the 2035 dry season (May – Sept), which means wastewater dischargers have about 10 years to come into compliance.



This infographic explains why some wastewater agencies planning for compliance with the Nutrient Watershed Permit will need more than 10 years to achieve load reductions.

For agencies that are planning treatment upgrades to remove TIN, key schedule considerations include:

Site Constraints
The Bay Area is urbanized. Many POTWs do not have space for established technologies like the Modified Ludzack-Ettinger (MLE) nutrient removal process.

Cost and Financing
POTWs are public agencies, and customer affordability is a major concern. Since State and federal funding is limited, POTWs must choose cost-effective options.

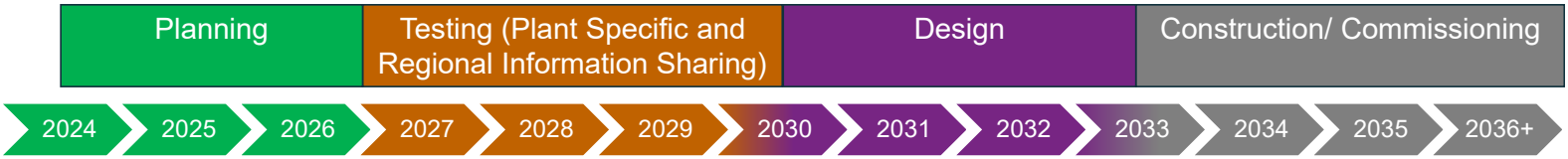
Risk Aversion
To responsibly use public funds, POTWs must choose projects with a high likelihood of success. New technologies will require extensive testing.

Intensification Technologies
Because of these constraints, many Bay Area POTWs are likely to rely on **intensification technologies** that have the potential to remove nutrients by modifying existing assets, rather than by constructing expensive, all-new treatment trains. Many of these intensification technologies, such as Membrane-Aerated Biofilm Reactors (MABRS) and deammonification processes, are still **emerging technologies** with most full-scale installations in Europe and Asia.

A hypothetical intensification project to meet the final load limits is expected to include four phases:

- Phase 1: Planning (2-3 years)
- Phase 2: Testing (3-4 years)
- Phase 3: Design (3 years)
- Phase 4: Construction, Startup, and Commissioning (5+ years)

Other Elements to be completed in Parallel:
- Stakeholder Outreach
- Funding
- Environmental, such as CEQA and air permits



Each of these four phases is discussed below in greater detail.

1. Planning
Duration: 2-3 years

POTWs need to identify a list of alternatives, develop facility needs for the various alternatives, screen alternatives, and select a preferred alternative. Most POTWs will complete this work with assistance from a consultant selected through a competitive process (Request for Proposals or RFP), which typically adds 2-6 months to the project schedule. The planning process can take as long as 24 months and often involves numerous workshops to incorporate the views of stakeholders including managers, operators, Board members, partner agencies, ratepayers, and neighbors. Two key considerations for selecting the preferred alternative are the adaptability if future load limits are lower and comparing treatment upgrade options with multi-benefit projects.

Planning	Testing (Plant Specific and Regional Information Sharing)	Design	Construction/ Commissioning

2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036+

2. Testing Duration: 3-4 years

Testing is strongly recommended for emerging and innovative technologies. The testing phase informs design criteria and verifies vendor performance claims. Testing can happen at different scales, all the way from bench testing in a laboratory, to pilot scale testing at a few gallons per minute, to demonstration scale testing using large tanks or split stream treatment.

Like the planning phase, this phase is often carried out by a team selected through a competitive RFP procurement process, adding six months to the schedule.

Regional information-sharing across the Bay Area is needed to advance technologies with the potential to reduce footprint, energy use, chemical use, or greenhouse gas emissions.

Pilot test of MABR at Central San

Pilot test of Microvi biocatalyst at Oro Loma

3. Design Duration: 3 years

The design phase typically includes several key milestones:

- **Geotechnical studies** are crucial since many Bay Area POTWs are located near the Bay margin.
- **Preliminary Design** producing with a Facility Plan or Preliminary Design Report at about 10% - 15% design.
- A **Value Engineering** study to address project costs.
- **Final design** milestones (e.g., 30%, 60%, 90% and 100%).

Like the planning and testing phases, this phase is typically carried out by a consultant team selected through a competitive RFP procurement process.

4. Construction, Startup, and Commissioning Duration: 5+ years

Once design is complete, funding is in place, and all permits are in hand, the POTW should be ready to put the project out for a competitive bid. After a qualified contractor is selected, the project can move forward into the construction phase, which typically takes several years. Construction is often limited to narrow windows during the dry season since wastewater treatment plants must remain operational even during construction.

Following construction, the startup and commissioning step can take up to a year.

This project phase is highly susceptible to delays due to shortages of contractor labor, equipment, and materials.

Summary

Bay Area POTWs are moving forward with projects to meet the nutrient reduction requirements of the 2024 Nutrient Watershed Permit. Many agencies will be relying on intensification technologies that allow treatment plants to maximize their use of existing assets, but these emerging technologies require testing before moving forward into construction. More information about intensification technologies was shared at the September 2024 workshop on Nutrient Removal in Bay Area Water Reclamation Facilities. https://bacwa.org/nutrient-seminar/

Projects that require all four project phases – **planning, testing, design, and construction** – are expected to take more than ten years to complete. Currently, there are individual Bay Area POTWs in each of these four phases, and some have already completed construction.

Bay Area POTWs are also incorporating multi-benefit projects into their nutrient removal plans. Multi-benefit projects, including recycled water and nature-based solutions, also require long lead times for coordination with partner agencies such as drinking water, flood control, and natural resource agencies.

Case Studies

Project schedules for several ongoing nutrient removal upgrades at Bay Area POTWs include:

- Union Sanitary District Enhanced Treatment & Site Upgrade – 14 years, including 9 years for construction
- City of Palo Alto Secondary Treatment Upgrades – 17 years, including 6 for construction
- City of San Leandro Treatment Wetland Project – 9 years, with 1-2 years for construction
- City of San Mateo Clean Water Program – More than 10 years, including 4 for construction

BACWA BAY AREA CLEAN WATER AGENCIES

This summary was prepared by BACWA with assistance from HDR. For the full memo, see https://bacwa.org/nutrients/

Date: 10/16/2024

Prepared by: Michael Falk, PhD, PE

Reviewed by: Dave Reardon, PE
Bill M'Coy, PE

Project: BACWA 3rd Watershed Permit Support

SUBJECT: HYPOTHETICAL SCHEDULE TO MEET THE 3RD WATERSHED PERMIT

Introduction

The recently adopted third nutrient watershed permit (R2-2024-0013) for San Francisco Bay wastewater treatment plants requires compliance with final effluent limitations by the 2035 dry season (May to October 2035). The permit requires a 40 percent baywide aggregate total inorganic nitrogen (TIN) load reduction compared to the 2022 dry season values. A fundamental question is whether the Bay Area's publicly-owned treatment works (POTWs) will be able to select a TIN reduction technology, evaluate the technology for their POTW (if required), design, construct, and commission such a facility within the allocated timeline. For POTWs considering multi-benefit regional projects, the ability to secure agreements for such projects could exacerbate the challenges with meeting such schedule requirements.

This brief memorandum is intended to present a hypothetical schedule regarding the various steps associated with such a schedule. NOTE: this schedule is based on a POTW considering an emerging/innovative technology due to the potential benefits (e.g., footprint, energy efficiency, reduced chemical use, cost savings, etc.).

Selecting an established technology does have the potential to accelerate the schedule, but it might come at a cost in terms of footprint, energy, chemicals, adaptability for lower limits, etc. Given the urbanization of the Bay Area, a more established technology (e.g., modified ludzack-ettinger (MLE)) that requires a larger footprint might not fit within existing site plans. In such instances, it is anticipated that agencies will evaluate various "intensification" technologies that have the potential to do more within existing assets. Regardless, removal of the test phase would still take more than 10 years to complete from planning through commissioning.

Results & Discussion

A hypothetical schedule to meet the adopted nutrient load limits in the third watershed permit is grouped into four different phases as follows:

- Phase 1: Planning (approximately 2-3 years)
- Phase 2 (if needed): Testing (approximately 3-4 years)
- Phase 3: Design (approximately 3 years)
- Phase 4: Construction, Startup, and Commissioning (approximately 5+ years)

A visual depiction of these four phases is provided in Figure 1. To meet the nutrient load limits, a POTW needs to select a technology, confirm the technology's ability to reliably meet such TIN limits

at their respective facility (both current and potential future requirements), design, construct, and commission the technology.

In parallel with all four phases, there are other elements that are essential for project(s) success and implementation:

- **Funding and Financing:** this considers both securing grants and various external funds (e.g., WIFIA), as well as performing rate studies to determine whether rate increases will be required to fund the effort.
- **Environmental and Permitting:** this covers the potential for California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) for permitting. The requirement will be largely dependent on the type of project. As for permitting, POTWs will be required to comply/renew any on-going treatment type permits in parallel with this effort, as well as securing any new permits associated with the upgrades.
- **Stakeholder Outreach:** Given the scale of the anticipated nutrient reduction upgrades, stakeholder outreach will be essential for project success.

Details for each phase are provided in the subsections that follow. Furthermore, there is a subsection titled “Other Scheduling Challenges/Constraints” after the four phases that covers other elements which might impact schedule.

Phase 1: Planning

To perform the planning, each POTW will likely procure a consultant in most cases under a competitive request for proposals (RFP) process. The RFP process can take several months as the POTW needs to draft the RFP, followed by in most cases board approvals, followed by proposal submittals, consultant selection, and contract execution. Such a process can last anywhere from a two to six months. The basis for such a range is the RFP tasks can require a visioning period as the POTW develops the list of tasks, followed by a sufficient timeline for consultants to propose/interview process, and legal review.

Following consultant selection, the team will need to identify a list of potential alternatives, develop facility needs for the various alternatives, screen alternatives, and select a preferred alternative(s) to carry forward. Such a decision-making process can take as long as 24 months as the consulting firm(s) will need to provide POTW specific results and there will need to numerous workshops to screen the alternatives. A workshop setting is desired with such an effort as the voices from the various stakeholders need to be incorporated into the decision-making process. Otherwise, the POTW is at risk of not weighing the perspectives that are critical for a successful project. As such, workshops take time due to full calendars coupled with having sufficient time in between each workshop to perform the required work.

A key element that will require thoughtful consideration while comparing/contrasting technologies is adaptability if future load limits are lower.

Phase 2: Testing

A testing phase is included for two fundamental reasons:

1) Develop POTW specific design criteria for the technology(s) carried forward from Phase 1. While one can argue that it might not be required for all technology(s), it is highly recommended for emerging and innovative technologies.
2) Regional information sharing as POTWs across the Bay test different technologies. This information sharing could be invaluable for risk management as POTWs strive to advance technologies that have the potential to reduce footprint, energy, chemicals, greenhouse gas (GHG) emissions, etc.

As previously noted, POTWs would likely evaluate various intensification technologies that would fall under emerging/innovative technology status. If such technologies are carried forward due to their associated benefits, most POTWs would perform a testing phase to inform design criteria and verify/validate vendor performance claims.

Technology status classification according to criteria developed by Tetra Tech (2013)[1] is provided in Table 1. Many of the more progressive technologies have been conceived and established in Europe, particularly deammonification. Asia has been quick to adopt these progressive technologies. North America has been slower to adopt the cutting-edge technologies in wastewater treatment.

The testing scale/duration is largely predicated on technology status and testing questions. If technology testing is carried forward, the POTW might need to go through the procurement process if the effort is led by a team different from the planning. Such an effort would likely be carried out via the RFP procurement process which can take upwards of six months as previously noted in Phase 1.

If the focus is to merely perform a treatability study, the scale might be limited to a bench- and/or pilot-scale at less than 5 gallons per minute (gpm) to confirm that the technology does as it is advertised. In contrast, if the focus is on developing design criteria as the technology has never been used in this application it might take a larger scale.

A case study that illustrates the sequential steps associated with testing duration and the various scales is the recently completed EPA Regional Grant at Oro Loma/Castro Valley Sanitary District (OLSD) that evaluated the Microvi Biocatalyst technology.[2] At the onset, the Microvi technology was “emerging” according to Table 1 as the technology had been used outside the US, but it had little or no testing in the US. Given the “first of its kind” in the US, OLSD underwent a methodical progression of testing as illustrated in Figure 2. Specifically, the OLSD experience took multiple years as it began at the lab-scale for treatability purposes, followed by pilot-scale at a few gpm to

[1] USEPA (2013) Emerging Technologies for Wastewater Treatment and In-Plant Wet Weather Management. EPA Grant Number 832-R-12-011. Prepared by Tetra Tech and Project Partners. USEPA, Washington, DC.
[2] HDR (2022) San Francisco Bay Nutrient Removal: Implementing Next-Generation Biological Sidestream Treatment at Oro Loma Sanitary District Wastewater Treatment Plant. Final Report: EPA Region IX Grant. San Francisco, CA

evaluate how the technology dealt with diurnal and seasonal variability, as well as ammonia removal rates. And lastly, OLSD tested the technology at the demonstration-scale within an unused tank to validate the technology. Overall, the effort took two and a half years to complete from lab-scale to demonstration-scale.

Phase 3: Design

Upon completing the planning efforts (i.e., Phases 1 and 2), the POTW likely needs to undergo another procurement process to select the designer. Similar to Phases 1 and 2, this process might take upwards of six months to implement.

The design of such facilities has numerous milestones with the delivery/review process. The initial deliverable is typically referred to as the “Facility Plan” and/or “Preliminary Design Report”. Such reports are typically viewed as 10 to 15 percent of the design. As with each phase, there is an owner review period, followed by addressing any outstanding comments and finalizing the report. Also, a Value Engineering (VE) study should be performed at this stage. Typically, the Preliminary Design Report and VE are performed over a 9 to 12 months.

The next progression is the final design which has various milestones (e.g., 30, 60, 90, and 100 percent drawings and specifications) that require a reviewing period, followed by review meetings to reach consensus on any outstanding comments and/or concerns. The final design duration for delivering complex nutrient upgrades is approximately 15 to 18 months. Early in the final design period, geotechnical studies must be completed to collect subsurface data and develop foundation design criteria. Also, additional value engineering studies are typically performed which can add several months to the design schedule.

A recent Bay Area example is the City of San Mateo’s upgrades from secondary treatment to nutrient removal using the membrane bioreactor (MBR) technology. The timeline from beginning the 30 percent to submitting the 100 design was approximately 18 months. While this example represents a complex sequencing effort to keep the plant in operation while constructing the upgrades, several nutrient upgrades in the Bay Area will face similar sequencing challenges.

Phase 4: Construction, Startup, and Commissioning

Following design and funding, the POTW should be ready to bid the project (if traditional design, bid, build practices). Such an effort requires the POTW to gain board approval following the 100 percent design, followed by advertising, and evaluating the bids. Upon selecting a contractor, the POTW will need to go through contracting prior to starting construction. This procurement process is similar to procuring a consultant as noted in Phases 1 through 3.

The initial step in Phase 4 is the construction step. Construction period for a major plant upgrade will be at minimum 3.5 years. To date, the City of San Mateo MBR has been under construction for over 3 years, and it is expected to be completed in 2025.

Following construction, the startup and commissioning step can vary greatly in the case of biological processes as is the case for nutrient reduction upgrades. In most cases, startup and commissioning will range from 6 to 12 months. For example, SacSewer’s recent EchoWater upgrades took nearly 12 months to transition from the existing high purity oxygen (HPO) tanks to the new 5-stage biological nutrient removal process.

Other Scheduling Challenges/Constraints

Besides the aforementioned items under Phases 1 through 4, there are other inherent schedule challenges that might require additional time, such as:

1) **Technology Information Sharing amongst POTWs:** a cornerstone of the regional nutrient management strategy to date has been collaboration amongst POTWs, regulators, scientists, and non-government organizations (NGOs). Continuing such collaboration is fundamental to advancing long-term regional solutions. From a technology perspective, it is critical that POTWs share any information gleaned from testing emerging and innovative technologies, regardless of scale (i.e., bench-, pilot-, demonstration-, and/or full-scale).
   As noted in Phase 2, it will take years for POTWs to develop experimental test plans, implement such plans, host open houses, write up reports summarizing the findings, and disseminate relevant findings amongst the POTWs. Such information sharing is essential for advancing regional solutions. While this element is included in Phase 2 of the hypothetical schedule, it is also included in this subsection as the duration is fluid as testing schedules are not necessarily aligned.
2) **Legal:** for large-scale upgrades such as those anticipated with the third watershed permit, the legal discussions revolving around terms and conditions between the owner and planner/designer can delay efforts for months. Under worst-case circumstances, this might require a POTW to restart the process in the event that the consultant, vendor, and/or contractor can not reach terms and conditions.
3) **Environmental:** the scale of such upgrades might require the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) permitting. The findings from such efforts have the potential to delay project implementation to address any pitfalls. The extent of such delays is case specific and unclear until the problem is identified and a solution developed.
4) **Contractor Labor/Equipment/Materials Availability:** as numerous projects advance in a similar timeline across the Bay, there are concerns over contractor availability. Specifically, there are concerns over skilled labor availability, having sufficient equipment available to implement such construction (e.g., cranes), and materials available simultaneously.
   A prime example that speaks to this challenge is the schedule delay on concrete with the recent upgrades at the $1.7 Bil EchoWater Project for SacSewer. During construction ramp up, the Oroville Dam emergency dam work delayed the EchoWater Project approximately six months as all the allocated concrete was consumed by the Oroville Dam work as it was a higher priority in the region.

5) **Equipment Lead Times:** since COVID19, various pieces of equipment within the wastewater industry have been challenging to secure in a timely manner. For example, the lead time on securing relatively general electrical equipment has been as extreme as 1-2 years for equipment (e.g., substation transformers, various valves, pipes/fittings, etc.). While the issue seems to be improving, it is unclear what the future holds. As such, the industry needs to have our "eyes wide open" on what the impacts might be if equipment lead times worsen in the future.
6) **Maintenance of Plant Operations (MOPO) Elongated Construction Schedules:** as POTWs navigate how to keep the existing plant operational during construction to maintain NPDES limits, they typically develop a MOPO to define the construction sequence. The findings from such MOPO's will define how many construction seasons are required to implement upgrades.
   It is expected that the number of construction seasons could be longer than expected as upgrades as significant as nutrient reduction are often complex that require bypasses, shutdowns, etc. that are limited to the dry season.
7) **Regional Multi-Benefit Projects:** as POTWs consider regional solutions, the two areas that routinely rise to the top are nature-based solutions (NbS) and recycled water as captured in the second watershed permit deliverables. While attractive for addressing challenges beyond nutrients (e.g., sea level rise for NbS and water supply for reuse), such regional multi-benefit projects can take longer than traditional compliance driven projects due to scheduling outside of a POTWs control (e.g., agreements between multiple parties), as well as implementation timelines that might differ from the third WSP.
8) **Risk Management:** as Bay Area utilities seek innovative nutrient management solutions that balance compliance reliability with the potential to reduce technology footprint, energy, chemicals, and others, there is the potential risk that a technology might not meet the anticipated results. In such instances, POTWs should perform testing to verify and validate technology vendor claims specific to their plant/region. Such findings should be shared with POTWs across the Bay as previously discussed for Phase 2.
   Another relevant example is for a POTW considering a nature-based solution that could struggle to reliably meet the anticipated nitrogen reduction goals. In such instances, the POTW will need to modify their plans for meeting TIN load caps and consequently struggle to meet the compliance schedule.
9) **Fourth Watershed Permit:** the fourth watershed permit is anticipated in 2029. The findings associated with the third watershed permit, as well as the health of the Bay should inform the fourth watershed permit findings. The TIN load limits could be more stringent than those associated with the third watershed permit. The extent of such a reduction is unclear. As

agencies select an adaptable technology that lends itself to lower limits, this also might require testing to verify/validate technology claims.

10) **Permitting:** as POTWs transition towards construction, there are dozens of required permits (e.g., air emissions) that have the potential to delay the startup and commissioning of nutrient reduction upgrades. The extent of such a reduction is highly dependent on the particular permit that is delaying the project.
11) **Contractor Availability/Pricing:** given the scale of such upgrades across the Bay, there are concerns about contractor availability, emphasis on skilled laborers. This could translate to longer construction timelines, as well an increase in construction pricing. Profound cost increases could delay projects as POTWs secure the funding to finance such large projects.
12) **Miscellaneous:** miscellaneous refers to items not already captured that might delay projects. For example, as POTWs deal with aging infrastructure, there might be a situation where keeping a plant operational due to failed equipment might delay construction of nutrient reduction upgrades.

Summary and Discussion

Overall, as POTWs develop their schedule for meeting the nutrient reduction requirements by May 2035, the schedule could take longer than the allocated 10 years. This memorandum identifies the approximate duration for each phase from planning through commissioning, as well as identifying other potential issues that might further delay project implementation.

A key feature of this implementation schedule is the inclusion of a test phase. This was included to i) serve as a means to develop POTW specific design criteria and ii) share information amongst the Bay Area POTWs and beyond. While this phase might not be required for every technology per se, allocating time for technologies that warrant such testing would generate invaluable industry data for Bay Area POTWs and beyond. Such information sharing would help manage risk as the data generated might provide the confidence to select a technology that otherwise would not be selected.

Even if the testing phase is excluded, the overall effort would still take approximately 10 years to complete from planning through commissioning (based on Figure 1).

Overall, the listed durations are simply approximations based on engineer's best judgment. It is expected that there will be instances where each phases duration will take significantly less time than listed and vice versa. The intent was to showcase how long each phase might take. It is recommended that each POTW develop their own specific implementation schedules to confirm the required implementation duration.

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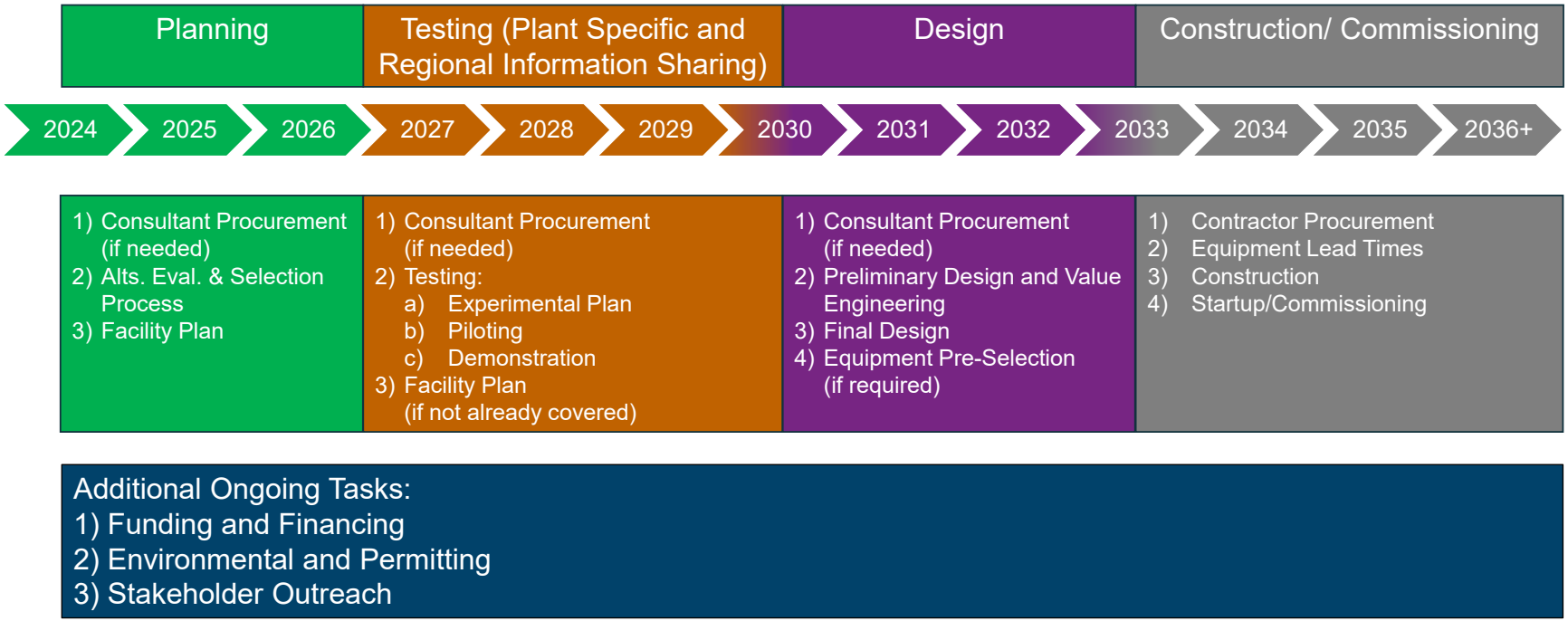


Figure 1. Illustration of the Four Phases Associated with Planning through Commissioning a POTW for Nutrient Removal *,**

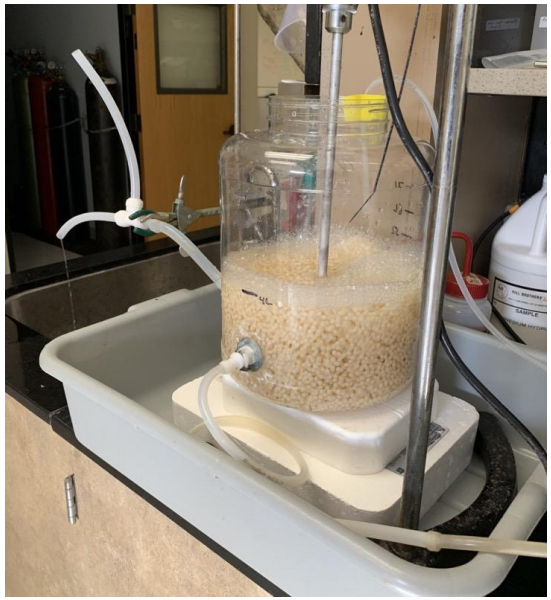
* The 4th WSP will come out in 2029. The limits and compliance schedule might need to be modified accordingly.

** Additional hypothetical challenges that could delay the schedule as noted in the main body: i) technology information sharing amongst POTWs, ii) legal review, iii) environmental, iv) contractor labor/equipment/materials availability, v) equipment lead times, vi) maintenance of plant operations elongated construction schedules, vii) regional multi-benefit projects, viii) risk management/sharing, ix) 4th watershed permit, x) permitting, and xi) miscellaneous (e.g., competing demands).

Table 1. Technology Status Classification Definition (Tetra Tech, 2013)

Technology Classification	Definition	Bench-Scale Testing	Pilot-Scale Testing	Demonstration-Scale/ Full-Scale Installations	Comment
Established	Technology used at >1 percent of full-scale facilities (150) in the US	Yes	Yes	Yes	May include technologies that are widely used although recently introduced in the US
Innovative	Technology that meets one of the following criteria: • Some degree of initial use (i.e., <1% full-scale facilities (150) in the US • Available and implemented in the US for <5 years • Established overseas	Yes	Yes	Yes	
Emerging	Technology has been tested at a pilot- or demonstration-scale, or has been implemented at full-scale	Yes	Yes	Yes	
Research	Technology is at the development stage and/or has been tested at laboratory- or bench-scale.	Maybe	No	No	Technology that has reached demonstration-scale overseas are considered to be research technologies for US applications

[a] Might be limited to outside the US
[b] ≤3 installations or operated for <1 year



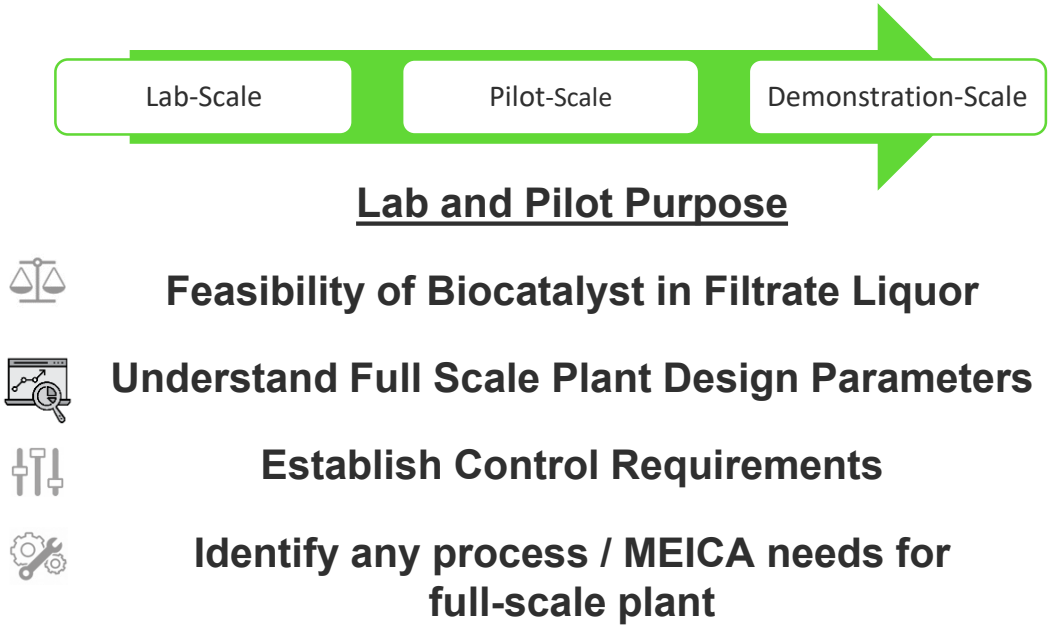


Figure 2. Illustration of the Progression from Lab-Scale to Full-Scale Demonstration at Oro Loma/Castro Valley Sanitary District

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From: Chris Thomas
To: Lorien Fono; Mary Cousins; Falk, Mike; Hammond, Charles
Cc: David Primozich; Erik Ringelberg
Subject: RE: BACWA Executive Board Meeting & SOW #2
Date: Thursday, September 11, 2025 9:22:52 AM

Hi Lorien,
Yes, we are nearly done with the initial round of outreach. We have now met with all the large and medium agencies, except for one last meeting which is scheduled for later this month. The conversations have been informative and have given us a much better understanding of the circumstances.

We have found that among the agencies there are a number of shared questions and concerns relating to matters such as timing, costs, risk, operational flexibility, and long-term certainty. This has been helpful for informing the potential structure of a trading program for the Bay as well as daylighting areas of uncertainty that will need to be addressed to establish a program. I believe that the agencies have similarly found the discussions informative as we have addressed many of their initial questions.

Although we haven't met with the smaller agencies, we would like to arrange a joint meeting with those entities at some point if time and budget allow. However, at this time we feel that we have enough information to proceed with the next tasks. We are coordinating with HDR to kickoff this second phase. We expect we will have more progress to report soon.

Best,
Chris

From: Lorien Fono <lfono@bacwa.org>
Sent: Wednesday, September 10, 2025 3:26 PM
To: Chris Thomas <cthomas@thefreshwatertrust.org>; Mary Cousins <mcousins@bacwa.org>; Falk, Mike <Mike.Falk@hdrinc.com>; Hammond, Charles <Charles.Hammond1@hdrinc.com>
Cc: David Primozich <primozich@thefreshwatertrust.org>; Erik Ringelberg <Erik@thefreshwatertrust.org>
Subject: RE: BACWA Executive Board Meeting & SOW #2

We have another Board meeting scheduled for next Friday 9/19. Do you have any updates on the BACWA trading analysis that I can pass along?

Bay Area Clean Water Agencies Water Quality Trading Feasibility Assessment

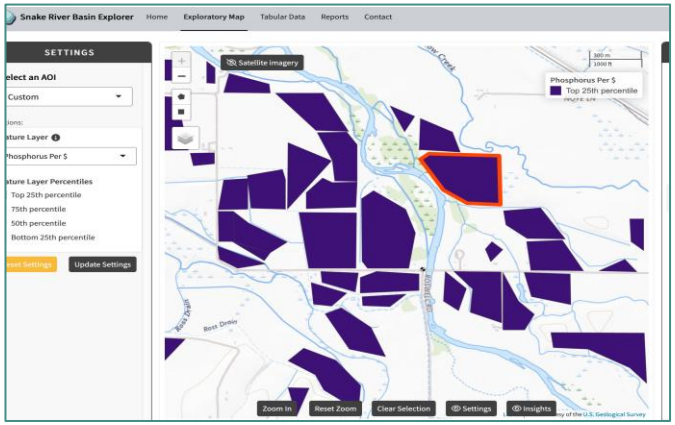
David Primozich, Vice President of Water
Chris Thomas, Sr. Attorney & Policy Specialist

September 2025

THE FRESHWATER TRUST™

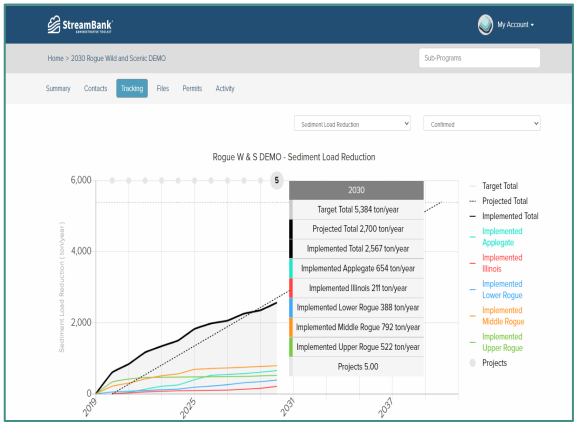
Who Is The Freshwater Trust?

A 501(c)(3) working to incorporate basin-wide water quality management strategies into Clean Water Act compliance programs



Watershed Analytics

Compliance Program Design & Permit Support



Compliance Program Administration

2025 Workplan

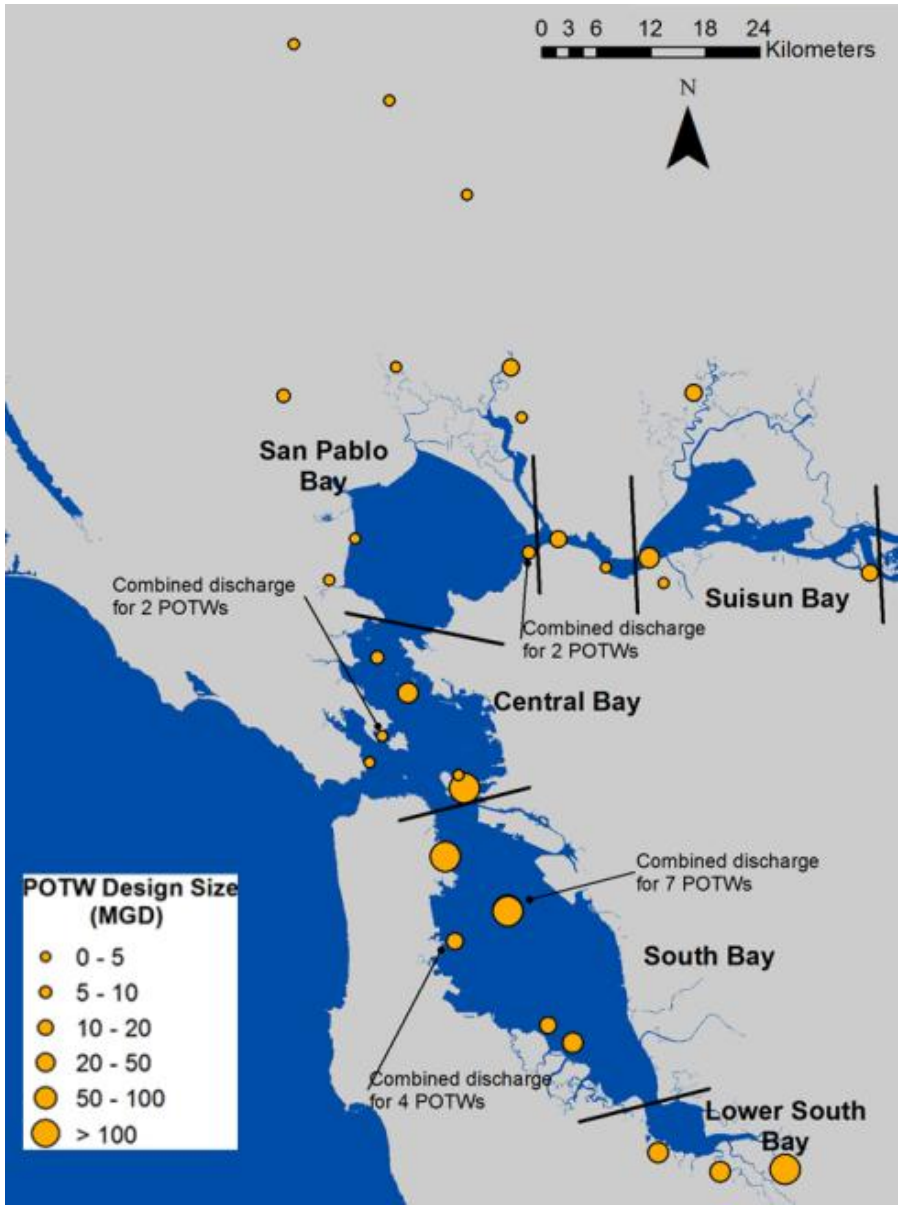
1. Outreach to BACWA Members, Experts & Stakeholders
   - Meet BACWA members to provide WQT information and document individual circumstances, interest in trading, and their questions and concerns
2. Initial Technical Analysis & Data Gap Investigation
   - Identify existing tools, information, partners and data gaps that are relevant to the development of a functional WQT program for the San Francisco Bay
3. Evaluate WQT Compliance Program for Nutrients
   - Analyze options and considerations and define the characteristics of a WQT program tailored to the circumstances
4. Propose Next Steps for Pursuing a WQT Program
   - Identify pathways to resolve outstanding questions, build support for WQT program among stakeholders and regulators, and establish structures necessary for a functional WQT program

THE FRESHWATER TRUST™

What Is Water Quality Trading?

Watershed-based approaches enable permittees to coordinate actions to deliver better water quality outcomes faster and more cost efficiently.

Permittees participating in a trading program can coordinate investments to achieve permit compliance.



Basics of Water Quality Trading

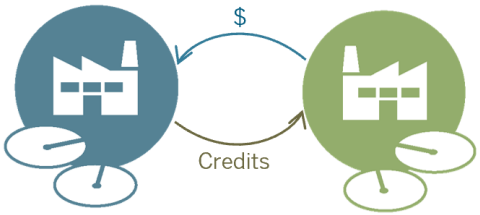
Many options for WQT program structure and operation

To be technically credible and legally durable, WQT programs must have:

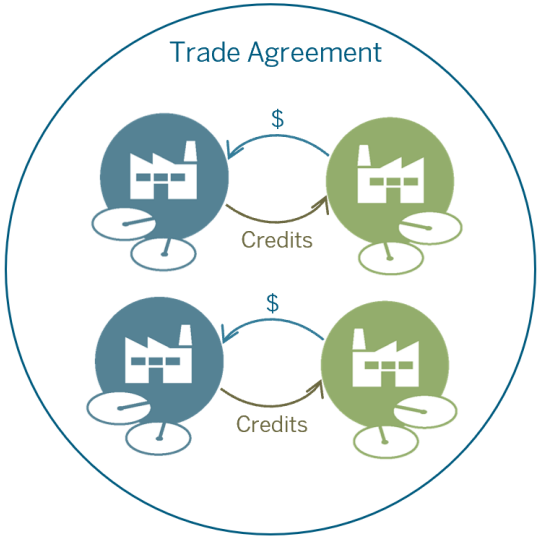
- **Standards** for eligibility
- Clear **permit terms** that define tradable discharges
- **Transparent systems** for facilitating transactions, tracking and reporting performance and custody of credits

Point-to-Point Source Trading Scenarios

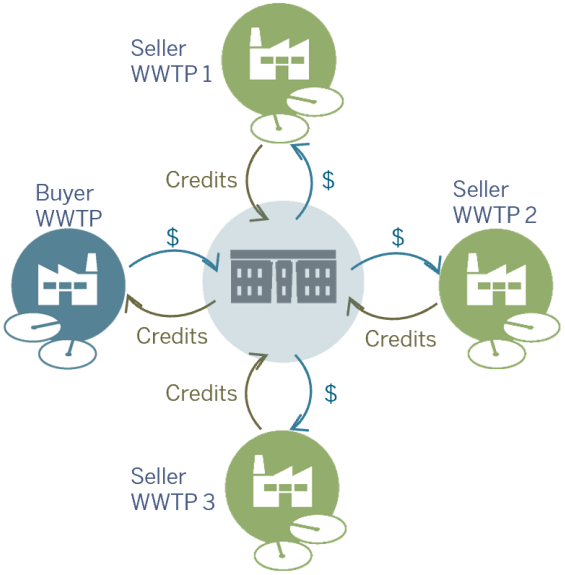
Trading between two point sources



Multiple facility trading



Point source trading through clearinghouse



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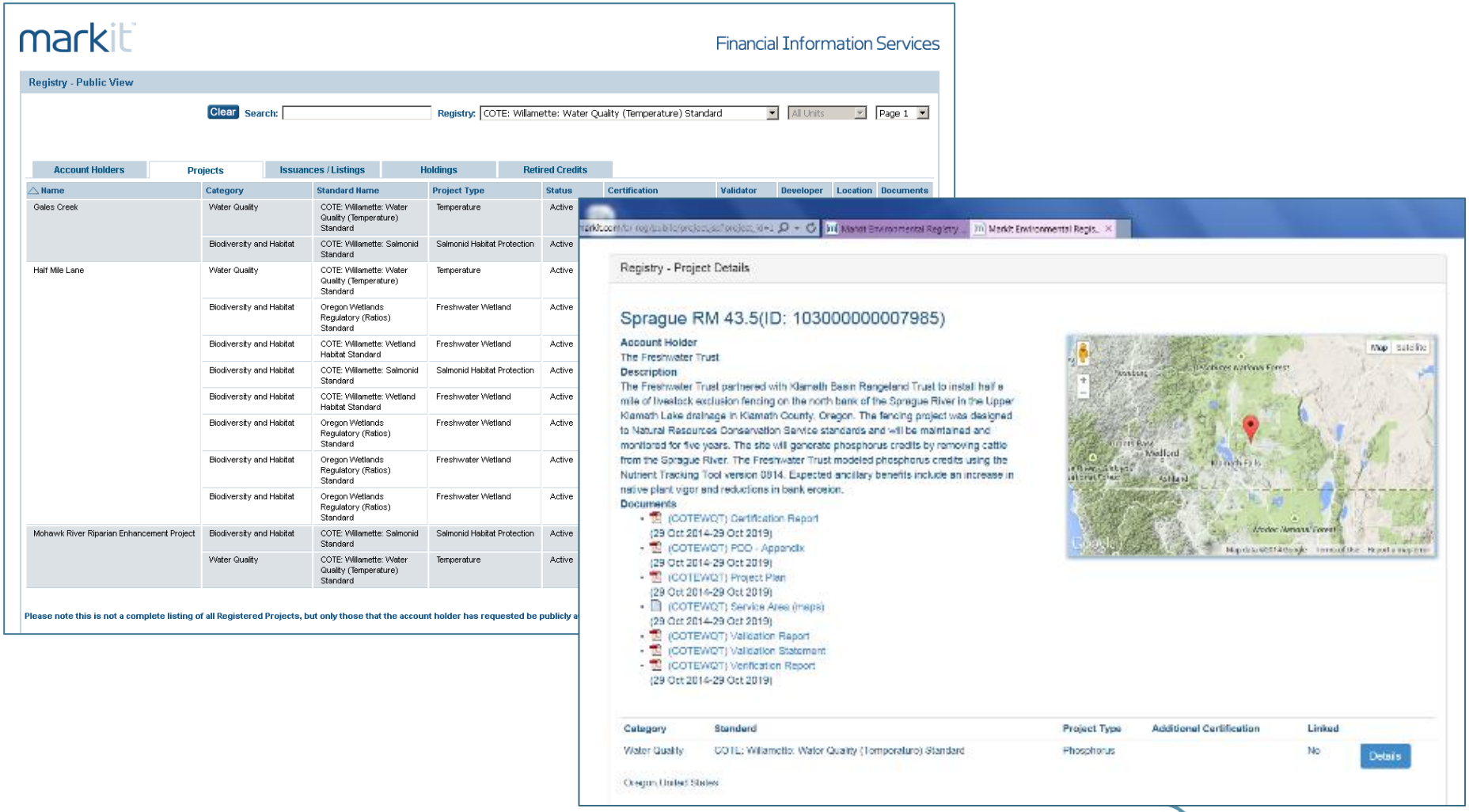
Infrastructure for Credibility & Transparency



Tracking & Reporting Outcomes

StreamBank ADMINISTRATIVE TOOLKIT

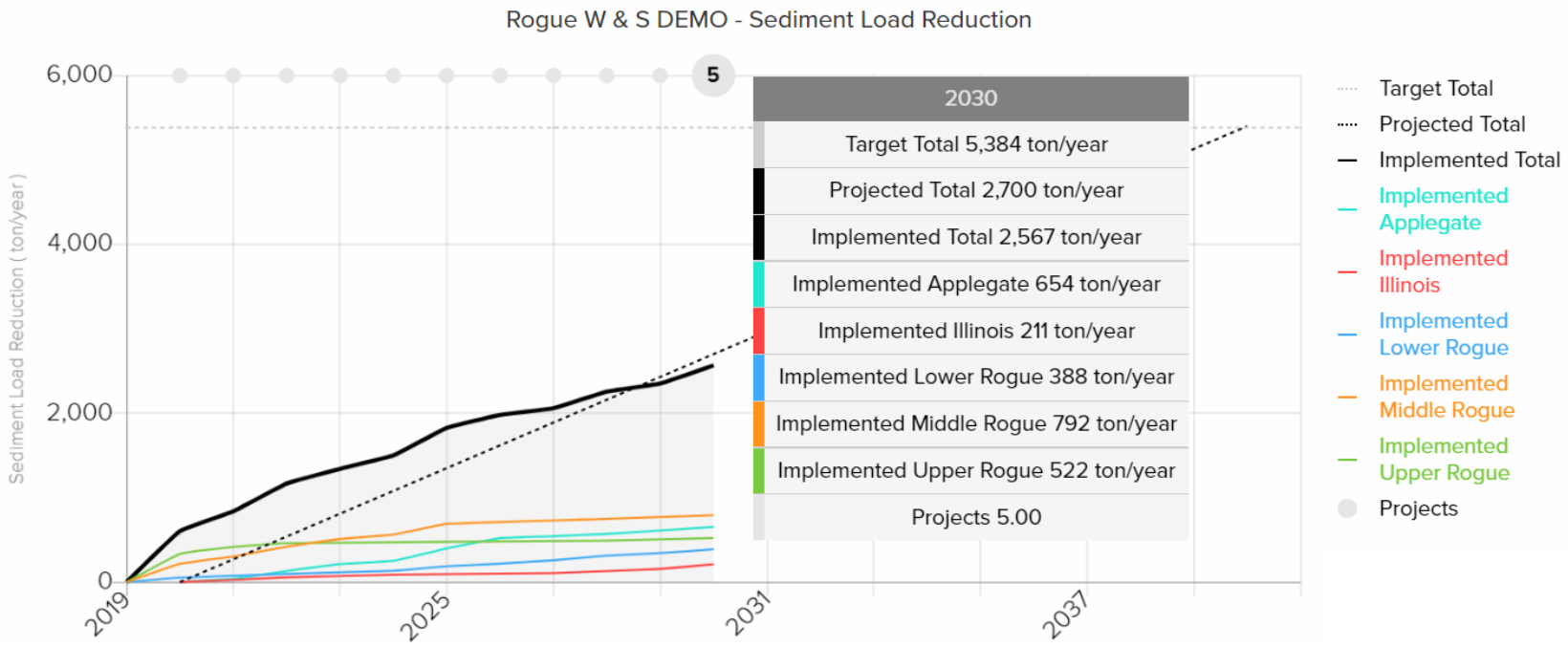
My Account

Home > 2030 Rogue Wild and Scenic DEMO

Sub-Programs

Summary | Contacts | Tracking | Files | Permits | Activity

Sediment Load Reduction | Confirmed



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Discussion Questions

1. What is the current state of your agency's planning for nutrient permit compliance?
2. How familiar are your agency's staff with WQT and have you encountered concerns about WQT?
3. Is your agency interested in participating in a WQT program?
4. Are you aware of any perceived limitations to WQT?
5. Have you considered the structure/operation of a WQT program?
6. What additional information would you need (e.g., technical, legal, financial) to evaluate participating in a WQT program?
7. Who else within your agency would need to be briefed to advance these discussions?

THE FRESHWATER TRUST™

BACWA After Dark: Show Off Your Work at San Francisco's Coolest Science Night!

Dear BACWA Members,

Ever wonder what happens when you mix wastewater treatment with science and curiosity? We're about to find out!

BACWA is partnering with the world-famous Exploratorium for one of their "After Dark" events – adults-only Thursday nights where San Francisco's smartest crowds come to play with science. Think of it as the coolest way to show off what we do every day to protect the Bay.

We Need YOUR Expertise!

Whether you're running a plant, fixing pumps, or managing operations, you've got stories, knowledge, and maybe some "interesting" items that people need to see. We're looking for:

Interactive Ideas & Existing Exhibits

- Got a cool model of your treatment process?
- Have demonstrations that show how things work?
- Educational displays gathering dust that could use some spotlight time?
- Creative ways to explain what we do?

Volunteer Exhibitors Ready to be the star of the show? We need friendly faces to (these ideas are a work in progress):

- "Ask an Operator" – Answer questions from curious adults
- "Guess What Got Flushed" – Display the weirdest things you've found in your screens (family-friendly weird!)
- "Treatment Plant Heroes" – Share your day-in-the-life stories
- Hands-on Demos – Show how settling works, demonstrate filtration, etc.

Why Join In?

- Show thousands of Bay Area residents what heroes you really are
- Get people excited about clean water (instead of just complaining about their bills)
- Network with colleagues in a unique setting
- Be part of something way cooler than your average conference booth

What We're Looking For:

- Interactive, hands-on activities (people love to touch things!)
- Stories that make wastewater interesting (we know you have them)
- Simple demos that work with crowds
- Your enthusiasm for protecting the Bay

This is our chance to show the public that wastewater treatment isn't just pipes and pumps – it's fascinating science that keeps our Bay healthy. Plus, it's a lot more fun than explaining rate increases!

Ready to Jump In? Reply with:

- What exhibits or ideas you might have
- Whether you'd like to volunteer as an exhibitor
- Any "interesting" finds from your facility you'd be willing to share (appropriately!)

The event planning is underway, and we want to make sure every corner of our industry is represented – from the folks who keep the plants running 24/7 to the engineers designing tomorrow's solutions.

Let's make wastewater the star of the show

BAY AREA ONE WATER NETWORK

Collective Action for Secure and Sustainable Bay Area Water Resources Stewardship:

Developing a Roadmap for the Bay Area One Water Network

September 5, 2025 | 9 AM – 4 PM, with reception to follow
Bay Area Metro Center, 375 Beale Street, San Francisco
Room 109 | Yerba Buena

AGENDA

GOAL

Collaborate with a cross-jurisdictional group of leaders to elaborate and refine a proposed roadmap to advance One Water solutions for the Bay Area and identify needs, opportunities, and priorities for collective action in the near term.

OBJECTIVES

1. **Prioritize critical issues the Network should address and identify key strategies** in the near and long term to address them.

2. **Generate and identify specific opportunities and mechanisms for collaborative action**.

3. **Take stock of the interest and capacity of those present at the convening** to work together to advance common goals.

WORKSHOP

8:45 AM **Registration, coffee and tea**

9:00 AM **Session 1**
OPENING: THE ONE WATER MISSION

Welcome
Dave Smith, Water Innovation Services

Orientation to the Day
Mark Jacobs, facilitator

Our Landscape of Challenges and Opportunities
Richard Luthy, Stanford University

Why Cross-Sector Collaboration Matters for the Bay Area
Lorien Fono, BACWA

Draft Roadmap: Key Issues for Discussion
Sasha Harris-Lovett, SF Estuary Partnership, BAOWN team lead

Tabletop Exercise
Participants will share around tables what you find compelling about the Bay Area One Water Network mission, goals, and proposed activities, as well as identify questions and concerns about the Network.

10:15 AM **Session 2**
ONE WATER SOLUTIONS I: WORLD CAFE

Included in the draft Roadmap are five One Water solutions. The Initiatives included in the roadmap utilize some of these solutions and are intended to be exemplary. The purpose of this session will be for participants to discuss overall strategies, specific opportunities, and gaps/needs to advance the solutions. Participants will also identify what role the Network could play in advancing each solution.

The World Cafe format will allow for everyone to participate in discussion of four of the five solutions. The World Cafe outputs will inform discussion in the afternoon about the roadmap and future activities of the Network. Each solution will have a large-format template to complete. These will be posted in the room. There will be an open space for participants to propose solutions of their own.

1. MUNICIPAL SCALE AND ON-SITE WATER RECYCLING
Co-Hosts: Paula Kehoe, SFPUC, and Dave Smith, Water Innovation Solutions
Related initiatives from draft roadmap:

- Leveraging Distributed Water Infrastructure for Responding to Natural Hazards
- Developing Regional Strategies for Onsite Water Reuse
- Exploring the Viability of Direct Potable Reuse for Water Supply Reliability

2. MULTI-BENEFIT STORMWATER MANAGEMENT
Host: Richard Luthy, Stanford University
Related initiative from draft roadmap: Developing a Tool to Quantify Multiple Benefits for One Water Projects

3. INNOVATIONS IN REGULATORY COMPLIANCE
Host: Lorien Fono, BACWA
Related initiative from draft roadmap: Facilitate One Water Planning at the Subregional Scale

4. NATURE-BASED SOLUTIONS
Co-Hosts: Sasha Harris-Lovett, SFEP, and Nasi Basiri, Valley Water
Related initiative from draft roadmap: Advancing Nature-Based Solutions for Managing Reverse Osmosis Concentrate

5. INNOVATIVE SOLUTIONS TO ADAPT TO SEA LEVEL RISE AND FLOOD RISKS
Host: David Sedlak, U.C. Berkeley
Related initiative from draft roadmap: Accelerating Brackish Groundwater Desalination

10:20 AM Rotate/Break
10:35 AM Round 1
11:00 AM Rotate
11:05 AM Round 2

11:30 AM BREAK

11:45 AM Session 2 – World Cafe continued
11:45 AM Round 3
12:05 PM Rotate
12:10 PM Round 4

12:30 PM LUNCH
In addition to sharing a meal together, please take a few minutes to review and add comments to world cafe outputs.

1:15 PM Session 3
HARVESTING INSIGHTS: Plenary discussion

An opportunity to reflect on the world cafe exercise and share insights:
- What are the most significant, exciting opportunities to advance One Water solutions to critical challenges through collaboration across water sectors?
- What critical needs for collaboration across water sectors ought to be prioritized by the broad water community?
- Are there critical issues / opportunities that have not yet been addressed in the draft roadmap that emerged in conversation or are on your mind?
- How might the One Water Network help catalyze, enable, and/or accelerate solutions?

2:15 PM **Session 4**
NETWORK VALUE AND FUNCTIONS: Plenary Discussion
Lorien Fono, BACWA
Adoption of One Water solutions to critical challenges in the Bay Area can be enabled and accelerated by a robust Bay Area One Water Network. This will require the active and sustained participation and support of many interest holders in the water resources space. Leadership also will be necessary. We will discuss the following:

- Where/how can the Bay Area One Water Network most significantly add value to what is already happening to advance collaboration across water sectors to advance needed solutions?
- How might the One Water Network best help catalyze, enable, and/or accelerate solutions?
- What potential functions of the Network are most important to effectively add that value?

3:00 PM **BREAK**

3:15 PM **Session 5**
BUILDING A NETWORK: What's next?
Sasha Harris-Lovett, SF Estuary Partnership
David Sedlak, U.C. Berkeley

4:00 PM **RECEPTION**

KEY REGULATORY ISSUE SUMMARY
Updated September 15, 2025

Action items for member agencies are in **bold**

Contents

New updates in this version are shown in Purple highlighting – Link to Previous Versions

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
NUTRIENTS IN SAN FRANCISCO BAY			
• San Francisco Bay receives some of the highest nitrogen loads among estuaries worldwide, yet has not historically experienced the water quality problems typical of other nutrient-enriched estuaries. • In the early 2000s, monitoring data of the Bay suggested that this historic resilience could be weakening. In 2012, stakeholders in the region formed the Nutrient Management Strategy (NMS) to prioritize scientific studies and ensure that all science to be used for policy decisions is conducted under one umbrella. • Program management of the NMS is led by the San Francisco Estuary Institute (SFEI). • In summer 2022, a harmful algae bloom in San Francisco Bay brought increased public attention to this topic.	• For FY26, BACWA is contributing $2.2M to fund scientific research by the NMS science team, fulfilling a requirement of the 2024 Watershed Permit. • In recent years, the NMS has been successful in attracting funding from other sources, such as NOAA and EPA, complementing BACWA's contributions. Continued federal funding is uncertain. • The focus of current scientific efforts is improving model representation of biogeochemistry, light attenuation, dissolved oxygen, and harmful algal bloom dynamics. • In May 2025, the NMS Steering Committee finalized a multi-year 2025-2030 Science Plan, as well as a more detailed work plan for the near term in the FY26 Program Plan. • Recent progress is summarized in the NMS FY26 Annual Report.	• **Share the recently-completed summary of the NMS science program with interested community members**. *Science to Inform Management: An Overview of the Nutrient Management Strategy* is suitable for wide distribution. • **Continue to participate in NMS steering committee, planning subcommittee meetings, and technical workgroups.** • **Provide funding for scientific studies via the Nutrient Surcharge.** • Continue to leverage BACWA members and technical consultants to provide review of recent work products and charge questions for the science team. • Continue to work with NMS scientists to obtain summaries of scientific accomplishments for public use.	Science to Inform Management: An Overview of the Nutrient Management Strategy BACWA Nutrients Page SFEI Nutrient Management Strategy Page NMS Steering Committee Meeting Materials FY26 Program Plan and 2025-2030 Science Plan NMS Work Products Data Visualizations, including remote sensing of algae blooms Baywise Website

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
SF BAY NUTRIENTS WATERSHED PERMIT			

• The 2024 Nutrients Watershed Permit requires:
  ○ Continued individual POTW nutrient monitoring and reporting;
  ○ Continued funding for science;
  ○ Effective in the 2025 dry season, interim performance-based effluent limits for Total Inorganic Nitrogen (TIN);
  ○ Effective in the 2035 dry season, final water quality-based effluent limits for TIN;
  ○ Continued group annual reporting for each water year (Oct. 1 – Sep. 30), with additional reporting related to the permit's 10-year compliance schedule;
  ○ Recognition of "early actors" that began implementing nutrient removal projects before October 1, 2024; and
  ○ Completion of a regional planning study.
• The final effluent limits in the 2024 Nutrients Watershed Permit are 40% lower than actual loads from the 2022 dry season, when San Francisco Bay experienced a harmful algae bloom.
• More information related to the first (2014) and second (2019) Nutrients Watershed Permits is available on the BACWA website.
	• Through the nutrient surcharge levied on permittees, BACWA will fund compliance with the following provisions of the 2024 Nutrients Watershed Permit on behalf of its members:
	  ○ Funding for scientific studies
	  ○ Group Annual Reporting
	  ○ Regional Planning Study
	BACWA has hired the consulting firm HDR to assist with the Group Annual Reports and Regional Planning study. T
	• In June 2025, BACWA submitted a Scoping Plan for the Regional Planning Study to the Regional Water Board. The Regional Planning study is due in March 2029 and will address elements such as schedule, capital costs, rate impacts, cross-media impacts to air and biosolids, opportunities for multi-benefit projects, nutrient trading, and more. The Freshwater Trust is completing a water quality trading feasibility assessment as one of the initial tasks of the Regional Planning Study.
	• The 2024 Permit contains a 10-year compliance schedule for complying with the final effluent limits. Some agencies will have difficulty meeting this deadline due to the magnitude and complexity of anticipated projects.
	• The Regional Water Board is working on a Basin Plan Amendment that will allow compliance schedules longer than 10 years in limited circumstances. A draft Basin Plan Amendment was shared with BACWA members in August 2025, and BACWA is currently compiling member feedback for Regional Water Board staff consideration.
		• **Review the Draft Basin Plan Amendment circulated in August 2025.** BACWA's Nutrient Strategy Team will next convene on October 9th to discuss BACWA's comments on the draft.
		• **Prepare to respond to Requests for Information from HDR related to nutrient removal planning, as required by the Permit and the subsequent letters provided by the Regional Water Board on May 13, 2025 and May 30, 2025. These RFIs will support compliance milestone reporting and the Regional Planning Study.**
		• Agencies will continue to report nutrient monitoring data directly to CIWQS through monthly self-monitoring reports, which HDR will compile for Group Annual Reports.
		• Follow guidance on reporting annual TIN loads to CIWQS with each agency's annual self-monitoring report. CIWQS reporting guidance will be shared soon via the BACWA Lab and Permits Committees.
		• BACWA will continue to facilitate information-sharing on technical topics, such as the August 2024 technical seminar on nutrient removal technology at Bay Area wastewater treatment plants, and the June 2025 tour of innovative treatment technologies at Linda County Water District.
			2024 Nutrients Watershed Permit
			
			2024 Regional Water Board Resolution on Extending Compliance Schedule
			
			BACWA Nutrients Page
			
			Resources from Dr. David Jenkins Technical Series Nutrient Seminar (August 2024)
			
			2024 Group Annual Report (Submitted April 1, 2025, Corrected July 21, 2025)
			
			Scoping Plan for Regional Planning Study
			
			May 13, 2025 Letter from Regional Water Board on Group Annual Report
			
			May 30, 2025 Clarification from Regional Water Board on Early Actors

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
OCEAN ACIDIFICATION & HYPOXIA			
• Ocean acidification (low pH) is one of the potentially harmful effects of climate change in water bodies. It is caused by the uptake of carbon dioxide from the atmosphere and other sources. Ocean acidification threatens the survival of many marine organisms, especially those with carbonate shells which can dissolve under low-pH conditions. • Nutrients from wastewater and other sources can cause algae blooms which can lead to hypoxia (low dissolved oxygen) when the algae decays and exerts biological oxygen demand. This process can also lead to acidification when the carbon from the algae is released into the ocean as carbon dioxide. Because nutrient inputs and algal production can contribute to both problems, they are grouped together under the umbrella term "Ocean Acidification & Hypoxia" (OAH). • State Water Board policy regarding discharges to the Ocean are contained in the California Ocean Plan. Currently, no regulations in the Ocean Plan directly address OAH caused by wastewater discharges. However, future regulations could limit coastal discharges of nutrients in order to reduce the potential for OAH. The Ocean Protection Council is the main State agency supporting scientific efforts related to Ocean OAH along the California coast.	• The Ocean Protection Council has funded the Southern California Coastal Water Research Project (SCCWRP) to conduct research and modeling on OAH due to nutrient pollution in southern California and along the San Francisco and Monterey coasts. Early modeling results show that the anthropogenic nutrient contributions to OAH is small in this region. • In 2023-2024, the National Water Research Institute convened an expert review panel to review the modeling efforts led by SCCWRP. Because of the work's relevance to northern California wastewater agencies that discharge to coastal waters, BACWA's Executive Director is assisting with the Project Steering Committee. The expert panel provided a final report with recommendations for improving the model to make it suitable for application in a regulatory context, such as quantifying uncertainty. Stakeholders are now in the process of prioritizing the implementing the expert panel's recommendations. • In FY26, BACWA is financially contributing to a study of coastal nutrient loading led by CASA and HDR. The effort will characterize current and future nutrient loads by coastal POTWs to the coastal ocean between Monterey Bay and the Golden Gate. HDR will also provide an independent review of ROMS-BEC model parameters and run model scenarios.	• Continue to track refinement of SCCWRP's modeling tools, which could be used to establish State Water Board policy on nutrient discharges to the coastal ocean. The wastewater community is advocating for model improvements to accurately capture the impacts of wastewater discharges, and to inform monitoring work that will support our understanding of ocean impacts of nutrients. • Continue to participate in the San Francisco Bay Nutrient Management Strategy, which is already addressing many related issues.	State Water Resources Control Board's California Ocean Plan Timelines for Planning, Policy, and Permitting Efforts at the State and Regional Water Boards Ocean Acidification and Hypoxia - California Ocean Protection Council National Water Research Institute - Expert Review Panel

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
PESTICIDES			

• Pesticides are regulated via the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and not the Clean Water Act. POTWs do not have the authority to regulate pesticide use in their service area, but may be responsible for pesticide impacts to their treatment processes or to surface water.
• EPA reviews all registered pesticides at least once every 15 years. Each review allows an opportunity for public comment.
• Through the Bay Area Pollution Prevention Group (BAPPG) Pesticides Committee, BACWA aims to proactively support a scientific and regulatory advocacy program so that pesticides will not impact POTWs' primary functions of collecting and treating wastewater, recycling water, and managing biosolids, or impact receiving waters via the "down the drain" route.
• Based on the most (2024) BAPPG/BACWA Pesticide Watch List, the pesticides of highest concern in wastewater are:
  ◦ Pyrethroids (21 chemicals)
  ◦ Fipronil
  ◦ Imidacloprid
	• BACWA continues to fund consultant support to write comment letters advocating for the consideration of POTW and surface water issues by EPA and the California Department of Pesticide Registration (CalDPR).
	• The Regional Water Board leverages BACWA's efforts to provide their own comment letters.
	• The BAPPG Pesticides Committee has developed a workplan for outreach on pet pesticides (see January 2025 meeting presentation).
	• Additions to the BAPPG/BACWA Pesticides Watch List "moderate concern" tier in 2024 included the preservative carbendazim and Quaternary Ammonium Compounds (see CECs, pg. 7).
	• In December 2024, EPA released a proposal to use aquatic life benchmarks from the Office of Pesticide Programs in the Clean Water Act program, where they could be used as recommended water quality criteria. If adopted, the Clean Water Act program would have new recommended water quality criteria for more than 750 pesticides.
	• CalDPR is beginning to implement its Sustainable Pest Management Roadmap by setting up a process for pesticide prioritization. The prioritization process is to be led by a scientific advisory committee and will involve public engagement. BACWA submitted a comment letter on the process. CalDPR is also planning to issue grants through the SPM Grants Program.
		• **BACWA members are encouraged to conduct public and veterinary office outreach using flea and tick outreach toolkits.** Baywise.org has flea and tick control messaging for pet owners and veterinarians. In addition, the BACWA website offers member agencies toolkits for conducting outreach to pet owners and veterinary offices.
		• Consider working with member agencies or other partners to seek CalDPR grant funding related to outreach on flea and tick pet pesticides.
		• Advocate for implementation of specific actions from the CalDPR Sustainable Pesticide Management Roadmap.
		• Continue to comment on EPA pesticide re-registrations and CalDPR actions.
		• Engage with EPA on proposed changes to the regulatory approval process for pesticides.
		• Work with veterinary associations on messaging with respect to flea and tick control alternatives.
		• Continue to develop summaries of EPA actions on pesticides.
		• Look for opportunities to work with CalDPR on pesticides research.
		• Work with other regional associations, such as CASQA, to collaborate on funding pesticide regulatory outreach.
			BACWA Pesticide Regulatory Support Page
			
			Toolkits for Member Outreach on Flea and Tick Pest Control
			
			Baywise flea and tick pages
			
			CalDPR Sustainable Pest Management Roadmap
			
			BAPPG/BACWA Pesticides Watch List (2024)
			
			EPA Proposal: Common Effects Approach for Aquatic Life Protective Values for Pesticides
			
			January 2025 Presentation from S. Hughes to BAPPG on Pesticides
			
			February 2025 Pesticides Update to BACWA Executive Board

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
MERCURY AND PCBS			
• The Mercury & PCBs Watershed Permit is based on Total Maximum Daily Loads (TMDLs) for San Francisco Bay for each of these pollutants. • The Mercury & PCBs Watershed Permit was most recently reissued in December 2022, and it continues to require discharger support for risk reduction activities. BACWA is funding risk reduction activities on behalf of its members to comply with this permit provision. • Aggregate mercury and PCBs loads have been well below waste load allocations through 2023, the last year for which data have been compiled. • EPA Method 1668C for measuring PCB Congeners has not been promulgated by EPA. Effluent limitations are based on PCB Aroclors quantified using EPA Methods 625.1 or 608.3. BACWA prepared a guidance document to assist members with reporting results from EPA Method 1668C, which Water Board staff endorsed. • In 2017, EPA adopted federal pretreatment program rules requiring dental offices to install dental amalgam separators. The rule is intended to reduce dental office discharge of mercury. The compliance date was in 2020.	• The Regional Water Board plans to designate three new beneficial uses for Bay Area water bodies: Tribal Tradition and Culture (CUL), Tribal Subsistence Fishing (T-SUB) and Subsistence Fishing (SUB). Water bodies with these beneficial uses could also be assigned lower mercury objectives. • The May 2025 Triennial Review identifies the effort to designate tribal and subsistence fishing beneficial uses as the Regional Water Board's highest priority for Basin Plan amendments. • In 2024, SFEI worked with stakeholders to develop a fish consumption survey for subsistence fishers that is needed for designation of the new beneficial use. BACWA funded completion of a small pilot project in March 2025 related to this fish consumption survey. In August 2025, BACWA contracted with SFEI to complete a larger pilot of the fish consumption survey in 2025-2027. • In late 2024, EPA proposed a Methods Update Rule that would withdraw the existing analytical methods for Aroclors (PCB mixtures) and promulgate a new method for PCB Congeners (Method 1628). The Mercury & PCBs permit uses Aroclors for compliance monitoring. Even if the proposed rule were finalized, there will be no change to monitoring until the Permit is reissued (2027+). • The Regional Water Board tentatively plans to re-open the Mercury TMDL in 2028, and to re-open the PCBs TMDL in 2030.	• Keep members up-to-date on progress of the fish consumption survey that SFE is piloting. This effort is being used to satisfy the risk reduction activities required for BACWA members to comply with the Mercury & PCBs watershed permit. • Work with Regional Water Board staff to understand the potential impact of a withdrawal of the EPA analytical method for PCBs Aroclors. • Continue outreach to dentists BAPPG and BACWA's pretreatment committee. Per federal rules, all dental facilities were required to submit one-time compliance reports by October 2020.	2022 Mercury & PCBs Watershed Permit (Effective Feb. 1, 2023) BACWA Risk Reduction Materials Mercury and PCB Load Trends 2013- 2024 Updated July 2025 2024 Triennial Review Staff Report Planning for Fish Consumption Survey of Subsistence Fishers BACWA Guidance on PCB Congeners Sampling, Analysis, and Reporting Protocols (October 2024) EPA Methods Update Rules

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
STATE WATER BOARD TOXICITY PROVISIONS			
• The State Water Board adopted the Statewide Toxicity Provisions in 2021 as state policy for water quality control for all inland surface waters and estuaries. The Provisions establish: ○ Use of Test of Significant Toxicity (TST) as statistical method to determine toxicity, replacing EC25/IC25; ○ Numeric limits for chronic toxicity for POTWs >5 MGD and with a pretreatment program; smaller POTWs will receive effluent targets and only receive limits if Reasonable Potential is established; ○ Regional Water Board discretion on whether to require RPAs for acute toxicity ○ For POTWs with *Ceriodaphnia dubia* as the most sensitive species, numeric targets rather than limits were initially in effect until completion of a statewide quality assurance study in 2023. • The Statewide Toxicity Provisions became effective in June 2023, following EPA approval. Individual NPDES permits reissued in the San Francisco Bay Region are implementing the Toxicity Provisions and requiring use of the TST for chronic toxicity testing. Reissued permits no longer require acute toxicity monitoring.	• EPA has not yet approved the Alternate Test Procedure for whole effluent toxicity testing. Until the Alternate Test Procedures are approved, the Regional Water Board has advised that dischargers should use the full five-concentration series for all tests, including routine monitoring and Species Sensitivity Screening Studies. • The State Water Board collaborated with stakeholders on a special study to improve the quality of *Ceriodaphnia dubia* testing. Upon completion of the study, the State Water Board compiled resources related to the study for dischargers that plan to use *Ceriodaphnia dubia* for chronic toxicity monitoring. • In 2024, the State Water Board received a report from staff on implementation of the provisions. The report stressed the importance of laboratories being ready to complete 3 chronic toxicity tests within a calendar month, as required when there is a "fail" result. • In February 2025, the BACWA Permits Committee provided member training on using the TST to interpret test results. • In August 2025, a California court ruled that the TST is not authorized under the federal Clean Water Act, but that it was properly adopted under State law. NPDES permit language will need to be adjusted to reflect this court ruling. For example, if TST-based effluent limits were enforceable under State law only, citizen suits would be impermissible.	• **Review Draft NPDES Permit language that will reflect the recent court invalidation of the TST under federal law.** Individual NPDES permits may be reissued with this language in the San Francisco Bay region as soon as Oct. 2025, so draft language could be available as early as Sept. 2025. • **Conduct toxicity testing using the Statewide Toxicity Provisions.** All member agencies with individual NPDES permits reissued after August 2022 have transitioned to the new toxicity testing requirements. • **Plan to conduct a species sensitivity screening** to comply with the Toxicity Provisions, which require a study no more than 10 years old be used to determine a "Tier I" species for use in compliance monitoring. The BACWA laboratory committee has compiled tips related to sensitivity screening studies for member agencies' use. • Members hiring a contract laboratory to perform testing using *Ceridaphnia dubia* should utilize the Ceriodaphnia dubia Quality Assurance Guidance Recommendations from the multi-laboratory study, including the performance metrics listed in Appendix E of the report.	State Water Board Toxicity Page EPA Approval of Statewide Toxicity Provisions Ceriodaphnia dubia Study Resources, including link to *Quality Assurance Guidance Recommendations* CASA Webinar on Lessons from Ceriodaphnia Study Lab Committee Tips on Sensitive Species Screening State Water Board November 2024 Status Report on Implementation of Toxicity Provisions February 2025 Permits Committee Training on Using the Test of Significant Toxicity (McCampbell Analytical) Court Opinion on TST from Fifth Appellate District Court of California August 2025

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CONTAMINANTS OF EMERGING CONCERN (CECS)			
• Pharmaceuticals and other trace contaminants of emerging concern (CECs) are ubiquitous in wastewater at low concentrations and have unknown effects on aquatic organisms. • The San Francisco Bay region has a CECs strategy focusing on monitoring/tracking concentrations of constituents with high occurrence and high potential toxicity. The State Water Board's Pretreatment and CECs Unit is also developing a similar monitoring strategy for use around the state. • The Regional Water Board has stated that wastewater agencies' voluntary and representative participation in RMP CECs studies is key to avoiding regulatory mandates for CECs monitoring. These studies are informational and not for compliance purposes. • BACWA developed a White Paper on representative participation to support facility selection for these studies. The white paper was updated in 2024 to include statistical information about POTWs to assist with future CECs study design.	• Bay dischargers are continuing to provide supplemental funding for RMP CECs studies through the NPDES Permit Amendment adopted in 2021 by the Regional Water Board (R2-2021-0028). • The State Water Board has recently increased its focus on CECs. In 2023, a State Water Board Science Advisory Panel released a report identifying risk-based and occurrence-based monitoring strategies in aquatic ecosystems. Similar approaches are already in use in the Bay Area by the RMP. • In the Bay Area, the RMP has designated organophosphate esters (OPEs) and PFAS as CECs of "high" concern. • CECs of "moderate" concern include alkylphenols and alkylphenol ethoxylates, bisphenols, fipronil and its degradates, imidacloprid, and microplastics. Carbendazim, a preservative used in paints and other products, was added to the "moderate" concern tier in 2024. • Quaternary Ammonium Compounds (QACs) are one of several classes of chemicals categorized as a "potential concern" due to lack of data. Monitoring studies of Bay water and stormwater are planned in coming years. A report on QACs in wastewater was published by SFEI in 2024. • In Fall 2024, both the RMP Annual Meeting and the RMP's annual publication, *The Pulse of the Bay*, focused on CECs in San Francisco Bay.	• Continue to participate in the RMP Emerging Contaminants Workgroup. • Participate in RMP studies by collecting wastewater samples at member facilities. For 2026, the Emerging Contaminants Workgroup is focusing mainly on stormwater-related studies, including a study of PFAS in precipitation. The workgroup also plans to conduct wastewater and stormwater monitoring of biocidal preservatives, including carbendazim and isothiazolinones. • Work with RMP staff to assist with study design for any new studies of CECs in wastewater. For example, in the future (2027+) the RMP may conduct a study on the co-benefits of regional nutrient upgrades on CECs removal. The study will not receive RMP funding for 2026 due to budget constraints.	RMP Emerging Contaminant Workgroup BACWA CECs White Paper (2024 version) 2021 NPDES Permit Amendment for Monitoring and Reporting State Water Board CECs webpage SFEI Report on QACs in Wastewater The Pulse of the Bay 2024 – Contaminants of Emerging Concern RMP 2024 Annual Meeting Materials RMP Report: Contaminants of Emerging Concern in San Francisco Bay – A Strategy for Future Investigations (2024 version) Emerging Contaminants Update from SFEI (Presentation to BAPPG) August 2025

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
MICROPLASTICS			
• Microplastic pollution is an environmental threat with the potential to impact wastewater disposal and reuse, as well as biosolids end uses. • Microplastics have been a focus of the RMP in recent years. One conclusion of the RMP work is that POTWs contribute much lower microplastic loads than stormwater. As a result, the RMP is focusing future microplastics sampling efforts on stormwater pathways. • In 2022, the Ocean Protection Council (OPC) adopted a Statewide Microplastics Strategy that calls for increased water recycling, additional monitoring of wastewater, source control in wastewater, and additional scientific research. • OPC funded a study of microplastic removal through wastewater treatment processes, with participation from several BACWA member agencies. The study was completed in August 2024 and found overall removal efficiencies between influent and effluent averaged 95% 99%, and 99.9% for primary, secondary, and tertiary treatment, respectively. • Ongoing microplastics investigations by the RMP are focused on tire particles in stormwater.	• The 2024 California Integrated Report (303(d) List) adopted by the State Water Board notes that San Francisco Bay is "potentially threatened" by microplastics. Due to data limitations, the Bay was not listed as an impaired water body during this listing cycle. • Unlike the 2024 Integrated Report, the 2026 Draft California Integrated Report (303(d) List) did not include an assessment of impairment due to microplastics. • Additional research to improve scientific understanding of microplastics in aquatic ecosystems will be needed to support a future impairment determination for the Bay. The Water Boards and OPC are supporting allocation of funding towards these research efforts. • In September 2025, AB 823 passed the California legislature, and will now go to the Governor for consideration. The bill would expand the AB 888 (2015) microbeads ban, which covered rinse-off personal care products, to include cleaning products and leave-on personal care products.	• Continue to participate in the RMP Microplastics Workgroup. The workgroup is currently focused on monitoring efforts in the Bay and in urban stormwater. • Review and share the results of CASA-funded work being completed at the Southern California Coastal Water Research Project (SCCWRP) that is an add-on component to the recently completed OPC microplastics study. The add-on study will assess how well autosampling equipment, typically used by POTWs to collect wastewater samples for monitoring and compliance purposes, may provide representative samples for microplasticsJ. • Continue tracking State Water Board and Ocean Protection Council actions via the CASA Microplastics Workgroup.	BACWA Microplastics Fact Sheet RMP Microplastics Workgroup Ocean Protection Council Microplastics Strategy SCCWRP Report on Microplastics in California Wastewater Treatment Plants (2024) 2024 California Integrated Report / 303(d) List 2026 Draft California Integrated Report / 303(d) List

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)			
• Per- and polyfluoroalkyl substances (PFAS) are a group of human-made substances that are very resistant to heat, water, and oil. PFAS are used in surface coating and protectant formulations. Common PFAS-containing products are non-stick cookware, cardboard/paper food packaging, water-resistant clothing, carpets, and fire-fighting foam. PFAS in consumer products are a major source of PFAS to POTWs. • Perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) are two types of PFAS no longer manufactured in the US; however, other types of PFAS are still produced and used in the US. • PFAS are persistent in the environment, can accumulate within the human body, and have demonstrated toxicity at relatively low concentrations. • Potential regulatory efforts to address PFAS focus on drinking water in order to minimize human ingestion of these chemicals, although regulators have also expressed concern about uptake through food, especially fish. • In 2020, the State Water Board issued an investigative order for POTWs. At that time, BACWA obtained approval to fund and conduct a Regional PFAS Study in lieu of the investigative order. • In 2021, EPA released a PFAS Strategic Roadmap.	• In 2024, EPA finalized Maximum Contaminant Levels (MCLs) for several PFAS compounds in drinking water. In May 2025, EPA announced its intent to extend the MCL compliance deadlines for PFOS and PFAS , and to rescind the MCLs for the other PFAS compounds. California has not yet adopted the EPA's drinking water limits, although the issue is a 2025 priority of the Division of Drinking Water. Drinking water limits will not be applicable to wastewater discharges to the Bay, but they could be used in NPDES permits for inland dischargers. • EPA identified industrial source control actions under Preliminary Effluent Guidelines Program Plan 16, but these efforts may be deferred by the current federal administration. 7 • In December 2024, EPA released draft national recommended human health water quality criteria for PFOS, PFOA, and perfluorobutanesulfonic acid (PFBS). BACWA submitted a comment letter. • In September 2025, SB 682 (Allen) passed the California legislature. If signed by the Governor, the bill would require that PFAS be phased out of six categories of consumer products: cleaning products, cookware, dental floss, juvenile products, food packaging, and ski wax. • The Regional Water Board's Site Cleanup Program released Environmental Screening Levels for 16 PFAS compounds. • The Regional Water Board is considering adoption of a general NPDES permit for groundwater dischargers containing technology-based effluent limits for PFAS.	• **Member agencies are encouraged to support PFAS source control efforts, including legislation, regulations, and public outreach.** BACWA is focused on source control as the best way to reduce PFAS in wastewater. A source control approach can be used for residential, commercial, and industrial sources, as well as legacy sources like landfill leachate and contaminated groundwater. • **Members should use Clean Water Act methods (EPA Method 1633 or 1621) for monitoring effluent, biosolids, or industrial wastewater.** • Develop a sampling plan for the next phase of BACWA's regional PFAS study to support the "PFAS Sources to Solutions" project being led by SFEI and the California Department of Toxic Substances Control. In FY26, BACWA plans to sponsor additional wastewater sampling focusing on sewershed sources of PFAS. • Review EPA's January 2025 draft risk assessment for PFOA and PFOS in biosolids (see Biosolids page).	BACWA PFAS Study Summary State Water Board PFAS Resources EPA PFAS Resources EPA Drinking Water Limits EPA POTW Influent Study EPA NPDES Permitting Guidance (Dec. 2022) Presentation on BACWA's Regional PFAS Study at RMP 2023 Annual Meeting UC Irvine Report on PFAS in Residential Wastewater "PFAS Sources to Solutions" Project Overview Senate Bill 682 (Allen) – Environmental health: Product Safety: PFAS Baywise Website for PFAS BACWA PFAS Materials Regional Water Board Environmental Screening Levels

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
SANITARY SEWER SYSTEMS			

• In 2022, the State Water Board reissued the statewide Sanitary Sewer Systems General Order (SSS-WDR). The reissued order replaced the 2006 Order and the 2013 Monitoring and Reporting Program.
• The 2022 SSS-WDR became effective in June 2023 and contains numerous new and modified requirements, such as:
  ○ A prohibition on discharges to groundwater
  ○ Reduced spill reporting requirements for small spills (spills from laterals or <50 gallons)
  ○ New spill monitoring requirements such as photo documentation and faster water quality sampling
  ○ New requirements for preparation of Sewer System Management Plans (SSMPs), including a focus on system resiliency, prioritizing corrective actions, and coordinating with stormwater agencies
  ○ Modified annual reporting requirements
  ○ New mapping requirements
  ○ Modified timelines for preparation of audits and SSMPs.
	• Due dates for audits and SSMPs under the reissued SSS-WDR vary by agency. The State Water Board has prepared an online tool to assist agencies in determining compliance dates.
	• Sewer system agencies must provide the State Water Board with a Geographic Information System (GIS)-based service area boundary map. In July 2025, the State Water Board opened the portal for submitting the maps and released a guidance document.
	• Maintaining an updated SSMP is a core requirement of the SSS-WDR. SSMP updates are required every six years, and must contain the 11 elements described in the reissued SSS-WDR. BACWA has prepared a *Guide for Developing and Updating SSMPs*, now available through the BACWA and State Water Board websites.
	• In 2024, BACWA completed a member survey of sewer lateral ordinances. Agencies are using sewer lateral replacement ordinances and incentive programs to address ongoing concerns about infiltration and inflow (I&I).
	• The California Underground Safety Board is developing GIS standards for subsurface installations, including sewer pipelines. In July 2025, the Board released draft GIS Regulatory Language for stakeholder comment. The draft language requires agencies to record geospatial coordinates to a horizontal accuracy of 100 mm for all new subsurface installations.
		• **Upload a sewer system boundary map to the State Water Board's portal by the due date of December 31, 2025**.
		• Participate in review of GIS regulatory language applicable to installation of new sewer system infrastructure. The Underground Safety Board recently collected comments on an initial draft, and formal rulemaking will follow at a later date.
		• Continue to use the Collections System Committee as a forum for discussing best practices for completing audits and SSMPs.
		• Continue to coordinate with CASA and CWEA on training opportunities for members to address compliance with new requirements in the 2022 SSS-WDR.
			State Water Board SSS-WDR page
			
			Reissued SSS-WDR (General Order 2022-0103-DWQ), Effective June 5, 2023
			
			Materials from Clean Water Summit Partners Webinars on Reissued SSS-WDR
			
			SSMP and Audit Due Dates Lookup Tool from State Water Board
			
			Guide for Developing and Updating Sewer System Management Plans (2024)
			
			BACWA Private Sewer Lateral Survey Results (2024)
			
			State Water Board guidance document on submitting boundary maps
			
			Underground Safety Board Draft GIS Regulatory Language and Staff Report

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
LABORATORY ACCREDITATION			
• In 2020, the State Water Board adopted new regulations for the Environmental Laboratory Accreditation Program (ELAP). • The new ELAP regulations replaced the previous state-specific accreditation standards with a national laboratory standard established by The NELAC Institute (TNI). • Compliance with TNI standards was required beginning **January 1, 2024**. • The TNI standards pose a particular challenge to small laboratories, many of which have closed because they cannot economically meet the new standards. This reduction has contributed to significant ELAP fee increases for the remaining laboratories. • From 2021 to 2024, the BACWA Lab Committee hosted 30 virtual sessions on the TNI standards. Diane Lawver of Quality Assurance Solutions, LLC, provided the training. The training sessions were recorded, and are available to download with a password (available upon request).	• The TNI standards apply to every ELAP-certified laboratory, regardless of certificate expiration date and regardless of location. Some laboratories have not yet been assessed to the TNI standard. Starting January 1, 2024, ELAP will be sending laboratories a written request asking for information about assessment plans and requesting a TNI-compliant Quality Assurance manual. • In FY25, ELAP restructured its fees to increase fees for large laboratories with more than 500 fields of accreditation. Smaller laboratories had no fee increase. No increases to ELAP fees are expected in FY26. • ELAP is now implementing EPA's 2021 Method Update Rule, and advised labs to update any outdated methods by February 2024. • In April 2024, EPA finalized a routine Methods Update Rule (rMUR 2). In October 2024 and April 2025, the BACWA Laboratory Committee provided member training on changes to Standard Methods affected by this Methods Update Rule. This Methods Update Rule will be implemented by ELAP at a later date. • In December 2024, EPA proposed a Methods Update Rule to promulgate EPA Method 1633A for 40 PFAS compounds, EPA Method 1621 for adsorbable organic fluorine, and Method 1628 for 209 PCB Congeners. The action also proposes to withdraw the existing methods for PCB Aroclors.	• Continue to work through BACWA's Laboratory Committee to support members as they navigate laboratory accreditation under the new TNI standards. • Publicize training opportunities offered by consultants, ELAP, and others.	State Water Board's ELAP regulations page, including links to timeline and relocation guidance tools ELAP Implementation of 2021 Method Update Rule EPA Methods Update Rules ELAP Fees – Stakeholder Meeting Information Materials from BACWA TNI Training Sessions 2021-2024 - *request password from BACWA staff* BACWA Laboratory Committee Meeting Materials

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
BIOSOLIDS			

• Regulatory drivers are leading to the phase-out of biosolids used as alternative daily cover (ADC) or disposed in landfills. SB 1383, requiring reductions in the amount of organic material deposited in landfills, went into effect in 2022. CalRecycle is the state agency responsible for implementation.
• Local enforcement of SB 1383 began in 2024, and compliance was required by January 1, 2025. Requirements include:
  ○ Diverted biosolids must be anaerobically digested and/or composted to qualify as landfill reduction.
  ○ CalRecycle is accepting applications to qualify other specific treatment technologies as landfill reduction (per Article 2 of SB 1383).
  ○ Local ordinances restricting land application are disallowed.
• While the regulations implementing SB 1383 do not explicitly forbid biosolids disposal/reuse in landfills, it is assumed that since biosolids are a relatively "clean" waste stream that can be easily diverted, landfills will stop accepting biosolids.
• The Bay Area Biosolids Coalition (BABC) was formed to find sustainable, cost-effective, all-weather options for biosolids management.
	• Jurisdictions that divert organic waste must also procure the end products of diversion, such as biogas, biomethane, and compost (but not biosolids). Procurement rules are being phased in over three years (2023 to 2025) and there are interim rules regarding procurement of biogas from POTWs.
	• CalRecycle and biosolids stakeholders are continuing to conduct outreach to counties with ordinances that restrict land application of biosolids.
	• CalRecycle reviews technologies that may be equivalent to landfill diversion/reduction per Article 2 of SB 1383. CalRecycle has also provided clarification on technologies that *already* comply with SB 1383, and need not apply under Article 2 (e.g., land application of biosolids that have not been anaerobically digested).
	• In 2024, BACWA prepared an updated Biosolids Trends Survey Report for calendar years 2021-2023.
	• In early 2025, EPA released a draft risk assessment for PFOA and PFOS in biosolids. Public comments were due in August 2025. The draft risk assessment estimates human health risks arising from biosolids land application and surface disposal. The assessment considers risks via surface water, ground water, fish consumption, and milk consumption pathways, among others. If EPA determines that regulation of biosolids disposal is needed to reduce risk, this will occur in a future phase.
		• As of July 2025, the Bay Area Biosolids Coalition (BABC) merged with BACWA and became BACWA's biosolids committee. The committee discusses topics such as communication, scientific research, land application, and regionalization of biosolids treatment. **All members are invited to participate.**
		• **If requested, respond to EPA's Influent Study of POTWs**, which will also function as a nationwide sewage sludge survey. Facilities larger than 10 MGD may be required to participate in the survey and conduct sampling. EPA had planned to conduct the survey in 2025, but the current status is uncertain due to the change in EPA administration.
		• Continue to follow emerging science and regulatory developments regarding PFAS, including EPA's draft risk assessment and CERCLA hazardous waste designations for PFOA and PFOS.
		• Engage through CASA and BABC to follow new legislation affecting biosolids processing and disposal.
		• Actively work through CASA with State agencies to develop sustainable long-term options for biosolids beneficial use.
		• Meet with Air District staff regularly to discuss alignment of state and local regulations that affect biosolids treatment and end uses.
			BACWA Biosolids Trends Surveys
			
			Bay Area Biosolids Coalition
			
			CASA White Paper on SB 1383 Implementation
			
			CalRecycle - Short-Lived Climate Pollutant Reduction Strategy
			
			CalRecycle Procurement FAQ (Updated by AB 1985)
			
			SB1383 Article 2 Determination
			
			EPA National Sewage Sludge Survey
			
			EPA Draft Risk Assessment for PFOA and PFOS in Biosolids

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CLIMATE CHANGE ADAPTATION			
• Climate change and water resilience are strategic priorities of both the State Water Board and Regional Water Board. • The State's Climate Change Assessment is the scientific foundation for climate-related vulnerability. Each assessment also includes details specific to the Bay Area region. The Fifth Climate Change assessment for California is currently underway. • The State's Climate Adaptation Strategy is updated every three years. The 2024 update was released in September 2025. • Bay Area coordination occurs through Bay Adapt, the Bay Area Climate Adaptation Network (BayCAN), and other venues. BACWA has signed a letter of support for the Bay Adapt Joint Platform. • The Regional Water Board is modifying the Basin Plan to address climate change and wetland policy. The changes will occur through multiple Basin Plan amendments. • Shallow groundwater response to SLR is a concern in low-lying Bay Area communities. Information and maps about current and future depth-to-groundwater is available for five Bay Area counties from Pathways Climate Institute and SFEI (plus Solano County mapping is underway), while Valley Water offers information on Santa Clara County.	• In June 2024, the Regional Water Board adopted a Climate Change Basin Plan amendment addressing dredge and fill procedures near the region's shorelines, especially for climate adaptation projects. Regional Water Board staff plan to seek Office of Administrative Law approval by the end of 2025. • In 2024, the Ocean Protection Council (OPC) adopted updated SLR guidance. Compared to the 2018 version, projections for extreme SLR (i.e., H++ scenario) were removed, and the range of projections has narrowed considerably, especially for 2050. • In 2024, the Bay Conservation and Development Commission (BCDC) adopted Sea Level Rise planning guidelines for the Bay Area as part of the Regional Shoreline Adaptation Plan. To comply with SB 272, the Plan requires cities and counties to develop subregional sea level rise adaptation plans by 2034. BCDC hosted a series of informational webinars in summer 2025. • In late 2024, the California Coastal Commission updated its sea level rise policy guidance to conform to OPC's new guidance. The guidance document also contains specific recommendations related to wastewater infrastructure. • SFEI offers resources to support planning of nature-based shoreline adaptation projects, such as the Baylands Resilience Metrics Mapbook.	• **Understand and begin planning to participate in the development of Subregional Shoreline Adaptation Plans**. These adaptation plans are required for cities and counties per BCDC's 2024 Regional Shoreline Adaptation Plan; special districts should also participate in their development. Plans are due by 2034. • **Begin using the OPC's updated Sea Level Rise Guidance.** Updates to the Coastal Commission's "Critical Infrastructure at Risk" SLR planning guidance are expected to follow. • Continue to develop committee content on technical topics related to climate change, such as sea level rise projections and changes in precipitation. • Work with Regional Water Board staff and BACWA members to update and revisit the Climate Change Information Request first sent to NPDES permittees in 2021. • Continue to work with Regional Water Board and other resource agencies to look for regulatory solutions to encourage wetlands projects for shoreline resiliency. SFEI recently began developing a decision support tool to help accelerate the implementation of nature-based shoreline projects.	Regional Water Board Basin Plan Amendment on Climate Change and Aquatic Habitat OPC 2024 Sea Level Rise Guidance California Coastal Commission Sea Level Rise Policy Guidance Update (Nov. 2024) California Climate Adaptation Strategy (Sep. 2025) BayCAN Funding Tracker BCDC's Regional Shoreline Adaptation Plan (2024) BCDC Webinars on Regional Shoreline Adaptation Plans Bay Adapt SFEI Shallow Groundwater Mapping (March 2025) Valley Water - Groundwater Response for Santa Clara County SFEI - Baylands Resilience Metrics Mapbook

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CLIMATE CHANGE MITIGATION			
• The California Air Resources Board's (CARB's) 2022 Climate Change Scoping Plan Update lays out the approach for the State to meet its greenhouse gas (GHG) emissions, including policies addressing short-lived climate pollutants, carbon sequestration, and the largest emitters (transportation, electricity, and industrial sectors). • CalRecycle is implementing SB 1383 (Short-Lived Climate Pollutant Reduction) to reduce methane emissions. SB 1383 requires diversion of organic waste from landfills, and re-routing organics from landfills to digesters at POTWs is one way to accomplish this. • The Bay Area Air District developed a Clean Air Plan that outlines local strategies to address climate pollutants. The Air District is currently leading an effort to develop a Comprehensive Climate Action Plan for eight counties in the region. • The Air District proposed the development of Regulation 13 (climate pollutants) targeting methane and nitrous oxide reductions. After a pause of several years, the Air District began revisiting Regulation 13 in 2024. • The State Water Board's 2017 Climate Change Resolution addresses adaptation, ecosystem resilience, water use and efficiency, and greenhouse gas emissions.	• CARB has pursued rapid fleet conversion to zero-emission vehicles (ZEVs), including medium and heavy-duty vehicles, through the Advanced Clean Fleets Regulation. • In January 2025, CARB withdrew its waiver requests to EPA for key portions of the Advanced Clean Fleets rule. CARB has announced that it plans to continue to enforce the State and Local Government Agency Fleets portion of the regulation. • In 2024, CARB re-opened the Advanced Clean Fleets regulations to incorporate requirements of AB 1594 by expanding ZEV purchase and daily usage exemptions for public agency utilities. In late July, CARB released a draft regulatory package for 45-day review. • In addition to pushing for ZEVs, CARB recently revised the Low Carbon Fuel Standard to emphasize hydrogen rather than biomethane as a transportation fuel, effective July 1, 2025. • CASA is continuing to advocate for a pathway for renewable natural gas in the context of the Advanced Clean Fleet and Low Carbon Fuel Standard amendments. • As a first step in revisiting Regulation 13, the Air District is developing a white paper on anaerobic digesters and potentially associated emissions. A draft version of the white paper is expected in October 2025. • The State Water Board is crafting a new Climate Change Resolution that will address Water Boards actions on climate change mitigation and adaptation. A draft is expected in Fall 2025.	• Continue to track implementation of the Advanced Clean Fleets rule. Comments are due Sept. 15th for a suite of proposed amendments that would exempt some traditional utility-specialized vehicles used by public agency utilities, per AB 1594. **BACWA members are invited to coordinate with CASA to speak at the public hearing for the Advanced Clean Fleets amendments on September 25.** • Support the Air District's development of a white paper on anaerobic digestion by providing applicable information on digestion and associated energy generation infrastructure. Review and provide comments on the draft white paper once it is released later in 2025. • Work with PG&E and the Air District to explore options for POTWs to inject biogas into PG&E pipelines under the utility's state-mandated biomethane procurement program. • Work with CASA to review and provide comments on the State Water Board's Climate Change Resolution.	CARB Climate Change Scoping Plan CARB Low Carbon Fuel Standard Amendments (Effective July 1, 2025) CARB Advanced Clean Fleets Rule CARB Rulemaking on Advanced Clean Fleets to incorporate AB 1594 (July 2025) CARB's ZEV Purchase Exemption List CalRecycle and SB 1383 Bay Area Clean Air Plan Bay Area Comprehensive Climate Action Plan Bay Area Air District's Regulation 13 for Climate Pollutants EPA Renewable Fuel Standards PG&E Procurement State Water Board Comprehensive Response to Climate Change Resolution (2017)

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
TOXIC AIR CONTAMINANTS			
• Regulation 11, Rule 18 (Rule 11-18), adopted in 2017, is the Air District's local effort to protect public health from toxic air pollution from existing facilities, including POTWs. • Per the Rule, the Air District will determine each facility's prioritization score (PS). Health Risk Assessments (HRAs) will be conducted for all facilities with a cancer PS>10 or non-cancer PS>1. Facilities verified to be above a threshold will have to implement a Risk Reduction Plan. • AB 617 (Community Air Protection Program) requires CARB to harmonize community air monitoring, reporting, & local emissions reduction programs for air toxics and GHGs. POTWs within communities already impacted by air pollution may have to accelerate implementation of risk reduction measures. • AB 2588 (Air Toxics "Hot Spots" Program) established a statewide program for the inventory of air toxics emissions from individual facilities, as well as requirements for risk assessment and public notification. • Since 2022, Air District staff and BACWA representatives have been meeting about 3-4 times per year to address concerns related to toxic air contaminants and associated rule-making. Workgroup materials are available on the AIR Committee website.	• In April 2024, the Air District finalized updated Implementation Procedures for Rule 11-18 describing how the Air District will conduct HRAs. It also established rules for vendors or contractors to conduct HRAs, if allowed by the Air District. In August 2025, the Air District released draft amendments to Rule 11-18, draft amendments to the Implementation Procedures, and a Preliminary Staff Report. The draft amendments aim to improve program efficiency and accelerate the preparation of HRAs by requiring facility owners to conduct HRAs (rather than the Air District). Comments are due Oct. 13. • To comply with provisions of AB 617 and AB 2588, the wastewater sector has until 2028 to perform a Pooled Emissions Study to update outdated default emission factors for toxic air contaminants. CASA is directing the Pooled Emissions Study with consultant support from Yorke Engineering. 27 BACWA member agencies are participating in the study by providing financial contributions. In FY26, BACWA plans to collect approximately $620,000 from participating member agencies. • In 2025, the project team has been meeting with CARB and staff from regional Air Districts to discuss the study plan. Regulator approval of the study plan is required before sampling can begin. The draft study plan for the Pooled Emissions Study will be submitted to CAPCOA (a coalition of regional air district staff) in Fall 2025, then later to CARB.	• **Review the proposed amendments to Rule 11-18.** BACWA's AIR Committee is preparing a comment letter on the amendments, and members are invited to share their comments. The Air District will also hold a virtual workshop on the evening of Thursday, October 2nd to explain the draft amendments and receive public comments. • **Review and understand the updated Rule 11-18 Implementation Procedures.** For most POTWs with a relatively low prioritization score, the HRAs will not occur right away. These POTWs will likely be able to use updated emissions factors from the statewide poled emissions study, as described below • **Report "business as usual" for air toxics through 2028 (through year 2027 data).** The wastewater sector has until 2028 to perform the statewide Pooled Emissions Study. • Continue participating in the BACWA-Air District workgroup to discuss toxic air contaminants, rule development, and related air quality regulatory issues.	Bay Area Air District Facility Risk Reduction Program Amendments (Rule 11-18) Bay Area Air District New Source Review of Toxic Air Contaminants (Rule 2-5) CARB page on AB 617 and AB 2588 and Final Statement of Reasons CASA Handout on Pooled Emissions Study CARB List of Approved Independent Contractors for Test Methods Timing of Rule 11-18 vs. Process for AB 617 July 2024 BACWA Update to Air District Stationary Source Committee BACWA AIR Committee website

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
BEST AVAILABLE CONTROL TECHNOLOGY			
• Best Available Control Technology (BACT) is a requirement for major new or modified sources of air pollution. • BACT is defined locally as part of the Air District's Rule 2-2, "New Source Review." BACT is established based on the most stringent level of emissions control that is achieved in practice and that is technologically feasible & cost effective. • CARB is working on proposed amendments to the off-road new diesel engine standards, called "Tier 5" rulemaking. The Tier 5 rulemaking aims to reduce oxides of nitrogen (NOx), particulate matter, and may also include first-time carbon dioxide (CO_2) emissions standards. • The Bay Area Air District is launching a three-year Engineering Program Manager Pilot Program with the intent of improving the permitting process for complex applications. This program will dedicate two Air District managers to work with selected facilities on challenging permit applications to ensure more efficient reviews, better communication, and improved transparency. Participating facilities will pay to cover the costs of Air District personnel.	• BACWA has been working with the Air District to provide better transparency for future BACT determinations. The Air District plans to hire a BACT Coordinator in FY26 for more consistency in this program. • BACT for all standby generators >50 bhp is now Tier 4 emissions standards. In December 2020, the Air District issued a BACT determination for Tier 4 emissions standards for large standby generators (≥ 1,000 bhp). In October 2024, the Air District issued a BACT determination for Tier 4 emissions standards for midsize standby generators (> 50 bhp and < 1,000 bhp). The BACT determination went into effect on December 2, 2024. Options to comply with the new standards include: (a) an EPA-certified Tier 4 engine (b) a Tier 4-compliant engine that is packaged by the engine manufacturer with abatement equipment, or (c) A lower tier engine that has been retrofitted with after-market abatement equipment to meet Tier 4 standards. • In 2024, CARB began working on proposed amendments to the off-road diesel engine emissions standards (Tier 5 rulemaking). A workshop was held in October 2024. Based on CARB's schedule, Tier 5 standards would go into effect in the 2029-2034 timeframe. • Air District is gauging interest from facilities that may be interested in participating in the Engineering Program Manager Pilot Program. BACWA has already provided early feedback to the Air District about this pilot program.	• **Design new or modified standby generators to meet Tier 4 emissions standards.** • Continue to coordinate with CASA to participate in review and public comment on CARB's Tier 5 rulemaking. • Provide feedback to Air District about BACWA membership's interest in participation in the Engineering Program Manager Pilot Program.	Air District BACT/TBACT Workbook Air District October 2024 Workshop on BACT Determination Slides and Video CARB Tier 5 Rulemaking Air District Engineering Program Manager Pilot Program Flyer and Webinar Recording

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
RECYCLED WATER			
• Approximately 10 percent of the municipal wastewater of Bay Area POTWs is currently recycled. Expansion of recycled water projects is a goal of many BACWA members, but implementation is slowed by high costs and administrative requirements. • In 2018, the State Water Board adopted uniform water recycling criteria for two types of Indirect Potable Reuse: surface water augmentation and groundwater augmentation. • In 2023, the State Water Board adopted uniform water recycling criteria for two types of Direct Potable Reuse: raw water augmentation and treated water augmentation. • As of 2020, virtually all recycled water in the Bay Area was produced at centralized facilities using municipal wastewater, and was treated to meet standards for non-potable reuse. There are not yet any Indirect or Direct Potable Reuse projects in the Bay Area, although several are in the planning stage.	• The State Water Board is currently developing standards for onsite treatment and reuse of non-potable water in multi-family, mixed use, and commercial buildings. The rulemaking process for Onsite Nonpotable Reuse began in March 2025. Revised draft regulations were released in August 2025. State Water Board staff anticipates board adoption by the end of 2025 (at the earliest) and completion of rulemaking in April 2026. • In 2023, BACWA completed a Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling, as required by the 2nd Nutrients Watershed Permit. • In 2024 the Regional Water Board finalized a Basin Plan Amendment that will allow greater flexibility for NPDES permitting of reverse osmosis concentrate discharges to San Francisco Bay. • Direct Potable Reuse regulations were finalized in 2024 and are now in effect.	• Continue to track adoption of regulations for Onsite Nonpotable Reuse. Once the regulations are adopted, BACWA intends to work with regulators and other stakeholders on implementation guidance for wastewater agencies. • Continue to provide members with technical resources related to interagency coordination, such as cost-sharing agreements and permitting. These topics are based on feedback from BACWA's 2023 workshop on interagency collaboration in which wastewater and water agency representatives convened to discuss challenges and opportunities for expanding water recycling in the Bay Area. • Continue to track the role of recycled water projects in diverting nutrient loads from San Francisco Bay. Significant nutrient load reductions and annual reporting on recycled water nutrient load diversions are required by the 2024 Nutrients Watershed Permit. BACWA will continue to compile information on recycled water nutrient load diversions as part of the Regional Planning Study due in 2029 (see page 2). • Track California legislation with potential impacts on recycled water funding, mandates, or regulations.	Water Boards Recycled Water Policy and Regulations Direct Potable Reuse Regulations Rulemaking for Onsite Nonpotable Reuse Regulations (updated August 2025) BACWA Special Studies of Recycled Water and Nature-Based Systems California's Water Supply Strategy (2022) Basin Plan Amendment affecting Water Recycling (now also incorporated into the Basin Plan) Meeting Materials from April 2025 Joint Workshop with WateReuse Northern California

Previously covered issues with no updates can be found in previous BACWA issues summaries.

ACRONYMS

ADC	Alternate Daily Cover
BABC	Bay Area Biosolids Coalition
BACT	Best Available Control Technology
BCDC	Bay Conservation and Development Commission
bhp	brake horsepower
CalDPR	California Department of Pesticide Registration
CARB	California Air Resources Board
CASA	California Association of Sanitation Agencies
CEC	Compound of Emerging Concern
CIWQS	California Integrated Water Quality System
CWEA	California Water Environment Association
EC25/IC25	25% Effect Concentration/25% Inhibition Concentration
ELAP	Environmental Laboratory Accreditation Program
ELTAC	Environmental Laboratory Technical Advisory Committee
EPA	United States Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FY	Fiscal Year
GHG	Greenhouse Gas
HFPA-DA	Hexafluoropropylene Oxide (HFPO) Dimer Acid, also known as GenX
MCL	Minimum Contaminant Level (Drinking Water)
MGD	Million Gallons per Day
NELAC	National Environmental Laboratory Accreditation Conference
NMS	Nutrient Management Strategy
OAH	Ocean Acidification and Hypoxia
OEHHA	Office of Environmental Health Hazard Assessment
OPC	Ocean Protection Council
PCB	Polychlorinated Biphenyl
PFAS	Per- and Polyfluoroalkyl Substances
PFHxS	Perfluorohexane Sulfonic Acid
PFNA	Perfluorononanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonic Acid
POTW	Publicly-Owned Treatment Works
PS	Prioritization Score
QAC	Quaternary Ammonium Compound
RMP	Regional Monitoring Program
RPA	Reasonable Potential Analysis
SF Bay	San Francisco Bay
SFEI	San Francisco Estuary Institute
SLR	Sea Level Rise
SSMP	Sewer System Management Plan
TMDL	Total Maximum Daily Load
TIN	Total Inorganic Nitrogen
TNI	The NELAC Institute
TST	Test of Significant Toxicity
WQO	Water Quality Objective
ZEV	Zero-Emission Vehicle

PRELIMINARY PROGRAM
BACWA ANNUAL TECHNICAL SEMINAR
Thursday October 9 - Friday October 10, 2025
Pardee Meeting Facility
DRAFT PROGRAM

Day	Time	Theme	Topic	Desired Outcomes
Thursday	9:30 AM		**Light breakfast**	
	10:00 AM	**Welcome and Introductions**	**Review Agenda**	
	10:15 AM	**Financial Review**	**Budgeting**	• Understanding of budget status • Review Updated 5-year Plan • Input on future level of reserves given anticipated cash flow • Review of collaborative funding
	11:15 AM	**Operational**	**Review of Policies and Procedures**	• Confirm existing policies • identify need for updates or new policies
	12:00 PM		**LUNCH BREAK**	
	1:00 PM	**Nutrients**	**Compliance Schedule**	• Review of Basin Plan Amendment markups • Recommendation for Staff Report content
	3:00pm	**Regulatory**	**Other Regulatory Updates**	Air, biosolids, pesticides, toxicity, more nutrients, etc.
	4:00 PM		**Adjourn for the day**	

Day	Time	Theme	Topic	Desired Outcomes
Friday	**8:30 AM**		**Breakfast**	
	9:00 AM	**Nutrients**	**Nutrient Science Update**	Presentation from SFEI - Update to source apportionment modeling
	10:45 AM	**BREAK**		
	11:00 AM	**PFAS**	**BACWA PFAS Strategy**	• Regulatory developments • Phase 3 Special Study • PFAS Communications • BACWA PFAS Forum
	12:00 PM	**LUNCH BREAK**		
	1:00 AM	**Strategic Planning**	**Strategic Planning**	• Review Strategic Plan • Agree on top priorities or new initiatives for fiscal year
	2:00P	**Adjornment**		

BAPPG Committee
Report to BACWA Board

Meeting Date: August 6, 2025
Executive Board Meeting Date: September 19, 2025
BAPPG Chairs: Robert Wilson (City of Santa Rosa), Autumn Ross (SFPUC)

Committee Request for Board Action: None

44 attendees participated virtually from 28 member agencies and the Regional Water Board, plus two guest speakers.

Updates on Committee Activity and Announcements

- **Regional Water Board Updates:** Nominations for the Dr. Teng Chung Wu Pollution Prevention Award are due August 13th. Mercury and PCB load updates were shared in the July 2025 Executive Officer's report, and are consistent with past loads.
- **Legislation:** SB 682, a ban on PFAS in six categories of consumer products, is in the state assembly. The WIPPES act (H.R.2269 or S.1092) has passed the House and a Senate committee.
- **BACWA Updates:** The communications steering committee is working on a video about the value of wastewater infrastructure. To join that group, contact Lorien Fono.
- **Leadership Opportunities:** Volunteers welcome! Members interested in serving on the BAPPG Steering Committee or helping to lead BAPPG should contact the chairs or BACWA staff.

Emerging Contaminants Update – Link to Slides

Ezra Miller from San Francisco Estuary Institute (SFEI) provided an update on behalf of the Regional Monitoring Program's Emerging Contaminants Workgroup. The workgroup uses a tiered risk-based framework for planning studies of Constituents of Emerging Concern (CECs). Currently, organophosphate esters (OPEs) and PFAS are "high" concern, while "moderate" concern CECs include bisphenols, carbendazim, fipronil & degradates, imidacloprid, and microplastics. Carbendazim, a recent addition to the list, is a preservative that has been found in toilet paper (link). QACs are a "possible concern" that have been linked to recent Bay Area WWTP upsets. SFEI has ongoing monitoring projects related to PFAS, OPEs, bisphenols, preservatives, flea/tick pesticides, and QACs. BACWA members are welcome to attend the workgroup's and RMP annual meetings.

Pet Pesticides Update – Link to Slides

Stephanie Hughes, consultant to BAPPG, shared an update on recent outreach efforts related to pet pesticides, which includes outreach to Regional Water Board staff; coordination with the American Veterinary Medical Association (AVMA) and veterinary experts from the UK; coordination with the CA Department of Pesticide Regulation (DPR) Surface Water Protection Program and Sustainable Pest Management division; and outreach by San Jose and Palo Alto staff to local pet shelters. The group discussed risk-based messaging related to pet pesticides (e.g., vacuuming and washing bedding as a first line of defense; oral rather than spot-on treatments) and whether it is appropriate to urge consumers to switch the brand of spot-on treatment to less toxic formulations.

Fall FOG Campaign

The steering committee shared AI-generated graphics concepts for the fall outreach campaign on Fats, Oils, and Grease (FOG). Attendees voted for their preferred images. The group discussed using the word "bin" rather than "trash" since some communities allow FOG in the green waste bin.

3 P's or 3 Ps? Attendees voted on whether they prefer for the phrase "3 P's" to have an apostrophe. The vote tally was 18 votes for "3 P's" and 8 votes for "3 Ps".

Next BAPPG General Meeting: Wednesday, October 1st, 10am – 12pm
In-Person at Regional Water Board Office, Regional Water Board, 1515 Clay St., Oakland - Room 9

Laboratory Committee
Report to BACWA Board

Committee meeting on 8/12/2025
Executive Board Meeting Date: 9/19/25
Committee Chair: Brittany Rossi Worthen, City of Petaluma

Committee Request for Board Action: None

47 attendees participated remotely, including representatives from 25 BACWA member agencies and the Regional Water Board.

Automation of Total Phosphorus Analysis at EBMUD

Emily Volkmar (EBMUD) described how her lab improved efficiency for Total Phosphorus analysis by implementing autoclave digestion and discrete analysis using method SM 4500-P F-2011. EBMUD recently purchased the SEAL AQ400 discrete analyzer to support their biological nutrient removal pilot project. They also switched from hot plate digestion to autoclave digestion for total phosphorus. Overall, the new method provides faster results, requires less staff time, and reduces repetitive stress injuries for laboratory staff. The automated method for total phosphorus is accredited separately, and EBMUD went through the accreditation process in 2024 by completing an MDL study, proficiency testing, an onsite assessment, and related tasks. The discrete analyzer is also useful for analyzing process control samples for ammonia, nitrate, and nitrite, which has been useful as EBMUD completes pilot testing of biological nutrient removal at the plant. Link to Slides.

Flow Injection Analysis of Nutrients at San José – Santa Clara

Buddhima Mahanama, Helio Regalado, and Alex Chieh (San José – Santa Clara RWF) presented on their lab's use of a Flow Injection Analyzer (FIAlyzer-1000 Series) for nutrient analysis. The method uses gas diffusion across a membrane followed by fluorescence detection, and does not require a distillation step. Using this method, the analysis time for ammonia samples has been cut in half. San José lab recently obtained accreditation for the EPA method (FIAlab 100) for analysis of ammonia and TKN by conducting an MDL study, performing an initial demonstration of capability, completing proficiency testing, and then setting up an audit. San José is an early adopter of this method, which EPA and California ELAP have rolled out as part of the 2021 Methods Update Rule. Link to Slides.

Agency Reports and Announcements

- **Training.** San José shared information about an in-person, hands-on training opportunity for activated sludge microscopy, to be led by Ryan Hennessy. Interested labs should contact Payal.
- **Audits.** Vacaville shared information about a surprise ELAP audit that their lab received in July 2025, which focused on drinking water methods using Colilert.
- **Staffing.** Union Sanitary District shared the results of an informal staffing survey; 11 out of 12 labs that they contacted were using an alternative schedule (e.g., 9/80, 10-hour shifts, etc.).
- **TNI.** One of the topics at this year's NEMS conference was new TNI standards to be released in 2026. The changes being proposed could eventually allow CA ELAP to be fully TNI-compliant rather than using a modified version of the TNI standard.
- **Tariffs.** Committee members discussed the effects of tariffs, which are being treated as a separate line item by some vendors (but not all).

BACWA Announcements

- **Nutrient Watershed Permit.** The PET Tool for uploading data to CIWQS has been updated. Members should use the "Seasonal Average" data type to report 5-month average dry season Total Inorganic Nitrogen load in their annual self-monitoring reports.
- **Chronic Toxicity.** A recent court opinion on the Test of Significant Toxicity could result in changes to whole effluent toxicity testing requirements. For now, dischargers should continue monitoring as required by their individual NPDES permits.

Next Meeting: Tuesday, October 14, 10 AM, Virtual

Collection Systems Committee
Report to BACWA Board

Committee meeting on 8/14/2025
Executive Board Meeting Date: 09/19/2025
Committee Chairs: Tyree Jackson (Oakland) and Dana Lawson (Central San)

Committee Request for Board Action: None

46 attendees from 27 member agencies and two guest speakers participated virtually.

Committee Leadership: The committee welcomed Tracy Heidersbach (EBMUD) as the committee's incoming co-chair, and thanked Tyree Jackson for his three years of leadership service.

Wildfire Response and Recovery - Link to Slides

Joe Schiavone, Deputy Director of Water and Sewer Operations at the City of Santa Rosa, shared his experience with wildfire recovery and response for sanitary sewer systems. Santa Rosa's Tubbs Fire in 2017 destroyed about 10% of the housing in the City's service area, and Joe has also assisted with water and wastewater systems recovery after other large fires. Some of the key points included:

- **Relationships.** During a fire, pump station operations are hampered by access restrictions and damaged communications lines. It is important to have a relationship with the Fire Department to maintain staff access to water and wastewater infrastructure.
- **Undergrounding.** Infrastructure that is below-ground is better-protected during a wildfire. After the Tubbs Fire, Santa Rosa was able to use FEMA hazard mitigation funding to modify one of their sewer lift stations to be a below-ground station. Sewer mains are typically undamaged.
- **Capping Laterals.** For the structures (e.g., homes) that burned, plastic sewer laterals were destroyed starting at the structure and extending towards the main. The open connections can cause debris and contaminated stormwater to wash into sewer mains. With FEMA assistance, Santa Rosa was able to have the damaged sewer laterals capped; laterals were re-connected as structures were rebuilt. Joe recommended that sewer agencies ensure they are part of the fire recovery team so that this lateral capping can be implemented soon after a fire. The work is typically performed by a contractor, not by the sewer agency, because it is on private property.

Private Sewer Lateral Inspection Program Update - Justin Keating (Vallejo Flood and Wastewater District) provided an overview of the Private Lateral Inspection Program that the District recently developed to respond to regulatory requirements and to reduce infiltration & inflow. The program requires a point-of-sale lateral inspection, but does not require replacement. The District continues to provide partial reimbursement for lateral replacement through their Upper Lateral Program, which District ratepayers support through a separate line item on their sewer bill. Members discussed enforcement considerations and the importance of outreach to real estate professionals.

Announcements

- Re-enrollees in the **Sanitary Sewer Systems General Order** must submit a service area boundary map to the State Water Board by December 31, 2025. The State Water Board has provided a Guidance Document. CASA's Spencer Saks shared tips for success, such as ensuring that the WDID for the affiliated wastewater treatment plant matches the one in your Annual Report (if it is incorrect, fix the Annual Report first).
- Per **BCDC's Regional Shoreline Adaptation Plan,** cities/counties must develop plans to adapt to Sea Level Rise. Contact BCDC if your special district needs a point of contact for this process.
- Air Quality Updates: As of December 2024, all diesel standby generators > 50 BMP must meet Tier 4 emissions standards. The California Air Resources Board is amending the Advanced Clean Fleet regulations to incorporate more exemptions and extensions regarding procurement of zero-emissions "utility-specialized" vehicles (link).
- Pollution Prevention Update: The California Department of Pesticide Regulation's enforcement staff have taken action to ensure that copper sulfate-based root control products are not available for sale online, as required by code (link). Using copper sulfate for root control can harm aquatic life in San Francisco Bay.

Next Meeting: Thursday, November 13th – Virtual

Permits Committee
Report to BACWA Board

Committee meeting on 8/19/2025
Executive Board Meeting Date: 9/19/2025
Committee Chair: Blake Brown, Central San

Committee Request for Board Action: None
43 attendees participated remotely from 23 member agencies.

Committee Leadership. The committee welcomed Blake Brown (Central San) as incoming chair and Chris Dembiczak (EBMUD) as incoming vice chair for FY26.

Toxicity Testing Updates

a. Court Decision on the Test of Significant Toxicity (TST).

A recent California District court opinion on the Test of Significant Toxicity found that the TST is not an approved method under the Clean Water Act (40 CFR Part 136), but upheld the statewide toxicity provisions under state law. This court decision could result in changes to whole effluent toxicity testing requirements. For now:

- Dischargers should continue monitoring using the TST, as required by their individual NPDES permits. Note: the approved Clean Water Act methods for chronic toxicity require **five** test concentrations. The TST method only uses results from **two** concentrations (control and IWC), but the TST has not been approved by USEPA under the Alternative Test Procedures program nor is it promulgated as a separate method. Dischargers should therefore include **five** concentrations in their chronic toxicity tests, with the IWC serving as one of the five.
- This court decision is resulting in temporary delays in reissuance of individual NPDES until new language can be approved by legal counsel at the Water Boards. This is currently affecting three BACWA members whose NPDES permits were scheduled for adoption at the August 2025 Regional Water Board meeting.

b. Reduced Monitoring Frequency – NPDES Permit Language

Reissued NPDES permits will now contain a monitoring trigger to revert to monthly monitoring if the discharger has been granted a reduced monitoring frequency, but there is an exceedance of the MDEL or MMEL. For a correct version of this sample language, see this Response to Comments.

c. Ammonia Interference

For chronic toxicity species sensitivity screening studies, agencies should try to avoid ammonia toxicity interference that would require zeolite removal and ammonia add-back for routine monitoring. At least two agencies currently conduct monitoring using this approach; while it is technically feasible, it is also costly.

Upcoming NPDES Permits and Tentative Orders

- A general NPDES permit for Groundwater is scheduled for reissuance at the September 10th Regional Water Board meeting. This Tentative Order contains effluent limits for PFAS compounds that are based on federal drinking water limits.
- To comply with the March 2025 Supreme Court decision on receiving water limitations, individual NPDES permits are being prepared with new Fact Sheet language for certain constituents that were previously subject to receiving water limits (e.g., Dissolved Oxygen; radionuclides). Relatedly, LWA shared two State Water Board guidance documents on application of this court decision to NPDES wastewater permits and MS4 permits. The guidance document explains the rationale regarding the new Fact Sheet language.
- There are several upcoming retirements in the Regional Water Board's NPDES division.

Dilution Study Requirements

Jennie Pang (SFPUC) shared language from an administrative draft NPDES permit that requires three specific modeling scenarios to be included in a future dilution study. The language is a concern because it is unusually specific and may not reflect the different dilution modeling approaches used to establish dilution credits in Region 2 permits. SFPUC will lead and BACWA will assist in discussing this topic further with Regional Water Board staff. Attendees also discussed that a future presentation on this technical topic would be useful for the committee.

Climate Change Questionnaire

BACWA is looking for volunteers to assist with proposing edits to the 2021 Climate Change Information Request to streamline and update the questions before its future use by the Regional Water Board.

Nutrient Watershed Permit Updates

- Download the latest PET Tool for reporting data to CIWQS. Dischargers should use the "Seasonal Average" data type for reporting the 5-month average dry season load of Total Inorganic Nitrogen to the annual self-monitoring report.
- In June, BACWA submitted the Scoping Plan for the Regional Planning Study to the Regional Water Board, and HDR is now under contract to complete the work. The contract also includes ongoing work by The Freshwater Trust to complete a Water Quality Trading Feasibility Study. The trading study will be an update of a 2017 study also completed by The Freshwater Trust
- The Regional Water Board has hired staff to work on a Basin Plan Amendment related to extended compliance timelines, and a draft is expected in late August 2025. BACWA plans to hold a Nutrient Strategy Team meeting to discuss the draft once it is available.
- The next Nutrient Management Strategy steering committee meeting is scheduled for 9/12/25.
- Attendees discussed that it would be interesting to have members share brief summaries of their nutrient removal alternatives analysis journey at future Permits Committee meetings.

Mercury and PCBs Watershed Permit

- BACWA has issued a contract to SFEI for $50k to facilitate completion of about 200 subsistence fishing surveys in 2025-2027. This effort will support the Regional Water Board's efforts to designate the subsistence fishing beneficial use, and it also fulfills the risk reduction requirement in the current Mercury & PCBs Watershed Permit (see Provision 6.3.4).
- Regional Water Board staff included a summary of Mercury and PCBs loads in the July 2025 Executive Officer's Report. The supporting calculations are also available upon request.

PFAS

The Regional Water Board has adopted Environmental Screening Levels for 14 additional PFAS compounds. These screening levels are used in the site cleanup program and are not directly applicable to wastewater dischargers, but they are a useful reference document. The Environmental Screening Levels for PFOS and PFOA are based on fish consumption, and are significant lower than typical wastewater concentrations in the region.

Reporting Mass Loads to CIWQS

Notes from the June 2025 Permits Committee meeting provide guidance on reporting mass loads to CIWQS. Regional Water Board staff have subsequently clarified that the guidance is dischargers "should" use the same averaging period for both flow and concentration (e.g., noon to noon), but it is not a strict requirement. Dischargers should consult with their NPDES permit case managers to discuss specifics.

Next Meeting: Tuesday, October 14th, Virtual

Asset Management Committee
Report to BACWA Board

Committee meeting on 8/20/2025
Executive Board Meeting Date: 9/19/2025
Committee Chairs: Rebecca Overacre (EBMUD) and Khae Bohan (Central San)

Committee Request for Board Action: Assist with recruiting new committee leaders

There were 50 attendees representing about 20 member agencies, including two guest speakers. About half of attendees were BACWA Collection Systems Committee members.

Committee Accomplishments, 2022-2025. Link to Slides. The co-chairs summarized the last few years of committee events and discussion topics, and shared that they are ready to pass the baton to new leadership. Volunteers needed!

Lessons Learned from a 24-Inch Force Main Inspection

Link to Presentation Slides

Black & Veatch's Chandler Carpenter and Clinton McAdams shared insights from a condition assessment of a 24-inch sanitary sewer force main in Phoenix. The assessment was conducted on the 20-year-old ductile iron force main because of a planned operational change, and to inform repair recommendations. Key points from the presentation included:

- **Condition Assessment Technology.** The condition assessment was completed with a PICA See Snake, which is propelled by the flow in the pipe (target velocity = 1 ft/s). The tool uses remote field electromagnetics to detect pitting and other defects in the pipe wall. This tool works with any metallic pipe. The high resolution offered by this tool allowed the team to see that most of the defects were below the springline of the pipe, and that the defects were not correlated with locations with negative pressures or air pockets. The defects were likely associated with internal corrosion caused by solids accumulation.

  The project team recommended changing pump station operations so that the force main flow would have an elevated velocity (>6 ft/s) once per day to flush out solids. The team also recommended a new air valve to prevent negative pressures.
- **Logistics and Schedule.** The tool is completely autonomous, but cannot travel through obstructions such as plug valves, so the condition assessment team installed launch piping and a temporary "safely catch" tool to launch and retrieve the instrument. Installation of the launch ports and progressive pigging that was conducted before the condition assessment took several weeks and was the main driver for the schedule; by comparison, the PICA tool was only planned to be in the pipeline for about one day. Unfortunately, during the inspection, the PICA tool became snagged at one of the pipe bends, and a section of pipe had to be excavated to retrieve the tool.
- **Force Main Condition Assessment Options.** Agencies with force mains need to keep tabs on this condition of this critical asset, but that can involve different tasks at each agency. It can involve keeping track of operational data, corrosion control equipment, and CCTV before moving to more sophisticated technology such as an electromagnetic inspection. Incorporating permanent launch ports for future force main inspections is also helpful and becoming increasingly common as force mains are rehabilitated.

Executive Director's Report to the Board

August 2025

PRACTICE GOOD GOVERNANCE (STRATEGY PLAN GOAL 5)

EXECUTIVE BOARD MEETING AND SUPPORT

- Worked with BACWA staff to plan and manage 8/15 Executive Board meeting
- Conducted the Executive Board meeting agenda review with the BACWA Chair
- Hosted 8/15 Executive Board meeting and developed meeting notes
- Continued to track all action items to completion
- Planned Special Seminar with R2 for September
- Worked with SFEI and EBDA on Resolution to honor Mike Connor

FINANCE:

- Reviewed the monthly BACWA financial reports
- Reviewed and approved invoices
- Reviewed FY25 year end financials
- Developed contracts for consultant support for FY26
- Attended year-end meeting with EBMUD accounting staff (8/11), and reallocated investment priority

COMMITTEES:

- Supported transition of BABC to BACWA committee
- Attended BABC meeting (8/18)
- Attended BABC website subgroup meeting to discuss use of Bayareabiosolids.com and baywise.org properties
- Attended BAPPG meeting (8/6)
- Attended Permits committee (8/19)
- Worked with members to understand range of positions on proposed BA Air District Project Manager Pilot, attended Air District Webinar on Pilot (8/20)
- Attended AIR committee (8/20)

ADMINISTRATION:

- Planned for and conducted the monthly BACWA staff meeting to prepare for the Board Meeting and to coordinate and prioritize activities.
- Signed off on invoices, reviewed correspondence, prepared for upcoming Board meetings, responded to inquiries on BACWA efforts, oversaw and participated in updating of web page and provided general direction to BACWA staff.
- Developed and responded to numerous emails and phone calls as part of the conduct of BACWA business on a day-to-day basis.

EXEMPLIFY SERVICE AND RESPONSIVENESS TO MEMBERS AND PUBLIC (STRATEGIC PLAN GOAL 4)

COMMUNICATIONS

- Continued scripting Wastewater 101 video with Civic Edge and Comms Steering Commitee
- Discussed potential collaboration with SFEI for museum exhibits, and visited Exploratorium with SFEI staff, visited Exploratorium After Dark
- Worked with RPM in the preparation of the monthly BACWA Bulletin.

PROJECTS OF SPECIAL BENEFIT:

BACC (BAY AREA CHEMICAL CONSORTIUM)

- Attended Annual Meeting (8/27)

BACWWE (BAY AREA COALITION FOR WATER/WASTEWATER EDUCATION)

- No update

FOSTER COLLABORATION AND RELATIONSHIP BUILDING WITH REGULATORS AND OTHER STAKEHOLDERS (STRATEGIC PLAN GOAL 2)

COLLABORATIONS:

- Attended monthly CASA SLC meetings
- Attended monthly CASA ACE meetings
- Attended monthly CASA RWG Biosolids Committee meetings
- Checked in with EPA on SF Bay Program Office funding for nutrient management
- Attended SFEP IC meeting (8/13)
- Attended CASA Annual Conference (7/30-8/1)
- Met with R2 Planning Manager to discuss collaborative goals
- Worked with BABC on contribution to National Collaborative at University of Arizona

REGULATORY:

- Attended CASA Air Toxics meetings
- Participated in CASA Pooled Emissions SC meeting
- Discussed nutrient regulatory alternatives with regulators and consultants from outside of the region
- Met with R2 EO to discuss basin plan amendment
- Met with R2 EO on Statewide PFAS Strategy, reached out to CASA and SFEI to discuss ideas
- Worked with RPM and SFEI to develop SOW for fish consumption survey to satisfy Hg/PCB permit risk reduction requirements

ASC (AQUATIC SCIENCE CENTER)

- Reviewed materials sent via email by ASC ED

- Attended Executive Committee meeting on communications and development
- Attended Executive Committee meeting on potential litigation
- Reviewed FY25 Audit and participated in Audit meeting

ADVOCATE FOR REGULATION BASED ON SCIENCE (STRATEGIC PLAN GOAL 1)

NUTRIENTS:

Completed a variety of tasks and activities associated with BACWA's interests on nutrients and collaborating with the Water Board including:

- Participated in Colorado NWRI Nutrient Panel meetings
- Attended monthly NMS PSC meetings
- Met with NMS Science Manager on programmatic issues
- Met with HDR and CMG to finalize regional plan scope of work, developed BAR and contract amendment
- Proposed updated science management questions
- Met with member agencies and consultants to discuss nutrient permitting and permit compliance
- Reached out to prospective NMS Reviewer candidates to discuss contract
- Met with R2 staff to plan presentation to Water Board on nutrient permit
- Participated in CASA OAH Subcommittee (8/11)
- Participated in SCCRWP ROMS-BEC IPR SC meeting (8/22) and met to confer with other POTW reps

RMP:

- Reviewed RMP materials

CALIFORNIA WATER MONITORING COUNCIL

- Attended Council meeting (8/21)

PURSUE REGIONAL, MULTI-BENEFIT SOLUTIONS TO ENVIRONMENTAL CHALLENGES (STRATEGIC PLAN GOAL 3)

MULTIBENEFIT PROGRAM ADVOCACY

- Discussed NBS communications approaches with SFEI staff
- Planned and participated in OneWater Planning meetings (8/4, 8/19, 8/27) and planned presentation for in-person summit in September

REGIONAL SOLUTIONS

- Supported TFT in setting up meetings with member agencies to discuss trading
- Attended Valley Water Potable Reuse Outreach Collaborative meeting (8/5)

BACWA ACTION ITEMS

Number	Subject	Task	Responsibiity	Deadline	Status
	Action Items from Aug 15 2025 BACWA Executive Board Meeting		**resp.**	**deadline**	**status**
2026.08.01	BACWA collaborative PFAS Strategy	BACWA to meet with Regional Water Board staff in early September to discuss opportunities to coordinate on PFAS source control, science, and communication	ED	9/5/2025	Complete
2026.08.02	PFAS limits in R2 groundwater discharge permit	BACWA RPM is going to prepare draft talking points and share them with BACWA community.	RPM	WIP	delayed until permit reissuance
2026.08.03	Central Coast Ocean Modeling	BACWA ED to submit comments by early September	ED	9/12/2025	Complete
2026.08.04	Informational: Impact of TST finding by 5th Appellate District Court	BACWA RPM to continue tracking outcome of TST court opinion on NPDES permits in the region	RPM	WIP	
2026.08.05	PFAS forum	BACWA ED to continue to work on PFAS forum	ED	9/12/2025	complete
2026.08.06	AI Infoshare	BACWA ED would like a list of BACWA agencies working on AI and will start to work on infoshare event.	ED	WIP	
2026.08.07	Air District Engineering Program Manager Pilot	BACWA ED to develop important points of discussion regarding the pilot at September BACWA Board Meeting	ED	9/12/2025	complete
2026.08.08	Succession planning update	BACWA ED to consider representation on SFEI/ASC Board when Amit and Lori are both present at Sept Meeting.	ED	9/12/2025	complete
2026.08.09	September 4 Joint Special Seminar with R2 on Klamath	Schedule and NST meeting prior to this event to review Water Board's proposed Basin Plan Amendment language and review content for lessons learned from other watersheds program item	ED	9/1/2025	Complete
	Action Items Remaining from Previous BACWA Executive Board Meetings				

FY26 6 of 9 Action items are complete
FY25: 49 of 49 Action items are complete
FY24: 43 of 43 Action Items are complete
FY23: 58 of 58 Action Items are complete
FY22: 51 of 52 Action items are completed
FY21: 51 of 51 Action items completed
FY20: *70 of 70 Action Items completed*
FY19: *110 of 110 action Items completed*
FY18: *66 of 66 Action Items completed*
FY17: *90 of 90 Action Items completed*

Board Calendar

December 2025, January & February 2026

DATE	AGENDA ITEMS
October 9 & 10 *Pardee Technical Seminar*	
December 12, 2025 *EBMUD Downtown*	**Approvals & Authorizations:** • FY25 Financial Audit • Approve Annual Report **Policy / Strategic Discussion:** • BACWA Committee Update • Source Control Presentation **Operational:** • •
January 9, 2026 *SFPUC*	**Approvals & Authorizations:** • 2nd NMS payment approval • **Policy / Strategic Discussion:** • BAWCA Committee Update • Freshwater Trust Presentation **Operational:** • FY27 Budget Schedule
February 20, 2026 *EBMUD Orinda*	**Approvals & Authorizations:** • • **Policy / Strategic Discussion:** • BAWCA Committee Update • **Operational:** • FY27 Draft Budget first review • Board Meetings FY27

Regulatory Program Manager's Report to the Executive Board

August 2025

BACWA BULLETIN: Completed and circulated August Bulletin.

CASA Conference: Attended CASA Annual Conference in San Diego (partial day).

NUTRIENTS: Continued to coordinate with HDR and contract management group to finalize the draft scope of work and fee estimate for Regional Planning Study; reviewed Nutrient Management Strategy draft work products; prepared for Nutrient Strategy Team meeting; reviewed draft Basin Plan Amendment.

COMMITTEE SUPPORT:

Asset Management – Assisted co-chairs with logistics for August meeting; prepared meeting notes.

BAPPG – Participated in August committee meeting and prepared meeting notes; coordinated with pesticides regulatory support consultants regarding potential grant funding for flea and tick pet pesticide outreach; participated in August pesticides subcommittee meeting; coordinated with steering committee regarding fall Fats, Oils, and Grease (FOG) outreach campaign; prepared draft edits to Baywise page for pet owners; provided list of BACWA member contact information to California Department of Pesticide Regulation.

Collection Systems – Prepared announcements for August committee meeting; prepared meeting notes; reviewed underground infrastructure GIS regulations.

Laboratory – Assisted with planning and announcements for August committee meeting; prepared meeting notes.

Permits – Reviewed court opinion from CA Appellate Court invalidating the TST under federal law and prepared guidance for members with input from Regional Water Board staff; discussed draft groundwater general order with CASA; prepared announcements for August committee meeting; prepared meeting notes; prepared draft update of climate change survey; discussed dilution modeling with Regional Water Board staff and member agency.

Recycled Water – Reviewed revised draft onsite nonpotable reuse regulations.

ADMINISTRATIVE: Website and email list administration; attended BACWA staff meeting; prepared draft list of committee accomplishments for FY25 for use in annual report.

BACWA MEETINGS ATTENDED:
BAPPG (8/6)
Lab Committee (8/12)
Collection Systems Committee (8/14)
Executive Board (8/15)
Permits Committee (8/19)
AIR Committee (8/20)
Asset Management Committee (8/21)
BAPPG Pesticides Committee (8/28)

EXTERNAL EVENTS ATTENDED:
Regional Shoreline Adaptation Planning Webinar (8/13)
Pop-up meeting on TST Legal Decision (8/21)
CASA SSS-WDR Data Review Group with State Water Board (8/25)