



B A C W A
BAY AREA
CLEAN WATER
A G E N C I E S

Executive Board Meeting

AGENDA

Friday, March 21, 2025 9:00 AM - 12:30 PM (PDT)

Central San

5019 Imhoff Pl., Martinez, CA 94553

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	9:10 AM	
CONSENT CALENDAR	9:11AM	
1 February 21, 2025 BACWA Executive Board meeting minutes		3-8
2 March 10, 2025 Special Executive Board Joint Meeting with R2		9-10
3 January 2025 Treasurer's Report		11-19
APPROVALS AND AUTHORIZATIONS	9:15 AM	
4 <u>Approval</u> : BABC Integration into BACWA		20-21
OPERATIONAL	9:30 AM	
5 <u>Discussion</u> : ED Performance Plan template and schedule		22-24
6 <u>Discussion</u> : Recommended edits to classes of membership policy		25-28
7 <u>Discussion</u> : Nutrient surcharge calculations - Draft motion		29-31
8 <u>Discussion</u> : Draft FY26 BACWA Budget, Workplan, and 5-year plan		32-47
9 <u>Discussion</u> : Annual meeting draft agenda		48
10 <u>Discussion</u> : Board meeting schedule FY26		49
11 <u>Discussion</u> : Netfile form 700 reminder		
BREAK	10:30 AM	
POLICY/STRATEGIC	10:45 AM	
12 <u>Discussion</u> : March 10 Joint meeting with R2 debrief		
13 <u>Discussion</u> : Compliance Schedule Basin Plan Amendment		
14 <u>Discussion</u> : OPC and SWB updates on OAH		50-54
15 <u>Informational</u> : GAR and Compliance Milestones update		
16 <u>Informational</u> : NMS Update Link to Planning Subcommittee Notes		55-61
17 <u>Informational</u> : EPA Region IX SF Bay Program Office funding update		
18 <u>Informational</u> : NBS Webinar on April 10		62
19 <u>Informational</u> : Recycled Water Committee/WateReuse joint workshop on Link to Registration		63
20 <u>Discussion</u> : Proposed PFAS Communications Summit		64
21 <u>Informational</u> : Chlorine Residual BPA cost savings		65
22 <u>Informational</u> : Regulatory Issues Matrix Update		66-83
REPORTS	12:10 AM	
23 Committee Reports		84-89
24 Member highlights		
25 Executive Director Report		90-91
26 Board Calendar and Action Items		92-93
27 Regulatory Program Manager Report		94
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 Amit Mutsuddy, Eric Dunlavey;	
e. Nutrient Governance Steering Committee	alternates: Lori Schectel, Jackie Zipkin	
e.i Nutrient Planning Subcommittee	Eric Dunlavey	
e.ii MERHAB MaTAG	Amit Mutsuddy	
f. SWRCB Nutrient SAG	Lorien Fono	
	Cheryl Munoz; Florence Wedington;	
g. BAIRWMP	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		
26 SUGGESTIONS FOR FUTURE AGENDA ITEMS		12:25pm	
NEXT MEETING			
The next meeting of the Board is scheduled for Apri 18, 2025 at EBMUD downtown			
ADJOURNMENT		12:30 PM	



Executive Board Meeting Minutes
Friday, February 21, 2025, 9:00 AM - 12:30 PM (PDT)
EBMUD Orinda

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); Lori Schectel (Central Contra Costa Sanitary District).

Attendees

Name	Agency/Company
Aaron Winer	West County Wastewater District
Alicia Chakrabarti	EBMUD
Amanda Roa	Fairfield-Suisun Sewer District
Andrew Damron	Napa San
Brian Thomas	Delta Diablo
Dave Richardson	Woodard & Curran
David Senn	SFEI
Irene Chu	Hazen and Sawyer
Jared Voskuhl	CASA
Jennifer Dymont	BACWA
Karin North	City of Palo Alto
Lorien Fono	BACWA
Mary Cousins	BACWA
Martha Sutula	SCCWRP
Sara Sadreddini	Black & Veatch
Sarah Scheidt	San Francisco International Airport
Stephanie Hughes	Consultant
Tim Lewis	Dublin San Ramon Services District
Tom Hall	EOA
Vince De Lange	Delta Diablo
Winola Cheong	City of Sunnyvale

Jackie called the meeting to order at 9:03am

Agenda Item

ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE

PUBLIC COMMENT None

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER Item 8 will be taken after Item 5 to accommodate speakers.

CONSENT CALENDAR

1 January 17, 2025, BACWA Executive Board meeting minutes

2 December 2024 Treasurer's Report

Consent Calendar items 1 and 2: 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. None abstained.

APPROVALS AND AUTHORIZATIONS

3 Approval: CAR for Richmond Shoreline Alliance risk reduction - BACWA RPM provided background information about the fish consumption survey project.

POLICY/STRATEGIC

4 Presentation: Pesticides Regulatory Advocacy - Stephanie Hughes leads the BACWA Pesticide Workgroup and highlighted the workgroup's recent work and goals for 2025. [Link to Slides](#). The workgroup meets regularly to discuss ways to reduce pesticide loads to wastewater plants by advocating to regulators (e.g., EPA, CA Department of Pesticide Regulation) and through general public outreach. Stephanie also summarized a major effort in 2024 and 2025 to conduct outreach to veterinarians regarding the toxicity of topical flea and tick pet pesticides. The group discussed the importance of getting this information out to agencies, pet owners, and others to control this source. BAPPG is asking all members to participate in the pet pesticides effort using [this checklist](#).

5 Presentation: OAH Modeling off the Northern California Coastline - Martha Sutula from Southern California Coastal Water Research Project (SCCWRP) shared a progress report on modeling of Ocean Acidification & Hypoxia (OAH). [Link to Slides](#). Martha explained that the ROMS-BEC model is used to simulate ocean circulation and chemistry. She also explained how the model is being used to explore the potential effects of land-based nutrient loads, such as ocean acidification and low dissolved oxygen. The model was first used in the Southern California Bight, where POTWs are the dominant land-based nutrient load. It has also been extended to the San Francisco and Monterey Coast areas, where loads from the Bay and from agriculture are the dominant nutrient loads. SFEI's David Senn also provided information about how the NMS Science team is coordinating with SCCWRP on this effort. Group discussion and questions followed Martha's presentation, focusing on the model's uncertainty compared to the current SF Bay model, and the need to incorporate scenarios that reflect the Nutrient Watershed Permit's required loading reductions.

Action item: BACWA ED to work with Martha & David to bring this discussion to stakeholders in the Bay Area soon.

Break

6 Discussion: NBC Bay Area OpenRoad segment - Jackie Zipkin shared that EBDA and NGO Save the Bay are working together a segment on OpenRoad about HASPA and the First Mile project that will build a horizontal levee south of Oro Loma. Jackie and Lorien are working on a portion of the segment addressing the value of wastewater in our region. BACWA will make a \$5,000 contribution to OpenRoad to produce the segment.

Action item: BACWA ED to share talking points for the segment with the Board.

7 Informational: GAR and Compliance Milestones update - BACWA ED shared draft TIN load data from the group annual report (GAR). The GAR is due to the Regional Water Board by April 1, 2025 and will also include information about compliance schedule milestones. BACWA ED also shared information about preparing the scoping plan due July 1, 2025.

Action item: BACWA RPM to share a review schedule for the draft GAR with BACWA members.

8 Informational: NMS Update - David Senn, from SFEI, provided an update from the last science planning meeting. David shared the science planning process & goals, funding and program management of NMS. Group discussion followed, focusing on the need to identify key management questions.

9 Informational: EPA Region IX SF Bay Program Office funding update – BACWA ED is meeting regularly with the regional EPA staff to discuss the outlook possible grant funding.

10 Discussion: Bay Area One Water Network Reboot - BACWA ED shared that this group is starting up again. There will be a workshop to develop a “One Water Road Map” in early fall. BACWA ED shared ideas and asked attendees for useful output from Bay Area One Water Network. BACWA ED asked for ongoing feedback on this project. Attendees suggested coordination with the [Bay Area IRWMP](#) to avoid duplication of effort.

11 Informational: Recycled water Committee/WateReuse joint workshop on nutrients-RW nexus - BACWA ED said BACWA’s Recycled Water Committee / WateReuse will have a joint meeting April 29, 2025, about the nutrient removal-RW nexus, located at Central San. The group reviewed a preliminary agenda.

12 Discussion: Proposed PFAS Communications Summit - BACWA ED shared information on a proposed PFAS communication summit. A proposed agenda was reviewed that summarized PFAS related challenges to POTWs due to potential future regulation, public awareness of PFAS, existing PFAS messaging, BACWA key messages on

PFAS to various audiences, and how BACWA can support messaging. Board members gave feedback that the meeting should be limited to one hour to keep participation high in a remote setting.

13 Discussion: Next joint meeting with R2 - Draft agenda - BACWA ED shared the draft agenda for the March 10th meeting with the Regional Water Board.

OPERATIONAL

14 Informational: Draft approval on BABC Integration into BACWA - BACWA ED would like to formally document BABC's integration into BACWA. A draft BAR to describe the process is in the packet. Please provide feedback to BACWA ED.

Action item: BACWA ED to bring a resolution regarding BABC integration for Board approval at the March meeting.

15 Discussion: Non-member fees for committee participation - BACWA ED shared a draft proposal for non-BACWA member fees for committee participation. The group discussed ideas and suggested updating the Class of Membership policy to allow a new class of affiliate members to join from outside the region.

Action item: BACWA ED to bring a revised Class of Membership policy to the Board for consideration at a future meeting.

16 Discussion: Nutrient surcharge calculations – BACWA ED shared that this item will be voted on at the April Executive Board meeting instead of March.

18 Discussion: Draft FY26 BACWA Budget and 5-year plan – BACWA ED shared that the budget proposes a 5% increase in member dues to accommodate the BABC support contract. The budget will need to be updated to reflect pass-through of the CASA Air Toxics Study; anticipated costs for FY26 have not yet been determined.

19 Discussion: Annual meeting preliminary agenda – BACWA ED shared the agenda and participants suggested additional discussions on the panels on pollution prevention and climate change.

Action item: BACWA ED to set up brainstorming sessions for the climate change and pollution prevention panels.

20 Discussion: Netfile form 700 – Board representatives were asked to file their forms.

REPORTS

19 Committee Reports – in packet

20 Member highlights – Board members shared that cost savings from the Chlorine Residual Basin Plan Amendment have been significant due to reduced sodium bisulfite use. Members shared that there are two bills related to PFAS in the California legislature. [SB 682](#) addresses non-essential PFAS in consumer products, and [AB 794](#) addresses the state’s adoption of drinking water limits.

21 Executive Director Report – in packet

22 Board Calendar and Action Items – in packet

23 Regulatory Program Manager Report – in packet

24 Other BACWA Representative Reports - none

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

25 SUGGESTIONS FOR FUTURE AGENDA ITEMS

NEXT MEETING

The next meeting of the Board is scheduled for March 21, 2025 at Central San

ADJOURNMENT - 12:38pm



Special Executive Board Meeting Minutes Joint Meeting with Regional Water Board Staff March 10, 2025

INTRODUCTIONS

Executive Board Representatives: Amit Mutsuddy (EBMUD), Jackie Zipkin (East Bay Dischargers Authority); Eric Dunlavey (San José), Lori Schectel (Central San); Amy Chastain (SFPUC)

Other Attendees:

Name(s)	Agency
Eileen White, Kevin Lunde, Bill Johnson, Richard Looker, Robert Schlipf	San Francisco Bay Regional Water Quality Control Board
Lorien Fono, Mary Cousins	BACWA
Alicia Chakrabarti	EBMUD
David Donovan	Hayward
Mike Falk, Charles Hammond	HDR

The meeting began at 10:06 am at the offices of the Regional Water Board in Oakland. There was no public comment.

SUMMARY OF DISCUSSION

Water Board and Agency Updates

Regional Water Board Executive Officer Eileen White reported that the Water Boards' attorneys are evaluating the recent Supreme Court decision in [City and County of San Francisco vs. EPA](#) to determine the impact on NPDES permitting. She also reported that State employees will be returning to the office 4 days/week starting in July per [Executive Order N-22-25](#). BACWA members provided agency updates on capital projects and staffing changes. EBDA shared that it saved approximately \$270,000 on sodium bisulfite in 2024 due to the [chlorine permit amendment](#), which reduced the dosing required for dechlorinating chemicals. BACWA will compile and provide additional information to the Regional Water Board to reflect the region-wide cost savings of this permit amendment.

Nutrients

Regional Water Board staff shared they have identified a preferred option for providing more time for compliance with the Nutrient Watershed Permit, as described in [Resolution R2-2024-0014](#). The preferred option is to pursue a non-TMDL Basin Plan Amendment that would supersede the statewide compliance schedule policy (within Region 2 only). The next step is to develop the concept further, in parallel with CEQA analysis. BACWA and Regional Water Board staff will investigate options for providing contractor support for the CEQA effort, as staffing resources with this expertise are not readily available in-house at the Water Boards.

3/10/25 Joint RB2 Meeting Summary

Representatives from HDR provided an update on the Group Annual Report that is currently being prepared and will be submitted by April 1st. Loads and water recycled diversions reflect wet weather conditions. The Group Annual Report will also contain information about compliance schedule milestones. Regional Water Board staff expressed interest in agencies' anticipated schedules for completion of nutrient removal projects. The group plans to hold another special Executive Board meeting with Regional Water Board staff in late May or early June to discuss the Scoping Plan for the regional planning study.

PFAS

BACWA shared perspectives on the EPA's draft [human health water quality criteria](#) for PFOA, PFAS, and PFBS, and the draft [biosolids risk assessment](#) for PFOA and PFOS. Regional Water Board staff noted that even if water quality criteria are not formally adopted by the Water Boards, they can be used for 303(d) listings. BACWA also shared the [SB 682](#) has been proposed in the California legislature to ban non-essential PFAS in consumer products, and that BAPPG is planning a spring outreach campaign on PFAS that will link to the [Baywise website](#).

Mercury and PCBs

Regional Water Board staff and BACWA staff agreed that if the EPA drops PCB Aroclors as an approved method as currently envisioned in the [draft Methods Update Rule](#), then a joint staff effort will be required to revisit PCBs data and revise the Mercury and PCBs Watershed Permit before its next reissuance. The Regional Water Board is planning to reopen the mercury TMDL in 2028 and the PCBs TMDL in 2030 to attend to the timeframe for implementation of the load allocations and add additional requirements related to stormwater from PCB hot spots. The pilot project for the [fish consumption questionnaire](#) is underway by Richmond Shoreline Alliance and will be completed in March 2025, but follow-on activities have not been identified at this time.

Recycled Water

BACWA and WaterReuse are planning a [joint workshop on April 29th](#) on nutrients and reuse. Also, the State Water Board is expected to release draft regulations for onsite nonpotable reuse soon.

Cross-Media Issues

Regional Water Board staff will participate in an April 21st meeting with BACWA and Bay Area Air District staff to express the importance of timely permitting for nutrient removal upgrades.

Climate Change

Four years ago, the Regional Water Board asked wastewater treatment agencies to respond to a [Climate change information request](#). Later this year, this survey will be refreshed and circulated as a 13383 letter. BACWA will assist Regional Water Board staff in revising and test-driving the questionnaire before it is circulated to all agencies.

The meeting was adjourned at 11:54 am.



B A C W A B A Y A R E A C L E A N W A T E R A G E N C I E S

February 24, 2025

MEMO TO: Bay Area Clean Water Agencies Executive Board
MEMO FROM: Phoebe Grow, Treasurer, East Bay Municipal Utility District
SUBJECT: Seventh Month FY 2024 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, 2024 through January 31, 2025** (Seven months of Fiscal Year 2025). 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, February 25, 2025 2:18 PM
To: Houck, Matt
Subject: RE: January 2025 Treasurer's Report

Hi Matt – Report looks good. Thanks!

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

From: Houck, Matt <matt.houck@ebmud.com>
Sent: Monday, February 24, 2025 2:19 PM
To: Grow, Phoebe <phoebe.grow@ebmud.com>
Subject: January 2025 Treasurer's Report

Hi Phoebe,

Please approve BACWA - January 2025 Treasurer's Report for distribution.

Let me know if you have any questions.

Thanks,

Matt Houck

Accountant III

East Bay Municipal Utility District

375 11TH St, MS 402, Oakland, CA 94607

P 510-287-0238



MONTHLY FINANCIAL SUMMARY REPORT

January 2025

Fund Balances

In FY25 BACWA has three operating funds (BACWA, Legal, and CBC) and three pass-through funds for which BACWA provides only contract administration services (WOT, BABC & BACC). As of October 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 January 31, 2025, was \$643,745 which is significantly higher than the target reserve of \$384,651 which is intended to cover 3 months of normal operating expenses based on the BACWA FY25 budget. \$410,103 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 \$233,642 unobligated.

CBC Fund: This fund provides the resources for completing special investigations as well as meeting regulatory requirements. The ending fund balance on January 31, 2024, was \$2,118,525 which is higher than the target reserve of \$1,000,000. \$78,0506 of the ending fund balance is encumbered to meet line-item expenses for completion of the Group Annual Report and Nutrient Watershed Permit contracts. This leaves an actual unencumbered reserve balance of \$ 1,040,475 (i.e., actual fund balance of \$2,040,475 less target reserves) as of January 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 January 31, 2025 (50% of the FY) are at 99%

Expenses as of January 31, 2025 (50% of the FY) are at 70%

**FY 2025
BACWA BUDGET to ACTUAL**

							
<u>BACWA FY25 BUDGET</u>	<u>Line Item Description</u>	<u>FY 2025 Budget</u>	<u>Projected Revenue as of Jan 2025 Changes from budget in blue</u>	<u>Actual January 2025</u>	<u>Actual % of Budget January 2025</u>	<u>Variance</u>	<u>NOTES</u>
REVENUES & FUNDING							
Dues	Principals' Contributions	\$553,929	\$553,929	\$553,930	100%	\$1	FY25: 3% increase 5 @ \$110,786
	Associate & Affiliate Contributions	\$195,780	\$195,780	\$195,780	100%	\$0	FY25: 3% increase. 12 Assoc: \$9142 47 Affiliate: \$1831; UC Berkeley \$500
Fees	Clean Bay Collaborative	\$675,000	\$675,000	\$675,000	100%	\$0	Same as FY23. Prin: \$450,000; Assoc/Affil: \$225,000
	Nutrient Surcharge	\$1,600,000	\$1,600,000	\$1,600,000	100%	\$0	See Nutrient Surcharge Spreadsheet
	Voluntary Nutrient Contributions			\$0	0%	\$0	
Other Receipts	AIR Non-Member	\$7,582	\$7,582	\$7,582	100%	\$0	3% increase (Santa Rosa)
	BAPPG Non-Members	\$4,264	\$4,264	\$4,264	100%	\$0	3% increase (Sta Rosa, Sac Reg'l, Vacaville) \$1,421/each
	Other			\$0		\$0	
Fund Transfer	Special Program Admin Fees (WOT)	\$1,000	\$0	\$0	0%	-\$1,000	
	Special Program Admin Fees (BACC)	\$39,522	\$39,522	\$0	0%	-\$39,522	400 hours of AED support \$98.80/hr
	Special Program Admin Fees (BABC)	\$6,000	\$6,000	\$0	0%	-\$6,000	ED, AED and RPM support
Air Toxics	CASA Passthrough	\$600,000	\$600,000	\$538,140	90%	-\$61,860	New in FY25
Interest Income	LAIF	\$80,000	\$80,000	\$150,726	188%	\$70,726	BACWA, Legal, & CBC Funds invested in LAIF
	Total Revenue	\$3,763,077	\$3,762,077	\$3,725,422	99.00%	-\$37,655	
BACWA FY25 BUDGET							
<u>BACWA FY25 BUDGET</u>	<u>Line Item Description</u>	<u>FY 2025 Budget</u>	<u>Projected Expense as of Jan 2025 Changes from budget in blue</u>	<u>Actual January 2025</u>	<u>Actual % of Budget January 2025</u>	<u>Variance</u>	<u>NOTES</u>
EXPENSES							
Labor							
	Executive Director	\$224,230	\$224,230	\$112,115	50%	-\$112,115	(incl 2.6% CPI SF Bay Metro Area Dec 2023)
	Assistant Executive Director	\$94,417	\$94,417	\$50,188	53%	-\$44,229	(incl 2.6% CPI SF Bay Metro Area Dec 2023); \$78.68/hour; Reflects 1200 hours
	BACC Administrator	\$39,522	\$39,522	\$29,311	74%	-\$10,210	400 hrs AED support at \$98.80 per hr
	Regulatory Program Manager	\$156,136	\$156,136	\$76,098	49%	-\$80,038	(2.6% CPI SF Bay Metro Area Dec 2023); \$115.65/hour, Reflects 1350 hours
	Total	\$514,304	\$514,304	\$267,712	52%	-\$246,592	
Administration							
	EBMUD Financial Services	\$43,297	\$43,297	\$22,380	52%	-\$20,917	FY25 no change
	Auditing Services	\$5,672	\$5,672	\$0	0%	-\$5,672	Finanical Auditors through EBMUD; per auditor rate schedule
	Administrative Expenses	\$4,059	\$4,059	\$99	2%	-\$3,960	50% less than FY24
	Insurance	\$10,753	\$10,753	\$8,457	79%	-\$2,296	15% increase from FY24 (10-15% est. increase per Alliant)
	Total	\$63,781	\$63,781	\$30,936	49%	-\$32,845	
Meetings							
	EB Meetings	\$3,500	\$3,500	\$2,782	79%	-\$718	27% increase from FY24
	Annual Meeting	\$14,369	\$14,369	\$1,900	13%	-\$12,469	No change from FY24
	Pardee	\$6,801	\$2,159	\$2,159	32%	-\$4,643	No change from FY24
	Misc. Meetings	\$10,000	\$10,000	\$5,848	58%	-\$4,152	33% increase from FY24 to accommodate conferences
	Total	\$34,670	\$30,028	\$12,688	37%	-\$21,982	
Communication							
	Website Hosting	\$743	\$743	\$231	31%	-\$512	2% increase from FY24, Go Daddy website hosting and domain registration
	File Storage	\$812	\$812	\$720	89%	-\$92	2% increase from FY24, box.net
	Website Development/Maintenance	\$1,624	\$1,624	\$330	20%	-\$1,294	2% increase from FY24
	IT Support	\$2,814	\$2,814	\$1,058	38%	-\$1,756	2% increase from FY24
	BACWA Value of Wastewater Communication	\$40,000	\$40,000	\$12,056	30%	-\$27,944	New line item in FY24, no change from FY24
	Other Commun	\$1,894	\$1,894	\$0	0%	-\$1,894	2% increase from FY23; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile
	Total	\$47,887	\$47,887	\$14,395	30%	-\$33,492	

**FY 2025
BACWA BUDGET to ACTUAL**

EXPENSES						
Legal						
	Regulatory Support	\$50,000	\$67,342	\$67,342	135%	\$17,342 Increase from FY24, new contract with Meyers Nave - received invoices from FY24 late
	Executive Board Support	\$2,403	\$2,403	\$128	5%	-\$2,275 2% increase from FY24
	Total	\$52,403	\$69,744	\$67,469	129%	\$15,066
Committees						
	AIR	\$76,000	\$76,000	\$34,893	46%	-\$41,107 \$75k consulting support, \$1k misc expenses. Carollo Engineers
	BAPPG	\$170,560	\$170,560	\$83,363	49%	-\$87,197 Includes CPSC @ \$5,000, OWOW @ \$10,000, NSAC @ \$10,000 and Pest. Reg Spt. @ \$71,500
	Assest Management Committee	\$500	\$500	\$0	0%	No change from FY24
	Biosolids Committee	\$500	\$500	\$0	0%	-\$500 \$500 in FY25
	Collections System	\$15,500	\$15,500	\$50,000	323%	\$34,500 SSS WDR Support - Budgeted in FY24 but invoice came late
	O&M Committee	\$1,500	\$1,500	\$413	28%	-\$1,087 Requested \$1000 increase from FY24 for Annual Meeting lunch
	Laboratory Committee	\$500	\$500	\$1,609	322%	\$1,109 FY24 TNI invoice paid in FY25.
	Permits Committee	\$500	\$500	\$390	78%	-\$110 No change from FY24
	Pretreatment	\$500	\$500	\$0	0%	-\$500 No change from FY24
	Recycled Water Committee	\$500	\$500	\$0	0%	-\$500 Requested default budget amount for FY25
	Misc Committee Support	\$45,000	\$45,000	\$10,695	24%	-\$34,305 No change from FY24
	Manager's Roundtable	\$1,000	\$1,000	\$0	0%	-\$1,000 No change from FY24
	Total	\$312,560	\$312,560	\$181,363	58%	-\$131,197
Collaboratives						
	Collaboratives					
	State of the Estuary (SFEP-biennial)	\$0	\$0	\$0	0%	\$0 Bienniel in Even Fiscal Years
	Arleen Navarret Award	\$2,500	\$2,500	\$0	0%	-\$2,500 Next Award will be disbursed in FY27
	BayCAN	\$5,000	\$5,000	\$1,500	30%	-\$3,500
	Bay Area One Water Network	\$0	\$0	\$0	0%	\$0 No change from FY24
	Bruce Wolf Scholarship	\$4,000	\$4,000	\$0	0%	-\$4,000 FY22, FY23, FY24, FY25 FY26
	Passthrough for CASA for air toxics	\$500,000	\$500,000	\$0	100%	-\$500,000 New line item in FY24
	Misc	\$1,500	\$4,000	\$4,000	267%	\$2,500 NBWA, SFEI Coastal Climate Resilience Scholarship donation
	Total	\$513,000	\$515,500	\$5,500	1%	-\$507,500
Other						
	Unbudgeted Items					
	Other	\$0	\$0	\$0	0%	\$0
		\$0	\$0	\$0	0%	\$0
Tech Support						
	Technical Support					
	Nutrients					
	Watershed Permit NMS Contribution	\$2,200,000	\$2,200,000	\$2,200,000	100%	\$0 Advance funding for 2nd Watershed Permit Sciece Studies; Final \$ TBD
	NMS Voluntary Contributions					
	Additional work under permit	\$100,000	\$100,000	\$10,000	10%	-\$90,000 Includes HDR PO for \$225k spread out over FY20-24.
	Regional Study on Nature Based Solutions		\$75,436	\$75,436		SFEI FY24 invoice paid in FY25.
	Nutrient Workshop(s)	\$0	\$0	\$0	0%	\$0 Pilot Studies/Plant Review/Innovative Technologies; Might change
	NMS Reviewer	\$50,000	\$1,400	\$1,400	0%	-\$48,600 No change from FY24, M. Connor Contract
	Regional Nutrient Special Study	\$100,000	\$100,000	\$0	0%	-\$100,000 New item in FY25
	General Tech Support	\$100,000	\$100,000	\$0	0%	-\$100,000 AB617 emissions factors, PFAS, other nutrient support
	CEC Investigations	\$10,000	\$0	\$0	0%	-\$10,000 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	\$2,572,500	\$2,589,336	\$2,286,836	89%	-\$285,664
	TOTAL EXPENSES	\$4,111,105	\$4,143,140	\$2,866,898	69.74%	-\$1,244,207
	PROJECTED EXPENSE DEVIATION FROM BUDGET					
	NET INCOME BEFORE TRANSFERS	-\$348,028	-\$381,063	\$858,524		
	TRANSFERS FROM RESERVES	\$348,028	\$348,028	\$0		aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS	\$0	\$0	\$0		
	TOTAL OPERATING BUDGET	\$1,538,605	\$1,553,804			

FY 2025
BACWA BUDGET to ACTUAL

<i>EXPENSES</i>							
	OPERATING RESERVE	\$384,651	\$388,451	\$0			

BACWA Fund Report as of January 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	332,398	851,612	540,265	643,745	410,103	233,642
604	LEGAL RSRV	300,000	-	-	300,000	-	300,000
605	CBC	2,038,831	2,338,132	2,258,438	2,118,525	78,050	2,040,475
	SUBTOTAL 1	2,671,229	3,189,744	2,798,703	3,062,270	488,153	2,574,117
602	BABC	240,179	177,000	63,591	353,588	56,434	297,154
606	BACC	35,351	3,856	60,227	(21,020)	10,702	(31,722)
607	BACC LEGAL RSRV	90,000	30,000	-	120,000	-	120,000
610	WOT	259,201	-	-	259,201	-	259,201
612	CASA Air Toxics	(41,840)	538,140	496,300	-	-	-
	SUBTOTAL 2	582,891	748,996	620,118	711,769	67,136	644,633
	GRAND TOTAL	3,254,120	3,938,740	3,418,821	3,774,039	555,289	3,218,750

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	332,398	851,612	540,265	643,745	(28,861)	27,455	642,339	642,339	-	0%	-		priority # 4 for allocation
604	LEGAL RSRV	300,000	-	-	300,000	-	-	300,000	-	300,000	12%	-		priority # 1 for allocation
605	CBC	2,038,831	2,338,132	2,258,438	2,118,525	(105,714)	1,100,000	3,112,811	1,058,191	2,054,620	83%	-		priority # 3 for allocation
	SUBTOTAL 1	2,671,229	3,189,744	2,798,703	3,062,270	(134,575)	1,127,455	4,055,150	1,700,530	2,354,620	95%	-		
602	BABC	240,179	177,000	63,591	353,588	(2,900)	-	350,688	350,688	-	0%	-		pass-through funds, no allocation
606	BACC	35,351	3,856	60,227	(21,020)	-	-	(21,020)	(21,020)	-	0%	-		
607	BACC LEGAL RSRV	90,000	30,000	-	120,000	-	-	120,000	-	120,000	5%	-		priority # 2 for allocation
610	WOT	259,201	-	-	259,201	-	-	259,201	259,201	-	0%	-		pass-through funds, no allocation
612	CASA Air Toxics	(41,840)	538,140	496,300	-	(31,800)	-	(31,800)	(31,800)	-	0%	-		pass-through funds, no allocation
	SUBTOTAL 2	582,891	748,996	620,118	711,769	(34,700)	-	677,069	557,069	120,000	5%	-		
	GRAND TOTAL	3,254,120	3,938,740	3,418,821	3,774,039	(169,275)	1,127,455	4,732,219	2,257,599	2,474,620	100%			

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

Reconciliation to Trial Balance

Per Report above:

General	3,189,744	STB	14930	2,474,620	
WOT, BABC, & BACC	748,996	STB	15050	2,257,599	
PROP	-	STB	16300	169,275	-
subtotal	3,938,740	STB	21350	(1,127,455)	-
				3,774,039	

Trial Balance Revenue Accounts

40100	Interest	(154,582)
40101	Mem Contrib	(1,951,712)
40102	Transfer	(30,000)
40103	Assoc Contrib	(187,119)
40104	Other	(1,615,327)
47310	State Grant	-
47320	Grant Retention	-
	subtotal	(3,938,740)
	Difference	-

BACWA Treasurer's Report Expenses and Encumbrances

Period Covering July 1, 2024 through January 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	76,000.00	75,562.45	437.55
	AS-Assistant Executive Directo	6175	94,417.00	94,417.00	-
	AS-Audit Services	6180	5,672.00	-	5,672.00
	AS-BACWA Admin Expense	6173	4,059.00	99.21	3,959.79
	AS-EBMUD Financial Services	6176	43,297.00	43,297.00	-
	AS-Executive Director	6174	224,230.00	224,230.00	-
	AS-Insurance	6177	10,753.00	8,465.67	2,287.33
	AS-Regulatory Program Manager	6179	156,136.00	156,136.00	-
	Administrative Support	6178	-	-	-
	BACWA Value of Wastewater Communication	6211	40,000.00	23,037.98	16,962.02
	BC-BAPPG	6152	170,560.00	156,110.18	14,449.82
	BC-Collections System	6144	15,500.00	50,000.00	(34,500.00)
	BC-Laboratory Committee	6149	500.00	1,608.65	(1,108.65)
	BC-Manager's Roundtable	6154	1,000.00	-	1,000.00
	BC-Miscellaneous Committee Sup	6150	45,000.00	10,695.00	34,305.00
	BC-Permit Committee	6145	500.00	389.90	110.10
	BC-Pretreatment Committee	6151	500.00	-	500.00
	BC-Water Recycling Committee	6146	500.00	-	500.00
	CAR-BACWA File Storage	6165	1,623.00	720.00	903.00
	CAR-BACWA IT Software	6167	1,894.00	1,057.93	836.07
	CAR-BACWA IT Support	6166	2,814.00	-	2,814.00
	CAR-BACWA Website Dev/Maint	6163	743.00	329.63	413.37
	CAR-BACWA Website Hosting	6164	812.00	230.96	581.04
	CAS-Arleen Navaret Award	6160	2,500.00	-	2,500.00
	CAS-BayCAN	6204	5,000.00	1,500.00	3,500.00
	CAS-Misc Collaborative Sup	6162	1,500.00	4,000.00	(2,500.00)
	CAS-PSSEP	6157	-	-	-
	CAS-Stanford ERC	6159	-	-	-
	GBS-Meeting Support-Annual	6170	14,369.00	1,900.00	12,469.00
	GBS-Meeting Support-Exec Bd	6169	3,500.00	2,781.96	718.04
	GBS-Meeting Support-Misc	6172	10,000.00	5,847.75	4,152.25
	GBS-Meeting Support-Pardee	6171	6,801.00	2,158.51	4,642.49
	LS-Executive Board Support	6156	2,403.00	127.50	2,275.50
	LS-Regulatory Support	6155	50,000.00	85,052.00	(35,052.00)
	O&M Committee	6148	1,500.00	412.80	1,087.20
	WQA-CE-Nature Based Solutions	6196	-	-	-
	Write-Off Doubtful Accounts	6208	-	200.00	(200.00)
600 Total			994,083.00	950,368.08	43,714.92
602	AS-Assistant Executive Directo	6175	39,522.00	-	39,522.00
	AS-Regulatory Program Manager	6179	-	-	-
	Academia Research & Development	6203	-	-	-
	Administrative Support	6178	-	-	-
	BDO Contract Expenses	6186	-	-	-
	Collateral Development	6197	-	-	-
	Program Manager Expense	6202	-	120,024.89	(120,024.89)
	Technology Research & Development	6206	-	-	-
602 Total			39,522.00	120,024.89	(80,502.89)
605	Recycled Water Evaluation	6198	100,000.00	-	100,000.00
	WQA - CEC Investigations	6201	10,000.00	-	10,000.00
	WQA-CE Addl Work Under Permit	6191	100,000.00	39,450.00	60,550.00
	WQA-CE Risk Reduction	6190	12,500.00	-	12,500.00
	WQA-CE Voluntary Nutr Contrib	6193	-	-	-
	WQA-CE-Nature Based Solutions	6196	-	47,037.63	(47,037.63)
	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			2,572,500.00	2,336,487.63	236,012.37
606	AS-BACWA Admin Expense	6173	-	-	-
	AS-Regulatory Program Manager	6179	-	915.42	(915.42)
	Administrative Support	6178	-	40,013.70	(40,013.70)
	BDO Fund Transfers	6141	-	30,000.00	(30,000.00)
	GBS-Meeting Support-Misc	6172	-	-	-
606 Total			-	70,929.12	(70,929.12)
610	Administrative Support	6178	-	-	-
	BC-BAPPG	6152	-	-	-
	BDO Contract Expenses	6186	-	-	-
	Bruce Wolf Scholarship	6210	4,000.00	-	4,000.00
610 Total			4,000.00	-	4,000.00
612	Passthrough to CASA for air toxics	6212	500,000.00	496,300.00	3,700.00
612 Total			500,000.00	496,300.00	3,700.00
Grand Total			4,110,105.00	3,974,109.72	135,995.28

BACWA Revenue Report as of January 31, 2025

Cost Center Code	Cost Center Description	Program Segment Description	Program Segment Value	Amended Budget	Current Period	FY24 - Year to Date	Unobligated
600	Bay Area Clean Water Agencies	BABC - AED and RPM Support	6200	(6,000.00)	-	-	6,000.00
		BACC - AED Support	6199	(39,522.00)	-	-	39,522.00
		BDO Affil/CS/Assoc Dues	6104	-	-	(40,782.00)	(40,782.00)
		BDO Affiliate/Associate Dues	6103	-	1,778.00	(45,775.00)	(45,775.00)
		BDO Assoc.&Affiliate Contr	6102	(195,780.00)	-	(100,562.00)	95,218.00
		BDO Fund Transfers	6141	(1,000.00)	-	-	1,000.00
		BDO Member Contributions	6101	(553,929.00)	-	(553,930.00)	(1.00)
		BDO Non-Member Contr AIR	6136	(7,582.00)	-	(1,421.00)	6,161.00
		BDO Non-Member Contr BAPPG	6135	(4,264.00)	-	(10,424.00)	(6,160.00)
		BDO Other Receipts	6105	-	-	-	-
		BDO Other Receipts (Misc)	6140	-	-	(2,732.00)	(2,732.00)
		BDO- Interest Income from LAIF	6142	(80,000.00)	(20,595.58)	(95,986.04)	(15,986.04)
		BDO-Alternative Investment Inc	6143	-	-	-	-
		600 Total				(888,077.00)	(18,817.58)
602	Bay Area Biosolids Coalition	BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	-	-	(177,000.00)	(177,000.00)
602 Total				-	-	(177,000.00)	(177,000.00)
605	Clean Bay Collaborative	BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	(675,000.00)	-	(682,642.00)	(7,642.00)
		BDO Other Receipts	6105	(1,600,000.00)	-	(1,600,750.00)	(750.00)
		BDO- Interest Income from LAIF	6142	-	(18,964.79)	(54,740.41)	(54,740.41)
605 Total				(2,275,000.00)	(18,964.79)	(2,338,132.41)	(63,132.41)
606	Bay Area Chemical Consortium	BDO Member Contributions	6101	-	-	-	-
		BDO- Interest Income from LAIF	6142	-	(1,422.36)	(3,856.31)	(3,856.31)
606 Total				-	(1,422.36)	(3,856.31)	(3,856.31)
607	BACC Legal RSRV	BDO Fund Transfers	6141	-	-	(30,000.00)	(30,000.00)
607 Total				-	-	(30,000.00)	(30,000.00)
612	CASA Air Toxics	BDO Member Contributions	6101	(600,000.00)	-	(538,140.00)	61,860.00
612 Total				(600,000.00)	-	(538,140.00)	61,860.00
Grand Total				(3,763,077.00)	(39,204.73)	(3,938,740.76)	(175,663.76)



BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 4

MEETING DATE: March 21, 2025

TITLE: Transition of the Bay Area Biosolids Coalition from a Project of Special Benefit to a BACWA Committee

☐ RECEIPT ☐ DISCUSSION ☐ RESOLUTION ☒ APPROVAL

RECOMMENDED ACTION

Approve the incorporation of the Bay Area Biosolids Coalition, currently a Project of Special Benefit of BACWA, into BACWA as a regular BACWA committee in Fiscal Year 2026.

SUMMARY

The Bay Area Biosolids to Energy Coalition was founded via a Joint Exercise of Powers Agreement (JEPA) on March 30, 2006. The group's purpose was to allow members to "enter into contracts for the planning, design, construction, operation, and maintenance of one or more regional biosolids facilities." The group rebranded as the Bay Area Biosolids Coalition (BABC) in 2016, and at its peak comprised nineteen public agency members. In FY2020, BACWA took on BABC as a Project of Special Benefit and provided administrative and accounting services for the coalition. BABC membership is open to public agencies, consultants, vendors, and academic institutions.

In recent years, BABC shifted its mission away from planning for a regional biosolids facility, and now supports communications on biosolids land application benefits and safety, information sharing among members, and keeping membership apprised of regulatory developments. BABC also supports research that fills information gaps pertaining to the safety and benefits of biosolids beneficial use. Much of the work in BABC is conducted via a Program Management contract which is currently held by Carollo Engineers.

BACWA itself maintains a Biosolids Committee, whose function is largely information sharing among members. The committee has been on hiatus since approximately 2020, due to lack of interest among its members in participating in two groups that serve a similar function.

Given BABC's shift away from planning for a regional solids processing facility and their membership decreasing to thirteen member agencies in recent years, some BACWA members approached the BABC to consider a potential transition to a BACWA committee. Over time, BACWA and BABC have discussed this possibility. As a committee, BABC would be financially supported by the regular BACWA fee structure and budgeting process, and be open to all BACWA agencies. In December 2024, BABC held a vote and unanimously elected to proceed with this transition.

If BACWA approves this transition, BABC will become a regular BACWA committee with a Steering Committee made up of members that direct committee activities and is responsible for making budgetary requests to the BACWA Board. While the Steering Committee governance structure is yet to be finalized; it will most likely be made up of several co-chairs who rotate out of the role on an annual basis.

Consistent with BACWA’s contracting policy, and because Carollo Engineers has performed the BABC Program Management task satisfactorily for many years, BACWA will sole source this contract for FY2026 and possibly FY2027 to smooth the transition to the new governance structure. The program management contract will be subject to a competitive solicitation for FY2028.

FISCAL IMPACT

Beginning in Fiscal Year 2026, the BABC Program Management Contract will be included as a line item in the BACWA budget and be funded via BACWA dues. The BACWA Budget and 5-year plan will be developed to accommodate this new expense. It is anticipated that BACWA dues will increase by 5 percent per year for three years, compared to the usual increase of 2 to 3 percent.

BABC research projects will be funded from the existing BABC reserve fund. After the reserve is spent, BABC will make budget requests for research projects to the BACWA Board. These projects will be funded via Clean Bay Collaborative fees that are part of each BACWA member’s annual invoice.

Current BABC members who are public agencies and not BACWA members can continue to participate as outlined in BACWA’s Classes of Membership Policy. Vendors and consultants will no longer be paying members of BABC but may participate in committee activities at the committee’s discretion.

BACWA will be responsible for supporting the BABC website (bayareabiosolids.com) and will fund hosting services under the communications budget line item, along with bacwa.org and baywise.org.

ALTERNATIVES

1. Do not approve the incorporation of BABC as a BACWA committee. This alternative is not recommended as the group will bring value to the community as a program of general benefit.

Approved: _____
Jackie Zipkin, Chair,
BACWA Executive Board

Date:

BACWA EXECUTIVE DIRECTOR EVALUATION

- 1 - below expectations
- 2 - meets expectations
- 3 - exceeds expectations

A. Practice Good Governance (Strat Plan Goal #5)

	<i>Example behaviours/ further elaboration</i>	Rating	Comments
1 Executive Board meetings are well organized and facilitated to enable timely input and direction from the Board, and to ensure Brown Act compliance.	<i>Mtgs are on time, packets are complete, mtgs are promptly noticed</i>		
2 Budgets are updated annually to reflect BACWA's priorities, and long-term planning supports BACWA's financial health	<i>Budget is re-evaluated at least annually; long-term financial (e.g., 5 yr) plans are created and communicated with input from Board and members</i>		
3 Invoices and payments are timely, complete, and accurate.	<i>Members invoices are timely and accurate; contractors are paid on time.</i>		
4 Committees' activities are aligned with the BACWA's priorities.	<i>Communication is maintained between ED, Board, and Committee leadership to ensure alignment.</i>		
5 BACWA's policies and plans are updated as appropriate and conform to applicable laws and best practices.	<i>Policies change when laws/regs change; policies are modified when circumstances warrant.</i>		
6 Contract resources, including the AED and PM contracts, are managed effectively.	<i>Contracts are issued in a timely manner, work of AED and PM is coordinated and integrated with ED's and committees and aligned with BACWA priorities</i>		
7 Implements direction from the Board and follows through on tasks.			

B. Exemplify service and responsiveness to members and the public (Strat Plan Goal #4)

	<i>Example behaviours/ further elaboration</i>	Rating	Comments
1 Provides forums for all members to share perspectives and provide input.	<i>Board meetings are inclusive, opportunities to solicit membership feedback are pursued.</i>		
2 Ensures members have access to information about BACWA activities and priority issues.	<i>BACWA Bulletin, white papers, website updates etc.</i>		

- | | | |
|---|--|---|
| 3 | Identifies and facilitates opportunities for collaboration across BACWA members. | <i>Chemical consortium; nutrient regional reporting, etc.</i> |
| 4 | Implements Board direction on public value of wastewater messaging | |

C. Foster collaboration and relationship building with regulators and other stakeholders (Strat Plan Goal #2)

	<i>Example behaviours/ further elaboration</i>	Rating	Comments
1	Effectively develops and maintains collaboration with regulators.	<i>Quarterly mtgs with Reg Board, BA Air District and other agencies</i>	
2	Fosters innovative, unique, and/or non-traditional partnerships to further BACWA's priorities.	<i>Identifies opps to partner with unique entities (e.g., NGOs on nutrients, EPA on funding, CBOs on risk reduction)</i>	
3	Collaborates with other clean water associations on issues of importance to BACWA.	<i>Participates in CASA and NACWA, etc./ communicates and coordinates with their leadership</i>	
4	Communicates BACWA's positions accurately and respectfully in public forums.	<i>Public testimony on regulations, media engagement, etc.</i>	

D. Advocate for Regulation Based on Science (Strat Plan Goal #1)

	<i>Example behaviours/ further elaboration</i>	Rating	Comments
1	Facilitates and supports advocacy for legislation and regulations based on science.	<i>Engagement with nutrient science program, RMP, etc.</i>	
2	Faciliates funding of technical analyses to support science-based regulations.		
3	Leverages the practical considerations - including financial and other utility resources - to guide prudent implementation of science-based regulations.		

E. Pursue regional & multi-benefit solutions to environmental challenges (Strat Plan Goal # 3)

<i>Example behaviours/ further elaboration</i>	Rating	Comments
--	---------------	-----------------

- 1 Facilitates development of forums to explore multi-benefit solutions. *Nutrient permit implementation, chemical consortium*
- 2 Enables development and implementation of regional solutions to effectively and efficiently address regional challenges.
- 3 Identifies and pursues opportunities to support innovation to better address water quality and other ecological challenges. *technology info-sharing, partnerships with research institutions, etc.*

F. Other comments and feedback (optional)



BAY AREA CLEAN WATER AGENCIES

EXECUTIVE BOARD RESOLUTION NO.

R-~~1925~~-01

WHEREAS, the Bay Area Clean Water Agencies (BACWA) was formed in 1984 as a public Joint Powers Authority with the mission of developing a regional understanding of the San Francisco Bay Estuary's watershed protection and enhancement needs through reliance on sound science, environmental, and economic information; *and*

WHEREAS, the public Joint Powers Authority (JPA) defines BACWA Associate membership in the following manner:

- a. Any public agency other than the original signatory agencies, with wastewater treatment or disposal responsibilities accepted for membership in this Association by the Executive Board; *and*

WHEREAS, the Executive Board pursuant to Section 5 B of the JPA has the authority to set forth the conditions and privileges of membership for Associate Members; *and*

WHEREAS, for the sake of clarity and to be consistent with the different types of Associate members which have emerged over time, the Executive Board desires by this Resolution to formally establish categories of BACWA Associate membership beyond the original overarching definition set forth in the JPA in the following manner:

- a. Category 1: Associate Member (greater than or equal to 10 mgd treatment plant permitted design capacity)
- b. Category 2: Affiliate Associate Member (less than 10 mgd treatment plant permitted design capacity)
- c. Category 3: Affiliate Collection-Only Associate Member (separate public agency having only a collection systems which discharges to a regional treatment plant);
- ~~e.~~ d. Category 4: Affiliate Member from outside the San Francisco Bay Region (the boundaries of the San Francisco Bay Region are as defined by the San Francisco Bay Regional Water Quality Control Board) ; *and*

~~**WHEREAS**, there are other public agencies that desire to participate in some of BACWA's~~

~~activities and Committees but are not recognized as BACWA members, these agencies would not pay BACWA dues but rather be charged a fee set by the Executive Board on a case by case basis which would allow them to continue their level of participation; and~~

WHEREAS, in accordance with the JPA, only the original Signatories to the JPA would have voting rights.

NOW, THEREFORE, BE IT RESOLVED that commencing with adoption of the ~~2019-2026~~ fiscal year and with each fiscal year thereafter, the above membership definitions and rules for participation are hereby adopted by the Executive Board pursuant to Section 5 of the Joint Powers Agreement unless and until such definitions are changed by resolution of the Executive Board.

CERTIFICATION

The undersigned, as Chair of Bay Area Clean Water Agency, hereby certifies that the foregoing Resolution was duly adopted by the Executive Board at its regular meeting held on ~~November 16, 2018~~ April 18, 2025.

Jackie Zipkin, BACWA Chair



POLICY NUMBER: BP-001

NAME OF POLICY: Dues and Fees Associated with Classes of Membership

DATE APPROVED: 12-18-2016

LAST REVISED: ~~12-18-16~~[04-18-25](#)

PURPOSE: In accordance with the BACWA JPA define the various classes of members.

POLICY: BACWA supports the establishment of differing classes of members each having their own dues and/or fee structure.

DEFINITIONS:

Dues: Dues cover an agency's membership in BACWA and support the operation of BACWA. Dues are not a function of the number of wastewater plants and agency owns and operates. EDWA is a special situation where its dues cover multiple POTWs that are members of the EBDA JPA in accordance with the BACWA JPA.

CBC Fee: All members are charged a CBC Fee which provides BACWA the resources to conduct special investigations and advocacy efforts on behalf of its members on a variety of issues including biosolids, water quality, permitting, pretreatment, O&M, collection systems.

Nutrient Surcharge: The Nutrient Surcharge is a special assessment used to supplement the CBC Fee financial resources and was specifically developed to meet the significant financial obligations of the Nutrient Watershed Permit. This fee is assessed to only those members who are listed in the Nutrient Watershed Permit. It will be continued until all obligations under the Permit are met.

Principals: The five BACWA Principals are comprised of the five original signers of the BACWA JPA. The Principals have the largest flows and loadings and thus bear the burden of the majority of BACWA's operating costs. All Principals pay the same dues ~~and~~ CBC fees. [The ~~and~~ allocation of the Nutrient Surcharge will be determined during each year's budgeting cycle and approved by the Executive Board along with the next fiscal year budget.](#)

Associates: Associate Members of BACWA are those members whose POTW design flows are greater than or equal to 10 million gallons per day (mgd). Being larger POTWs their dues and fees are slightly higher than Affiliate Members. All Associate dues are the same, however since the CBC



and Nutrient Surcharge are based on loadings, these charges can vary among different Associate members.

Affiliates: Affiliate Members are the smaller to medium size POTWs with design flows less than 10 mgd. Affiliates have the lowest dues structure. Like Associates, since the CBC and Nutrient Surcharge are based on loadings, these charges can vary among different Affiliates. Members who operate collection systems and not a POTW are placed in the Affiliate class of membership and pay fixed dues and a fixed CBC Fee, but since they do not operate a POTW they are not assess the Nutrient Surcharge.

Affiliate from outside the San Francisco Bay Region: Regular membership is open to all POTWs and public collection systems entities within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (Water Board). This area generally covers the nine Bay Area counties, but is defined by the watershed tributary to San Francisco Bay within those nine counties. Public entities outside of the Water Board's jurisdiction may have an interest in joining one or more of the BACWA committees or initiatives. Recognizing that these entities may not have the same regulatory issues as the regular BACWA membership, these entities may be allowed to join a BACWA committee or initiative based on a case-by-case review by the BACWA Board and provided their interests are aligned with that of the general BACWA membership agencies may join BACWA as a special class of member that allows them access to all BACWA committees. Financial participation for any non-BACW member would be established on a case-by-case basis by the BACWA Board These affiliate members from outside the San Francisco Bay Region will pay BACWA dues equivalent to other affiliate members, but will not pay CBC Fees or the Nutrient Surcharge.

APPLICABILITY: This Policy applies to all BACWA Members

Nutrient Surcharge Allocation Methodology

FY26

Background

BACWA's nutrient surcharge is levied to its members each year who are Nutrient Watershed Permittees. These funds partially support nutrient science in compliance with the third Nutrient Watershed Permit (R2-2024-0013). This funding is passed through directly to SFEI and supplemented with additional funding from BACWA's Clean Bay Collaborative (CBC) Fees. For the third Nutrient Watershed Permit, which is the current permit, the annual science support obligation is \$2.2M per year. Additional CBC funds are spent to support other permit compliance activities such as the Group Annual Report and special studies.

Each year the nutrient surcharge is set at a level to gradually draw down BACWA's excess CBC Reserves to the target level of \$1.0M. In FY26, the total nutrient surcharge was set to \$1.75M.

In the past, the nutrient surcharge was allocated via different methods. During the term of the first watershed permit (R2-2014-0014), two thirds of the surcharge was split equally between the BACWA principals and the remaining one third was divided among the associate and affiliate member permittees in proportion to their previous year's annual Total Inorganic Nitrogen (TIN) load. Since FY20, during the term of the second watershed permit (R2-2019-0017) and the first year of the third watershed permit, all agencies, including the BACWA principals, paid in proportion to their annual TIN load, calculated as a 3-year rolling average.

The third watershed permit requires TIN load reductions based on dry season (May 1 – Sept 30) loads, so the Executive Board gave direction that the nutrient surcharge should be allocated based on dry season loads, rather than annual average loads. However, several agencies have dry season discharge prohibitions, which means their dry season loads are close to zero. A surcharge floor was proposed so that agencies without TIN limits, but with continued requirements for reporting and support for the science, would continue to pay a nominal fee to support these activities. Based on the total contractor cost for producing the Group Annual Report, divided by the number of dischargers, this floor was set at \$1,400 for major dischargers. For minor discharges, the floor was set at 1/10th the value of major dischargers, or \$140.

Calculation methodology for FY26

Based on the reasoning above, each agency's nutrient surcharge is calculated as follows:

Sum of agency "floors" = \$43,820

Total surcharge allocated based on dry season TIN = \$1,750,000 - \$43,820 = \$1,706,180

Agency surcharge = floor + (agency's fraction of 3-year rolling average dry season TIN load x Total surcharge allocated based on TIN)

Major discharger

$$\text{Nutrient Surcharge (major)} = \$1,400 + \left(\frac{\text{3-year average agency dry season TIN load}}{\text{3-year average aggregate dry season TIN load}} \times \$1,706,180 \right)$$

Minor discharger:

$$\text{Nutrient Surcharge (minor)} = \$140 + \left(\frac{\text{3-year average agency dry season TIN load}}{\text{3-year average aggregate dry season TIN load}} \times \$1,706,180 \right)$$

Draft Nutrient Surcharge Calculations for FY26 Based on Dry Season Loads and Fixed Base Fee

		2nd wsp		3rd wsp					
BACWA Agency	Subembayment	2021/2022	2022/2023	2023/2024	Average of Oct 2021 - Sep 2024 (3 Years)	% (based on TIN) FY26			FY 26 Nutrient Surcharge*
Basis for Allocation							GAR Fee (\$1400 for majo, \$140 for minor)		TIN (Oct 2021- Sept 2024)
Amount Needed Science Funding								\$1,706,180	1,750,000
CCCS	Suisun Bay	3,690	3,430	3,410	3,510	8.01%	\$1,400	\$136,750	\$138,150
EBDA	South Bay	6,890	7,320	7,030	7,080	16.17%	\$1,400	\$275,837	\$277,237
EBMUD	Central Bay	9,960	7,330	7,610	8,300	18.95%	\$1,400	\$323,368	\$324,768
San Jose	Lower South Bay	2,530	3,460	4,310	3,433	7.84%	\$1,400	\$133,763	\$135,163
SFPUC Southeast	South Bay	7,400	7,040	7,380	7,273	16.61%	\$1,400	\$283,369	\$284,769
American Canyon	San Pablo Bay	11.3	15	23.7	17	0.04%	\$1,400	\$649	\$2,049
Benicia	San Pablo Bay	204	230	240	225	0.51%	\$1,400	\$8,753	\$10,153
Burlingame	South Bay	253	278	245	259	0.59%	\$1,400	\$10,078	\$11,478
CMSA	Central Bay	1,090	997	1,100	1,062	2.43%	\$1,400	\$41,389	\$42,789
Crockett (Port Costa)	San Pablo Bay				-	0.00%	\$140	\$0	\$140
Delta Diablo	Suisun Bay	944	1,200	1,320	1,155	2.64%	\$1,400	\$44,986	\$46,386
FSSD	Suisun Bay	1,040	884	949	958	2.19%	\$1,400	\$37,311	\$38,711
Las Gallinas ^(b)	San Pablo Bay	0	0	0	-	0.00%	\$1,400	\$0	\$1,400
MSD 5 (Tiburon & Paradise Cove)	Central Bay	47.577	45.72	44.25	46	0.10%	\$280	\$1,786	\$2,066
Millbrae	South Bay	245	254	268	256	0.58%	\$1,400	\$9,961	\$11,361
Mt. View	Suisun Bay	41.6	56.5	49.3	49	0.11%	\$1,400	\$1,914	\$3,314
Napa SD	San Pablo Bay	0	0	0	-	0.00%	\$1,400	\$0	\$1,400
Novato SD	San Pablo Bay	0	118	38.9	52	0.12%	\$1,400	\$2,038	\$3,438
Palo Alto	Lower South Bay	2,230	2,300	2,050	2,193	5.01%	\$1,400	\$85,452	\$86,852
Petaluma	San Pablo Bay	0	0	0	-	0.00%	\$1,400	\$0	\$1,400
Pinole	San Pablo Bay	369	350	351	357	0.81%	\$1,400	\$13,896	\$15,296
Rodeo SD	San Pablo Bay	39.2	48.8	40.2	43	0.10%	\$1,400	\$1,665	\$3,065
SFO Airport	South Bay	90.5	212	55	119	0.27%	\$1,400	\$4,643	\$6,043
San Mateo	South Bay	1,340	1,450	1,410	1,400	3.20%	\$1,400	\$54,544	\$55,944
Sausalito-Marín City SD	Central Bay	110	114	118	114	0.26%	\$1,400	\$4,441	\$5,841
Sewerage Agency of SM	Central Bay	246	235	233	238	0.54%	\$1,400	\$9,272	\$10,672
Sonoma Co Water Ag	San Pablo Bay	0	2.33	0	1	0.00%	\$1,400	\$30	\$1,430
SVCW	South Bay	2,460	2,560	2,280	2,433	5.56%	\$1,400	\$94,803	\$96,203
South SF	South Bay	1,220	1,230	1,150	1,200	2.74%	\$1,400	\$46,752	\$48,152
Sunnyvale	Lower South Bay	460	720	621	600	1.37%	\$1,400	\$23,389	\$24,789
Treasure Island	Central Bay	19.9	25.6	23	23	0.05%	\$1,400	\$890	\$2,290
Vallejo Sanitation & FCD	San Pablo Bay	769	755	887	804	1.84%	\$1,400	\$31,311	\$32,711
West County Agency	Central Bay	692	628	462	594	1.36%	\$1,400	\$23,142	\$24,542
					-				
Total		44,392	43,289	43,698	43,793	100%			\$1,750,000
Principals Only		30,470	28,580	29,740	29,597	67.58%			\$1,160,086
Total w/o principals		13,922	14,709	13,958	14,196	32.42%			\$589,914

FY 2026 Budget

			Draft	
<u>BACWA FY26 BUDGET</u>	<u>Line Item Description</u>	<u>FY25 Budget</u>	<u>FY26 Budget</u>	<u>FY26 NOTES</u>
REVENUES & FUNDING				
Dues	Principals' Contributions	\$553,929	\$581,626	FY26: 5% increase 5 @ \$116,325
	Associate & Affiliate Contributions	\$195,780	\$260,064	FY26: 5% increase. 12 Assoc: \$9599.10 Affiliate: \$1922.55; UC Berkeley \$515 (3% increase from FY25)
Fees	Clean Bay Collaborative	\$675,000	\$675,000	Same as FY23. Prin: \$450,000; Assoc/Affil: \$225,000
	Nutrient Surcharge	\$1,600,000	\$1,750,000	See Nutrient Surcharge Spreadsheet
	Member Voluntary Nutrient Contributions			
Other Receipts	Non R2 Affiliate Members		\$5,768	Santa Rosa, Sac Reg'l, Vacaville, \$1922.55 / each
	WOT/BABC admin fees	\$7,000	NA	
	BACC Admin Fees	\$39,522	\$40,468	400 hours of AED support \$101.17/hr
Air Toxics	CASA Passthrough	\$600,000	\$620,125	New in FY25
Interest Income	LAIF	\$80,000	\$160,000	BACWA, Legal, & CBC Funds invested in LAIF
	Total Revenue	\$3,751,231	\$4,093,051	
EXPENSES				
Labor				
	Executive Director	\$224,230	\$229,612	(incl 2.4% CPI SF Bay Metro Area Dec 2024)
	Assistant Executive Director	\$94,417	\$96,682	(incl 2.4% CPI SF Bay Metro Area Dec 2024); \$81/hour; Reflects 1200 hours
	BACC Administrator	\$39,522	\$40,468	400 hrs AED support at \$101.17 per hr
	Regulatory Program Manager	\$156,136	\$159,875	(2.4% CPI SF Bay Metro Area Dec 2024); \$118.43/hour, Reflects 1350 hours
	Total	514,304	\$526,636	
Administration				
	EBMUD Financial Services	\$43,297	\$44,596	3% increase in FY26
	Auditing Services	\$5,672	\$5,672	Financial Auditors through EBMUD; per auditor rate schedule
	Administrative Expenses	\$4,059	\$4,059	No change from FY25
	Insurance	\$10,753	\$12,366	15% increase from FY25 (10-15% est. increase per Alliant)
	Total	63,781	\$66,693	
Meetings				
	EB Meetings	\$3,500	\$4,200	20% increase from FY25
	Annual Meeting	\$14,369	\$14,369	No change from FY24
	Pardee	\$6,801	\$4,000	reduced in FY26
	Misc. Meetings and conferences	\$10,000	\$10,000	No change from FY25
	Total	34,670	\$32,569	
Communication				
	Website Hosting / Domain registration	\$743	\$758	2% increase from FY25, Go Daddy website hosting and domain registration

FY 2026 Budget

EXPENSES				
	File Storage	\$812	\$828	2% increase from FY25, box.net
	Website Development/Maintenance	\$1,624	\$1,656	2% increase from FY25
	IT Support (As Needed)	\$2,814	\$2,870	2% increase from FY25
	BACWA Value of Wastewater Communication	\$40,000	\$50,000	New line item in FY24, no change from FY24 - TBD
	Other Communication	\$1,894	\$1,932	2% increase from FY25; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile
	Total	\$47,887	\$58,044	
Legal				
	Regulatory Support	\$50,000	\$10,000	Decrease from FY25, Contract with Meyers Nave
	Executive Board Support	\$2,403	\$2,403	No increase from FY25
	Total	\$52,403	\$12,403	
Committees				
	AIR	\$76,000	\$94,750	\$93,750 consulting support, \$1k misc expenses - TBD
	AIR support for ACE	\$0	\$0	sunset
	BAPPG	\$170,560	\$148,060	Includes Pest. Reg Spt. @ \$70; Pest. Prof Outreach @\$19K; Media Consultant @ \$50K; website/unplanned is
	Asset Management Committee	\$500	\$500	No change from FY25
	BABC	\$500	\$120,000	Formerly BACWA Biosolids, now BABC program management contract
	Collections System	\$15,500	\$1,000	SSS WDR Support
	O&M Committee	\$1,500	\$1,500	No change from FY25
	Laboratory Committee	\$500	\$500	No change from FY25
	Permits Committee	\$500	\$500	No change from FY25
	Pretreatment	\$500	\$500	No change from FY25
	Recycled Water Committee	\$500	\$500	No change from FY25
	Misc Committee Support	\$45,000	\$45,000	No change from FY25
	Manager's Roundtable	\$1,000	\$1,000	No change from FY25
	Total	\$312,560	\$413,810	
Collaboratives				
	Collaboratives			
	State of the Estuary (SFEP-biennial)	\$0	\$20,000	Biennial in Even Fiscal Years
	Arleen Navarret Award	\$2,500	\$0	Next Award will be disbursed in FY27
	BayCAN	\$5,000	\$5,000	
	Bay Area One Water Network	\$0	\$5,000	Donation due in FY26
	Bruce Wolfe Scholarship	\$4,000	\$4,000	FY22, FY23, FY24, FY26 FY26
	Our Water Our World Program		\$10,000	Previously included in BAPPG Budget
	National Stewardship Action Council		\$10,000	Previously included in BAPPG Budget
	California Product Stewardship Council		\$10,000	Previously included in BAPPG Budget
	Passthrough to CASA for air toxics	\$500,000	\$620,125	New line item in FY24
	Misc	\$1,500	\$1,500	NBWA
	Total	\$513,000	\$685,625	
Other				

FY 2026 Budget

<u>EXPENSES</u>				
	Unbudgeted Items			
	Other			
Tech Support				
	Technical Support			
	Nutrients			
	Watershed Permit NMS Contribution	\$2,200,000	\$2,200,000	Advance funding for 2nd Watershed Permit Sciece Studies
	NMS Voluntary Contributions			
	Additional work under permit	\$100,000	\$100,000	Discretionary work including trading
	Nutrient Workshop(s)	\$0	\$0	Pilot Studies/Plant Review/Innovative Technologies; Might change
	NMS Reviewer	\$50,000	\$50,000	No change from FY24, M. Connor Contract
	Regional Nutrient Compliance Support	\$100,000	\$250,000	New item in FY25
	General Tech Support	\$100,000	\$100,000	Eg., Nutrients, biosolids
	CEC Investigations	\$10,000	\$50,000	PFAS Study Phase 3
	Risk Reduction	\$12,500	\$12,500	Will plan new risk reduction tasks for current Hg/PCB Watershed Permit
	Total	\$2,572,500	\$2,762,500	
	TOTAL EXPENSES	\$4,111,105	\$4,558,281	
	NET INCOME BEFORE TRANSFERS	-\$359,874	-\$465,230	
	TRANSFERS FROM RESERVES			aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS		\$0	
	TOTAL OPERATING BUDGET		\$1,538,605	
	OPERATING RESERVE		\$384,651	

Budget & Workplan

FISCAL YEAR 2026

DRAFT



B A C W A
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A G E N C I E S

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INTRODUCTION

The Bay Area Clean Water Agencies (BACWA) is a joint public powers agency created by a 1984 Joint Powers Agreement (JPA) between the Central Contra Costa Sanitary District (CCCSD), the East Bay Dischargers Association (EBDA), the East Bay Municipal Utility District (EBMUD), the City of San Francisco, and the City of San Jose (collectively, “the Principal Agencies”). The JPA requires approval of an annual budget and workplan divided into three parts: overhead (Part A), general benefit programs (Part B), and special benefit programs (Part C).

The JPA requires that revenues for each fiscal year be equivalent to anticipated expenditures. Expenditures for Management & Administration (Part A), and General Benefit Programs (Part B) are funded by all BACWA members because these programs are carried out on behalf of all member agencies.

Since adoption of the Annual Budget for fiscal year 1984, and each fiscal year thereafter, the Executive Board has allocated Part A and Part B costs pursuant to authority provided in Section 10 of the Joint Powers Agreement among Member Agencies in the following manner (the “Allocation Method”):

- a. a stated portion to the Original Signatory Members in equal shares; and
- b. the balance to Associate and Affiliate Members based on one or more of several factors consisting of the type of agency, size of plant, metals loadings, and total inorganic nitrogen loadings in the ratio that their share is to that of the total Associate and Affiliate Membership.

On September 26, 2014 BACWA formally adopted this allocation through Executive Board Resolution R-2015-01. BACWA currently has two General Benefit Programs: the core BACWA program to support member agencies and the Clean Bay Collaborative. Expenditures for Special Benefit Programs (Part C) are funded by those agencies that elect to fund those programs because those benefits accrue primarily to those participating agencies.

In FY25 BACWA had three Special Benefit Programs, all of which conform to the JPA requirements under Part C.: Water Operator Training, the Bay Area Biosolids Coalition (BABC), and the Bay Area Chemical Consortium (BACC). The Water Operator Training program, also known as the Bay Area Consortium for Water/Wastewater Education (BACWWE) is a group of BACWA agencies who provide funding for operator educational opportunities. The Bay Area Biosolids Coalition is comprised of a subset of BACWA members who are pursuing alternatives for biosolids beneficial reuse and/or disposal in order to meet regulatory requirements for diversion of organics from landfills. In FY26 the BABC will sunset as a Special Benefit Program and be integrated into BACWA as a regular committee. The Bay Area Chemical Consortium is comprised of BACWA agencies as well as additional public water and wastewater agencies who work together to develop group chemical bids.

The purpose of this document is to fulfill the requirements of the JPA for Fiscal Year 2026 (FY26). This workplan and budget specify the purpose of each of BACWA’s programs during FY26, the methods by which they will be carried out, the products that will be developed, and the persons responsible for implementation. The schedule for implementation of these programs is July 1, 2025 through June 30, 2026.

STRATEGIC PLAN

BACWA adopted its first strategic plan and accompanying workplan in 2009. BACWA reformulated its strategic plan in 2020 and adopted updates in 2022. The strategic plan states the mission, vision values and goals of the organization as demonstrated in the work undertaken annually by the agency.

BACWA's Mission

To provide an effective regional voice for clean water agencies' stewardship of the San Francisco Bay's ecological, community, and economic resources.

BACWA's Vision

To demonstrate leadership in the protection and enhancement of the San Francisco Bay ecosystem.

BACWA's Values

- Environmental stewardship
- Leadership
- Science-based decision making
- Collaboration
- Fiscal responsibility
- Watershed-based solutions

BACWA's Goals

- Advocate for regulation based on science
- Foster collaboration and relationship building with regulators and other stakeholders
- Pursue regional, multi-benefit solutions to environmental challenges
- Exemplify service and responsiveness to members and the public
- Practice good governance

MANAGEMENT AND ADMINISTRATION (PART A)

BACWA has administrative and management expenses that are necessary for the agency to carry out its non-program related core functions (JPA, Section 9). They include expenses related to financial management, insurance, and organizational support. Administration of BACWA is carried out under contract by an Executive Director (ED), Assistant Executive Director (AED), and Regulatory Program Manager (RPM) selected by the Executive Board. Treasurer services are provided through an agreement with EBMUD who manages BACWA's finances and oversees the annual audit which is conducted by an independent auditor. The objective of these expenditures is to ensure effective, efficient, and transparent management of BACWA, which serves BACWA's goal to practice good governance. BACWA management and administration are funded through BACWA dues.

Management & Administration (A)				
Goal	Deliverables/Outcomes	Lead	FY26 Budget	Budget Line
A. Practice Good Governance (Labor, Meetings, Legal, Administration)	A.1. Monthly Treasurer Reports,	ED, AED, EBMUD	\$44,596	Administration/ EBMUD Financial Services
	A.2. Annual audit	ED, AED, Auditor	\$5,672	Administration/ Auditing Services
	A.3. Miscellaneous Operational Expenses	ED, AED, RPM	\$4,059	Administration/ Administrative Expenses
	A.4. Insurance to manage organizational risk	ED, AED	\$12,366	Administration/ Insurance
	A.5. Compliance with organizational legal requirements	ED, AED	\$2,403	Legal/Executive Board Support
	A.6. Program Administration and Operations Support	ED, AED, RPM	\$147,111	Labor/ ED (15%), RPM (10%) AED (100%),
	A.7. BACWA Executive Board Meetings & Administrative Expenses	ED, AED	\$4,200	Meetings/Exec. Board Meetings
	A.8. Pardee Technical Seminar & Administrative Expenses	ED, AED	\$4,000	Meetings/ Pardee Seminar
	A.9. Miscellaneous Meeting & Administrative Expenses	ED, AED, RPM	\$10,000	Meetings/ Misc. Meetings
	A.10. File Storage	ED, AED	\$828	Communications/File Storage
	A.11. IT Support (As Needed)	ED, AED	\$2,870	Communications/IT Support
	A.112. Software (As Needed)	ED, AED	\$1,932	Communications/Software
	A.113. BACWA Value of Wastewater Communication		50,000	Communications
		TOTAL	\$290,037	

GENERAL BENEFIT PROGRAMS (PART B)

There are two aspects of BACWA's general benefit program: the core BACWA Member Agency program and the technically-focused Clean Bay Collaborative (CBC) program. Activities in these Programs are supported by the ED, AED, RPM, volunteers who Chair the BACWA Committees, and consultant support as needed.

BACWA MEMBER AGENCY PROGRAM (PART B1)

The **BACWA Member Agency Program (B1)** serves BACWA's goals to (1) exemplify service and responsiveness to members and the public; and to (2) foster collaboration and relationship building with regulators and other stakeholders

These goals are accomplished by providing member agencies with information on regulations, scientific and technical developments; forums for participating in policy discussions and collaborating on mutually beneficial projects; and opportunities to engage with the larger Bay Area environmental community. Program expenses include support for committee facilitation and special projects; member workshops and trainings; membership in state and national organizations that disseminate information to members; and communication expenses such as the website, newsletters, the annual report, and the annual meeting. The BACWA Member Agency program is funded by BACWA dues.

CLEAN BAY COLLABORATIVE (CBC) (PART B2)

The purpose of the **CBC program (B2)** is to respond to current regulatory requirements and to develop scientific, technical, and industry information to inform future regulations and policies affecting Bay Area POTWs and the environment. These effort support BACWA's goals to: (1) Advocate for regulation based on science; (2) Foster collaboration and relationship building with regulators and other stakeholders; and (3) Pursue regional, multi-benefit solutions to environmental challenges. Program expenses include the costs of targeted special studies and reports requested by or used to inform policy discussions with regulatory agencies, policy strategy development and implementation, and collaborations with statewide organizations to do the same. The CBC program is funded through CBC fees and the Nutrient Surcharge.

Bay Area Clean Water Agency Program (B1)				
Goal(s)	Deliverables/Outcomes	Lead	FY26 Budget	Budget Line
B1. Exemplify service and responsiveness to members and the public; and foster collaboration and relationship building with regulators and other stakeholders (Committees, Labor, Meetings, Administration, Communications, Collaborations)	B1.1. AIR Committee Support - Admin Support - Technical Support	Chair, AED, RPM, Consultant	\$94,750	Committees/AIR Comm.
	B1.2. BAPPG Committee Support - Multiple Programs for public education and outreach, and regulatory advocacy	Chair, AED, RPM, Consultants	\$148,060	Committees/BAPPG Comm.
	B1.3. Asset Management Comm		\$500	Committees/Asset Mgt
	B1.4. BABC - Misc. Expenses	Chair	\$120,000	Committees/BABC Comm.
	B1.5. Collection Systems Comm. Support - Misc. Expenses	Chair, RPM	\$1,000	Committees/Collection Systems Comm.
	B1.6. O&M Committee - Misc. Expenses	Chair, RPM	\$1,500	Committees/ O&M Committee
	B1.7. Laboratory Comm. Support - Misc. Expenses	Chair, RPM	\$500	Committees/Laboratory Comm.
	B1.8. Permits Comm. Support - Misc. Expenses	Chair, RPM	\$500	Committees/Permits Comm.

B1.9. Pretreatment Committee, - Misc. Expenses	Chair	\$500	Committees/Pretreatment Comm.
B1.10. Recycled Water Comm., Misc. Expenses	Chair, RPM	\$500	Committees/Recycled Water Comm.
B1.11. Misc. Committee Support	ED, AED, RPM	\$45,000	Committees/ Misc. Comm. Support
B1.12. Manager's Roundtable, Misc. Expenses	ED, AED	\$1,000	Committees/ Manager's Roundtable
B1.13. Executive Director	Board Chair	\$195,169	Labor/ ED (85%)
B1.14. Legal Support, provide review of regulatory products	ED	\$10,000	Legal/ Regulatory Legal Support
B1.15. Regulatory Program Manager	RPM	\$111,912	Labor/ RPM (70%)
B1.16. Annual Meeting	ED, AED, RPM	\$14,369	Meetings/ Annual Meeting
B.17. Website Hosting	ED, AED, Consultant	\$758	Communications/ Website Hosting
B.18. Website Development/Maintenance	ED, AED, RPM, Consultant	\$1,656	Communications/ Website Dev/Maint
B1.19. State of the Estuary	ED, AED	\$20,000	Collaboratives, State of the Estuary
B1.20. Arleen Navarret Award	ED, AED	\$0	Collaboratives, Arleen Navarret Award
B1.21. BayCAN	ED, AED	\$5,000	Collaboratives, New FY22
B1.22. Bay Area One Water Network	ED, AED	\$5,000	Collaboratives, Bay Area One Water Network
B1.23. Bruce Wolf Scholarship	ED, AED	\$4,000	Collaboratives, Bruce Wolf Scholarship
B1.24. Our Water Our World Program	ED, AED	\$10,000	Collaboratives, previously included in BAPPG budget
B1.25. National Stewardship Action Council	ED, AED	\$10,000	Collaboratives, previously included in BAPPG budget
B1.26. California Product Stewardship Council	ED, AED	\$10,000	Collaboratives, previously included in BAPPG budget
B1.27. Miscellaneous	ED, AED	\$1,500	Collaboratives, Misc.

Clean Bay Collaborative (B2)

B2. Clean Bay Collaborative (1) Advocate for regulation based on science; (2) Foster	B2.1. Watershed Permit NMS Contribution	ED, RPM, Consultant	\$2,200,000	Tech. Support/ Nutrients/Watershed Permit Obligation
	B2.2. NMS Voluntary Contributions	ED, RPM		Tech. Support/ Nutrients/Watershed/Vol Contributions

collaboration and relationship building with regulators and other stakeholders; and (3) Pursue regional, multi-benefit solutions to environmental challenges.	B2.3. Additional Work Needed Under Permit	ED, RPM, Consultant	\$100,000	Tech. Support/ Nutrients/Add'l Work Under Permit/ GAR etc.
	B2.6. Nutrient Workshop(s)	ED, RPM, Consultant		Tech. Support/ Nutrient Workshop(s)
	B2.6. NMS Reviewer	Consultant	\$50,000	Tech. Support/NMS Reviewer
	B2.7. Regional Nutrient Special Study		\$250,000	
	B2.8. General Tech Support	ED, RPM, Consultants	\$100,000	Tech. Support, General Tech Support: PEEP, PFAS, Nutrient Review
	B2.9. CEC Investigations	ED, RPM, Consultants	\$50,000	Tech Support/PFAS Study Phase 3
	B2.10. Risk Reduction	ED, RPM, Consultants	\$12,500	Tech, Support/ Risk Reduction
	B2.11. General Technical and Regulatory Support	ED, RPM	\$31,975	Labor/ RPM (20%)
	TOTAL		\$3,3607,649	

SPECIAL BENEFITS PROGRAMS (PART C)

BACWA has two active special benefit programs: Water Operator Training also known as BACWWE, and Bay Area Chemical Consortium (BACC). These programs are administered under Part C of the JPA Annual Budget and Workplan. In FY26 the Bay Area Biosolids Coalition, previously a special benefit program, will be integrated into the general benefit program as a regular committee.

Member dues for Wastewater Operator Training (BACWWE) are optional and are established on an annual basis by its Program members with training offered at community colleges throughout the BACWA service area. In FY26, BACWWE is considering revamping their program, which will affect how the program is funded, and whether it will continue to be a program of special benefit.

BACC became a Special Benefits Program in FY 20. BACC is an administrative program governed by BACWA and supported by the BACWA ED and AED. BACC solicits chemical bid information from more than 60 member agencies, then arranges a group bid. BACC participant agencies are invoiced for BACWA labor and other expenses related to bid administration at the end of each fiscal year.

WATER OPERATOR TRAINING (PART C1)		
Deliverables/Outcomes	Manager	FY 25 Budget

Encourage development of a skilled workforce by offering classes in conjunction with a local community college.	Program Participant Reps; ED, AED	To be determined by member interest.
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BAY AREA BIOSOLIDS COALITION (PART C2)		
<u>Deliverables/Outcomes</u>	<u>Manager</u>	<u>FY 25 Budget</u>
Pursue alternatives for biosolids beneficial reuse and/or disposal in order to meet future regulatory requirements for diversion of organics from landfills	Program Participant Reps; ED, RPM, AED	To be determined by member interest.

BAY AREA CHEMICAL CONSORTIUM (PART C3)		
<u>Deliverables/Outcomes</u>	<u>Manager</u>	<u>FY 25 Budget</u>
Administer a series of chemical bids for participating agencies.	ED, AED	To be determined by level of effort and expenses associated with program administration and legal reserve development.

FISCAL YEAR 2026 BUDGET

BACWA/CBC	2026 Budget	Notes
<u>REVENUES</u>		
BACWA Principals' Contributions	581,626	5% increase, 5@ \$116,325
BACWA Assoc. & Affil. Contributions	260,064	5% increase. 12 Assoc: \$9599 Affiliate: \$1922; UC Berkeley \$515
Clean Bay Collaborative (CBC)	675,000	Prin: \$450,000; Assoc / Affil: \$225,00
Nutrient Surcharge	1,750,000	2 nd Watershed Permit Requirement
Voluntary Nutrient Contributions	0	
Non R2 Affiliate Members	5,768	Santa Rosa, Sac Reg'l, Vacaville, \$1922 / each
BACC Admin Fees	40,468	400 hours AED support
CASA Passthrough	620,125	Air Toxics, New in FY25
Interest Income (LAIF)	160,000	Includes BACWA & Nutrient Funds
TOTAL	4,093,051	

<u>EXPENSES</u>		
Labor	526,636	
Executive Director	229,612	2.4% increase

Assistant Executive Director	96,682	2.4% increase; \$81/hour; Reflects 1200 hours
BACC Administrator	40,468	400 hrs AED support at \$101.71 per hr
Regulatory Program Manager	159,875	2.4% increase; \$118.43/hour, Reflects 1350 hours
Administration	66,693	
EBMUD Financial Services	44,596	3% increase in FY26
Auditing Services	5,672	Financial audit through EBMUD
Administrative Expenses	4,059	No change from FY25
Insurance	12,366	15% increase from FY25
Meetings	32,569	
EB Meetings	4,200	20% increase from FY25
Annual Meeting	14,369	No change from FY25
Pardee	4,000	Reduced in FY26
Misc. meetings and conferences	10,000	No change from FY25
Communications	58,044	
Web Hosting / Domain Registration	758	2% increase
File Storage	828	2% increase, box.net
Website Development/Maint.	1,656	2% increase
IT Support (As Needed)	2,870	2% increase
BACWA Value of Wastewater Communication	50,000	
Other Communications/Software	1,932	2% increase. MS Exchange/Survey Monkey/Poll Everywhere/Zoom/ NetFile
Legal Support	12,403	
Regulatory Support	10,000	Decrease from FY25
Executive Board Support	2,403	No increase from FY25
BACWA Committees	413,810	
AIR	94,750	Consultant support
BAPPG	148,060	Consultant support
Asset Management Committee	500	No change from FY25
BABC Committee	120,000	New in FY26
Collections System	1,000	SSS WDR Support
O&M Committee	1,500	No change from FY25
Laboratory Committee	500	No change from FY25
Permit Committee	500	No change from FY25
Pretreatment Committee	500	No change from FY25
Recycled Water Committee	500	No change from FY25
Misc. Committee Support	45,000	No change from FY25
Manager's Roundtable	1,000	No change from FY25
Collaboratives	685,625	
State of the Estuary	20,000	Biennial in odd fiscal years
Arleen Navarret Award	0	Biennial in even fiscal years
BayCAN	5,000	
Bay Area One Water Network	5,000	Donation due in FY26
Bruce Wolf Scholarship	4,000	FY22, FY23, FY26, FY26 FY26
Our Water Our World Program	10,000	Previously included in BAPPG Budget
National Stewardship Action Council	10,000	Previously included in BAPPG Budget
California Product Stewardship Council	10,000	Previously included in BAPPG Budget
Passthrough to CASA for air toxics	620,125	New line in FY24

Misc.	1,500	NBWA
Technical Support	\$2,762,500	
Nutrients		
Watershed	2,200,000	Advanced funding for 2 nd Watershed Permit Science Studies – not to exceed value.
NMS Voluntary Contributions	0	
Additional Work Under Permit	100,000	Discretionary work including trading
Nutrient Workshop(s)	0	
NMS Reviewer	50,000	No change from FY24
Regional Nutrient Special Study	250,000	New item in FY25
General Technical Support	100,000	E.g. Nutrients, biosolids
CEC Investigations	50,000	PFAS Study Phase 3
Risk Reduction	12,500	Will plan new risk reduction tasks for current Hg/PCB Watershed Permit.
TOTAL	\$4,558,281*	

*FY26 Budget Expense Total includes BACC Administration expense and WorkPlan tables A&B do not.

* CASA Air Toxics pass through program is on FY26 Budget and presented in table below.

WOT	2026 Budget (Est)	Notes
REVENUES	0	
Participant's Contributions	0	Est. depends on member interest.
EXPENSES	85,200	
Contract expenses	80,000	Est. depends on member interest.
BACWA Indirect Expenses	1,000	Per BACWA level of effort in admin support
TOTAL	85,200	Funding transferred from WOT reserve

BACC	2026 Budget (Est)	Notes
REVENUES	\$77,724.21	
Participant's Contributions	\$77,724.21	Est. equivalent to expenses.
EXPENSES	\$77,724.21	
Bid software	\$4,710.09	
BACC Legal reserve	\$30,000	Target total reserve \$150,000 to be built over 5 years.
Miscellaneous expenses	\$2,492.12	
BACWA Indirect Expenses	\$40,522	Per BACWA Policy, reflects level of effort.
TOTAL	0	

The California Association of Sanitation Agencies (CASA) has requested that the Regional Associations, including BACWA, collect funds from their members in support of a statewide air toxics testing initiative. BACWA would pay CASA the estimated fees on behalf of BACWA's participating members, and collect

the funds from its participating members the subsequent fiscal year. The final fees are still under development and will be finalized and approved by a steering committee made up of project participants. This effort would not be a program of special benefit. This project would not impact BACWA's finances over the four-year course of the project, as revenues and expenses are expected to be equivalent.

CASA Air Toxics	2026 Budget	Notes
<u>REVENUES</u>		
Participant Invoices	\$620,125	Fees reflect FY24 and FY26 CASA costs collected by BACWA in FY26.
<u>EXPENSES</u>		
CASA Air Toxics program	\$620,125	FY26 fees collected from BACWA members passed on to CASA. FY24 fees advanced by BACWA in FY24 per Board approval.
TOTAL	0	

- \$100,000 was paid in FY24

	5 Year Plan to Eliminate Excess Reserves (CBC @ \$1,000,000) - raise nutrient surcharge							
				3rd WS PERMIT(tbd)				
			2024 (actual)	2025 (budgeted)	2026 proposed	2027 propose	2028 propose	2029 propose
REVENUES								
	Dues	Principals' Contributions		\$553,929	\$581,625	\$610,707	\$641,242	\$660,479
		Assoc. & Aff. Contributions		\$195,780	\$260,064	\$273,067	\$286,721	\$295,322
		Aff outside of R2			\$5,768	\$6,056	\$6,359	\$6,550
	Fees	Clean Bay Collaborative Fee		\$675,000	\$675,000	\$675,000	\$675,000	\$675,000
		Nutrient Surcharge	\$1,400,000	\$1,600,000	\$1,750,000	\$1,900,000	\$2,000,000	\$2,000,000
		Member Vol. Nutrient Contributions		\$0	\$0	\$0	\$0	
	Other Receipts	Non-BACWA AIR		\$7,582				
		Non-BACWA BAPPG Fee		\$4,264				
		Special Program Admin Fees (WOT, BABC, BACC)		\$46,522	\$40,468	\$41,682	\$42,933	\$44,220
	Fund Transfer	LAIF		\$80,000	\$160,000	\$80,000	\$80,000	\$80,000
	Investment Income	CASA Passthrough		\$600,000	\$620,125	tbd		
		Higher Yield Investments		\$0	\$0	\$0	\$0	\$0
TOTAL REVENUES		Total	\$3,101,035	\$3,763,077	\$4,093,050	\$3,586,512	\$3,732,254	\$3,761,572
EXPENSES								
	Labor			\$514,304	\$526,636	\$542,435	\$558,708	\$575,469
	Administration			\$63,781	\$66,693	\$68,027	\$69,387	\$70,775
	Meetings			\$34,670	\$32,569	\$33,220	\$33,885	\$34,562
	Communication			\$47,887	\$58,044	\$59,205	\$60,389	\$61,597
	Legal			\$52,403	\$12,403	\$12,651	\$12,904	\$13,162
	Committees			\$312,560	\$413,810	\$312,560	\$413,810	\$312,560
	Collaboratives (minus CASA passthrough)			\$13,000	\$65,500	\$44,310	\$67,696	\$46,550
	CASA Passthrough			\$500,000	\$620,125	tbd	tbd	-
	Technical Support	Nutrients						
		Permit Req'm't for Science Funding		\$2,200,000	\$2,200,000	\$2,200,000	\$2,200,000	\$2,200,000
		NMS Voluntary Contributions		\$0	\$0	\$0	\$0	\$0
		Additional Work Under Permit		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
		3rd WSP Special Studies		\$100,000	\$250,000	\$250,000	\$250,000	\$90,000
		Nutrient Workshops		\$0	\$0	\$0	\$0	\$0
		NMS Reviewer		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
		General Tech Support		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
		CEC Investigations		\$10,000	\$50,000	\$50,000	\$10,000	\$10,000
		Risk Reduction		\$12,500	\$12,500	\$12,500	\$12,500	\$12,500
	Total Technical Support		\$2,165,702	\$2,572,500	\$2,762,500	\$2,762,500	\$2,722,500	\$2,562,500
TOTAL EXPENSES			\$3,182,990	\$4,111,105	\$4,558,280	\$3,834,908	\$3,939,280	\$3,677,176
NET INCOME BEFORE TRANSFERS			(\$81,955)	(\$348,028)	(\$465,230)	(\$248,396)	(\$207,025)	\$84,396
TRANSFERS TO(+)/FROM(-) RESERVES			(\$81,955)	(\$348,028)	(\$465,230)	(\$248,396)	(\$207,025)	\$84,396
RESERVES								
	Operating Target	\$200,000						
	Legal Target	\$300,000						
	CBC Target	\$1,000,000						
	Target Reserves	\$1,500,000						
	Total Reserves at End of FY23		\$2,804,946	\$2,456,918	\$1,991,688	\$1,743,292	\$1,536,267	\$1,620,663
	Amt. Above CBC Target End of FY (projected)			\$956,918	\$491,688	\$243,292	\$36,267	\$120,663



BACWA
BAY AREA
CLEAN WATER
AGENCIES

BAY AREA CLEAN WATER AGENCIES
ANNUAL MEETING PROGRAM
May 2, 2025
David Brower Center
Berkeley, CA

TIME	DESCRIPTION	SPEAKER
8:30am - 9:00am	Coffee in the lobby	
9:00 am - 9:15 am	Welcome/Introduction Year in Review	Jackie Zipkin, BACWA Chair/ EBDA Lorien Fono, BACWA
9:15 am - 10:30 am	Regulator Priorities Bay Area Air District US Environmental Protection Agency State Water Resources Control Board staff San Francisco Bay Regional Water Board staff Q&A	Moderator: Lori Schectel Meredith Bauer/Greg Nudd Ellen Blake/Peter Kozelka - tentative Bill Johnson Phil Crader
10:30 am - 11:00 am	Break - Coffee and snacks in the foyer	
11:00 am - 12:00 pm	Climate resilience - Planning for uncertainty Wastewater/stormwater coordination Emergency response and planning Facilitated Discussion	Moderator: Amy Chastain
12:00 pm - 1:00 pm	Lunch - On the terrace	
1:00 pm - 1:10 pm	BACWA Leadership Recognition	Jackie Zipkin, BACWA Chair/EBDA
1:10 pm -2:10m	Nutrient Watershed Permit year 1 check in How is BACWA assisting with compliance Regional Planning - What projects are agencies moving ahead with? Compliance schedule considerations New Science Plan Communications materials Facilitated Discussion	Moderator: Amit Mutsuddy Lorien Fono, BACWA Mike Falk Bill Johnson Dave Senn
2:10 pm - 3:00 pm	Pollution Prevention: Where have we been and where are we going? Staff perspectives Regulatory Perspectives NGO perspectives	Moderator: Eric Dunlavey
3:00 pm - 3:10 pm	Annual Meeting Wrap-Up	Jackie Zipkin, BACWA Chair/EBDA
3:30 PM	Adjourn - Social hour	

Draft - FY 2026 BACWA Board Meetings

~~July 18, 2025~~

August 15, 2025

September 19, 2025

October 9 & 10, 2025– Pardee Technical Seminar

November 21, 2025 *

December 19, 2025 *

January 16, 2026

February 20, 2026

March 20, 2026

April 17, 2026

May 1 or 8, 2026 Annual Meeting, David Brower Center, Berkeley

June 19, 2026

*Combine into an early December meeting (December 5, 2025)



Resolution of the California Ocean Protection Council on Ocean Acidification and Hypoxia

March 3, 2025

WHEREAS, the California Ocean Protection Act mandates that the California Ocean Protection Council (OPC) coordinate and improve the protection of California’s ocean and coastal resources, and the Governor’s Ocean Action Plan directs the OPC to play a leadership role in managing and protecting California’s oceans, bays, estuaries and coastal wetlands, including integration of coastal water quality programs to increase their effectiveness;

WHEREAS, the California Ocean Protection Act declares, “The governance of ocean resources should be guided by principles of sustainability, ecosystem health, precaution, recognition of the interconnectedness between land and ocean, decisions informed by good science and improved understanding of coastal and ocean ecosystems, and public participation in decisionmaking”;

WHEREAS, the California Ocean Protection Act further directs OPC to support state agencies’ use and sharing of scientific and geospatial information for coastal- and ocean-relevant decisionmaking, including scientific and geospatial information regarding existing and predicted patterns of human activities, specifically for those that require the use of a precautionary approach.

WHEREAS, the precautionary principle recognizes that where the possibility of large or irreversible effect, scientific uncertainty should not prevent protective action;

WHEREAS, due primarily to global carbon dioxide emissions, with contributions from land-based sources, the ocean is acidifying and harming calcifying marine organisms, marine food webs, and marine ecosystems;

WHEREAS, anthropogenic nutrient inputs into the ocean and ocean warming are causing an increase in hypoxia (low dissolved oxygen levels) and impacting the survival and viable habitat of marine species and fisheries;

WHEREAS, the West Coast of North America, including California, will face the “earliest, most severe changes in ocean carbon chemistry,” according to the West Coast Ocean Acidification and Hypoxia Science Panel, which was comprised of leading scientists from California, Oregon, Washington, and British Columbia;

WHEREAS, California Assembly Bill 2139 (2016) authorized the OPC to develop an ocean acidification and hypoxia (OAH) science task force for decision making and, in addition to other actions, requires the OPC to “Work with other agencies to coordinate and ensure that criteria and standards for coastal water health to address ocean acidification and hypoxia are developed and informed by the best available science”;

WHEREAS, a key recommendation of the West Coast OAH Science Panel’s 2016 Report is reduction of local pollutant inputs that exacerbate OAH;

WHEREAS, the 2018 State of California Ocean Acidification Action Plan directs action to “Identify sources and reduce local water-borne and airborne pollution that can exacerbate coastal ocean acidification” as part of the Plan’s strategies to identify and prepare for a full range of risks and impacts, reduce the causes of ocean acidification, improve the resilience of vulnerable groups, and minimize harmful effects;

WHEREAS, the OPC’s “Strategic Plan to Protect California’s Coast and Ocean 2020 – 2025” Objective 1.2 directs OPC to minimize causes and impacts of OAH, including Target 1.2.1, “Based on the latest scientific research, advance adoption of regulations, as needed, establishing water quality objectives for ocean acidification and hypoxia that include, but are not limited to, publicly owned treatment works, stormwater, and non-point source pollution, by 2025, with scientific analysis of the relationship between nutrient inputs and acidification hot spots completed by 2022”;

WHEREAS, the California State Water Resources Control Board’s 2024 Strategic Work Plan includes Action 2.1.4 to “Develop an Ocean Plan amendment to add water quality objectives and a program of implementation to address ocean acidification, hypoxia, and the effects of anthropogenic sources of nutrients in ocean waters. Initiate investigation of feasibility of nutrient removal at wastewater treatment plants that discharge to the ocean,” which builds on prior Strategic Work Plans to advance OAH research and development of water quality objectives and which falls under the State Water Board’s priority to protect and restore watersheds, marine waters, and ecosystems;

WHEREAS, OPC has invested substantial state resources in the development of a Coupled Remote Ocean Monitoring System and Biogeochemical Elemental Cycling (ROMS-BEC) OAH model for the entire West Coast as impacted by the California Current System. In the Southern California Bight, this effort has demonstrated that coastal anthropogenic nutrients, mainly from wastewater treatment plant effluent, are driving significant changes in ocean chemistry (reduction of subsurface pH and oxygen) and these changes have the potential to cause vertical compression of viable ocean habitat for fish and shelled organisms;

WHEREAS, the 2024 Independent Peer Review of the ROMS-BEC affirmed that the model is capturing fundamental physical and biogeochemical processes in the Southern California Bight that are associated with OAH. The coupled modeling system has been validated and gone through a rigorous scientific peer review process. It can be used to address basic management questions about whether nutrient loads from treated wastewater discharges in the region have impacted the marine environment and ecosystem in the Southern California Bight and what the large-scale and first-order impacts are.

WHEREAS, the OPC has already begun to take actions, including ongoing research to evaluate OAH sources and impacts across the state, including the contribution of cross-border pollution in driving changes in ocean chemistry, and coordinated OAH monitoring across local, regional, state, and federal entities, that will inform OAH resilience and mitigation strategies statewide to address the impacts of all contributing sources;

NOW, THEREFORE, the California Ocean Protection Council hereby:

RESOLVES to take the following priority actions:

- **Invest in and advance monitoring and research:** Building upon previous investments, OPC will continue to fund projects that advance scientific understanding of OAH causes and impacts, identify and evaluate coastal pollutants contributing to OAH, and strengthen monitoring and observation systems statewide to further knowledge of current and future OAH conditions and inform nutrient management.
- **Support development of water quality objective(s) and program of implementation:** Based on the best available science, including observational monitoring and modeling data, and consistent with the precautionary principle, OPC supports the development of one or more water quality objectives and associated program of implementation by the State Water Resources Control Board to address OAH impacts to ensure the reasonable protection of California's coastal and ocean ecosystems and their beneficial uses. OPC supports and encourages a program of

implementation that addresses the anthropogenic causes of OAH within the State Water Resources Control Board's regulatory authority, including nutrient management actions as appropriate, and considers water recycling needs and energy demands.

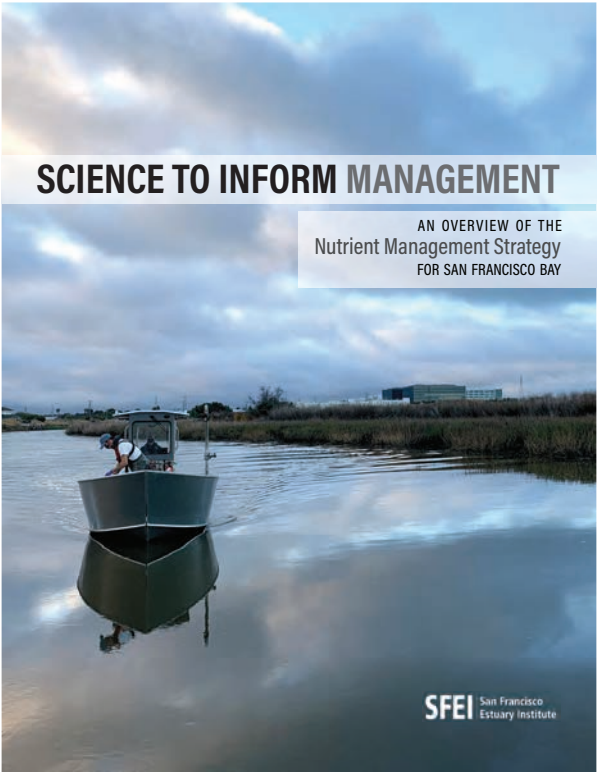
- **Advance and inform nutrient management approaches:** OPC will encourage state agencies to seek early collaboration and information sharing with external stakeholders to increase understanding of effective nutrient interventions, inform and support improved management of land-based nutrients, and carefully invest public funds and prioritize nutrient management in publicly owned treatment works and other specified land-based sources of nutrients in state programs. This includes, but is not limited to, requesting information regarding nutrient management approaches and feasibility when providing funding to non-state entities, to the extent permissible by law.
- **Seek opportunities to advance multi-benefit infrastructure upgrades for water recycling:** OPC will work with stakeholders and government partners to identify and leverage funding opportunities to inform and support infrastructure upgrades for water recycling at publicly owned treatment works that also reduce nutrient inputs on coastal and ocean ecosystems and resulting impacts on OAH. Infrastructure upgrades can provide additional co-benefits in support of other state water quality and water supply priorities, such as advancing *California's Water Supply Strategy: Adapting to a Hotter, Drier Future* and enhancing local water supply, through water recycling infrastructure that incorporates appropriate nutrient management. OPC supports a collaborative approach to advance infrastructure upgrades and water recycling to ensure they are feasible, will meet water quality objectives, address aging infrastructure challenges, and advance OAH and nutrient remediation efforts to protect beneficial uses of California ocean waters that provide for California's coastal and ocean ecosystem.

**03/04/2025 BOARD MEETING – ITEM #3
CHANGE SHEET #1 (CIRCULATED 02/28/2025)**

Agenda Item 3 relates to the draft Strategic Work Plan for 2025. Changes, to page 9 of the draft plan, are shown below, in underline for additions and strikethrough for deletions.

2.2.4 Ocean acidification and hypoxia. Develop an Ocean Plan amendment (amendment) to add a water quality objective and a program of implementation to address ocean acidification, hypoxia, and the effects of anthropogenic sources of nutrients in ocean waters off the Southern California Bight. ~~Develop and, if appropriate, work with the Regional Water Boards to incentivize or require early implementation of technologically feasible wastewater treatment controls for ocean discharges prior to the completion of the amendment.~~ Collaborate with regional boards, other state agencies, and external stakeholders to identify effective land-based nutrient interventions and management strategies, including opportunities to accelerate solutions where feasible. For 2025, focus on (1) evaluating aragonite saturation as the metric to assess acidification objective and drafting proposed water quality objective language; (2) applying model results to consider the processes and anthropogenic discharges that drive acidification; and (3) investigating wastewater treatment technologies as well as incentives and regulatory options. [DWQ]

Note from BACWA:
This document is available to download
at
<https://www.sfei.org/documents/science-inform-management-overview-nutrient-management-strategy-san-francisco-bay>



Acknowledgements

We extend our gratitude to the San Francisco Bay Nutrient Management Strategy Steering Committee, technical advisors, and scientific collaborators for their invaluable guidance and feedback, which have been instrumental in shaping the program and ensuring its scientific integrity.

We also acknowledge the critical support provided by the Bay Area Clean Water Agencies through the San Francisco Bay Nutrient Watershed Permit, administered by the San Francisco Bay Regional Water Quality Control Board. Additional funding from the US Environmental Protection Agency's Water Quality Improvement Fund, NOAA's MERHAB program, and other public sources has been vital in advancing our understanding of nutrient management strategies and informing management actions.

We appreciate support from others at SFEI, including Emily Corwin for her guidance and review of the draft version of this report, and the SFEI Science Communications design team, who designed and produced the report.

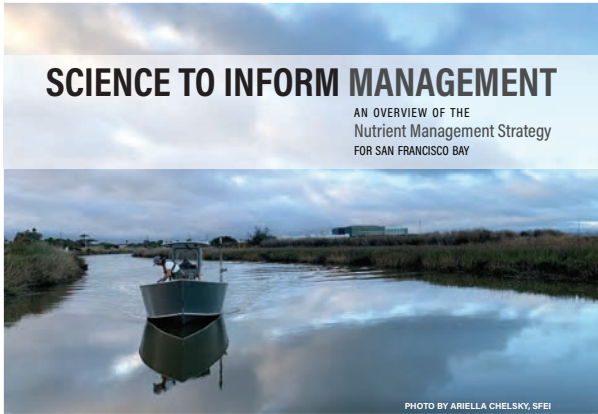
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AUTHORS Ian Wren
David Senn
Will Geiken
Ariella Chelsky
Dan Kilam

DESIGN RUTH ASKEVOLD

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March 2025

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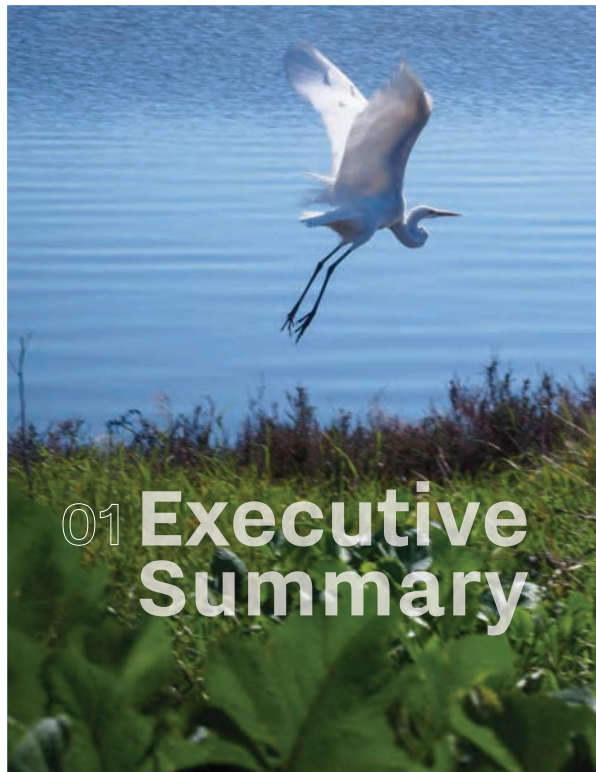
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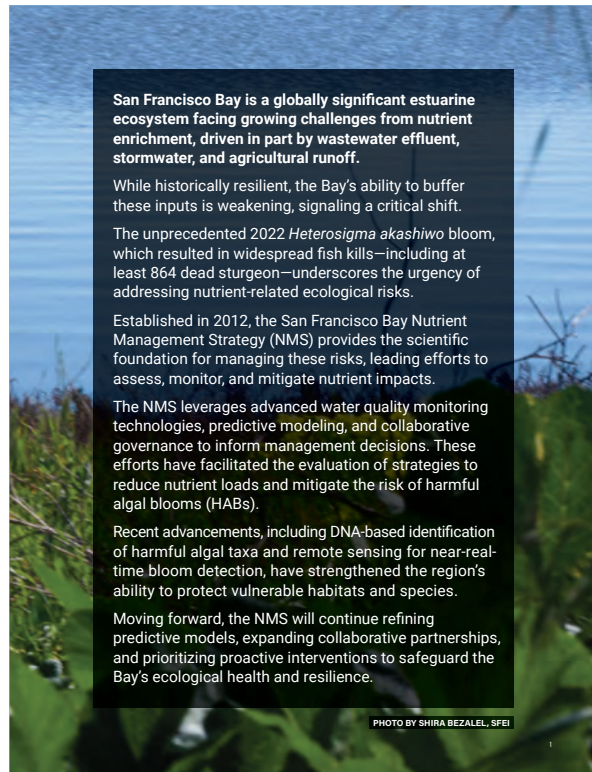
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01 Executive Summary



San Francisco Bay is a globally significant estuarine ecosystem facing growing challenges from nutrient enrichment, driven in part by wastewater effluent, stormwater, and agricultural runoff.

While historically resilient, the Bay's ability to buffer these inputs is weakening, signaling a critical shift.

The unprecedented 2022 *Heterosigma akashiwo* bloom, which resulted in widespread fish kills—including at least 864 dead sturgeon—underscores the urgency of addressing nutrient-related ecological risks.

Established in 2012, the San Francisco Bay Nutrient Management Strategy (NMS) provides the scientific foundation for managing these risks, leading efforts to assess, monitor, and mitigate nutrient impacts.

The NMS leverages advanced water quality monitoring technologies, predictive modeling, and collaborative governance to inform management decisions. These efforts have facilitated the evaluation of strategies to reduce nutrient loads and mitigate the risk of harmful algal blooms (HABs).

Recent advancements, including DNA-based identification of harmful algal taxa and remote sensing for near-real-time bloom detection, have strengthened the region's ability to protect vulnerable habitats and species.

Moving forward, the NMS will continue refining predictive models, expanding collaborative partnerships, and prioritizing proactive interventions to safeguard the Bay's ecological health and resilience.

PHOTO BY SHIRA BEZALEL, SFEI

KEY TAKEAWAYS

Bay Resilience and Vulnerability

Historically, high turbidity, strong tidal mixing, and filter-feeding organisms, like oysters, helped mitigate nutrient impacts. However, recent trends (e.g., increased phytoplankton biomass and harmful algal blooms) demonstrate this resilience is weakening.



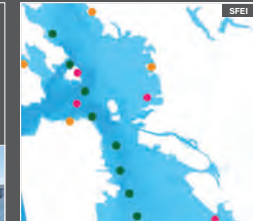
IMAGERY BY COPERNICUS SENTINEL (2019) CC BY-SA 3.0

Harmful Algal Blooms (HABs)

The 2022 *Heterosigma akashiwo* bloom exhibited unprecedented biomass levels, widespread dissolved oxygen depletion, and significant fish mortality, likely due to toxin production or other harmful mechanisms.



PHOTO CONTRIBUTION BY CITIZEN SCIENCE GROUP



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Advancing Detection & Monitoring

Early detection of blooms through citizen science and advanced remote sensing has improved response capabilities. However, gaps remain in understanding the triggers of HABs and their long-term ecological impacts. The NMS is filling these gaps through world-class models, advanced sensors, and real-time monitoring.



Wastewater Contributions

About 90% of dry season nutrient loads in San Francisco Bay come from wastewater treatment plants, dominated by dissolved inorganic nitrogen (DIN) and phosphorus, with South and Lower South Bays experiencing the highest concentrations.



ALAMY

Critical Role of Nitrogen

Nitrogen levels are a key driver of algal blooms and chronic low dissolved oxygen, especially in shallow South Bay habitats, with strong links between nutrient availability, phytoplankton production, and oxygen depletion.

Ongoing Science Needs

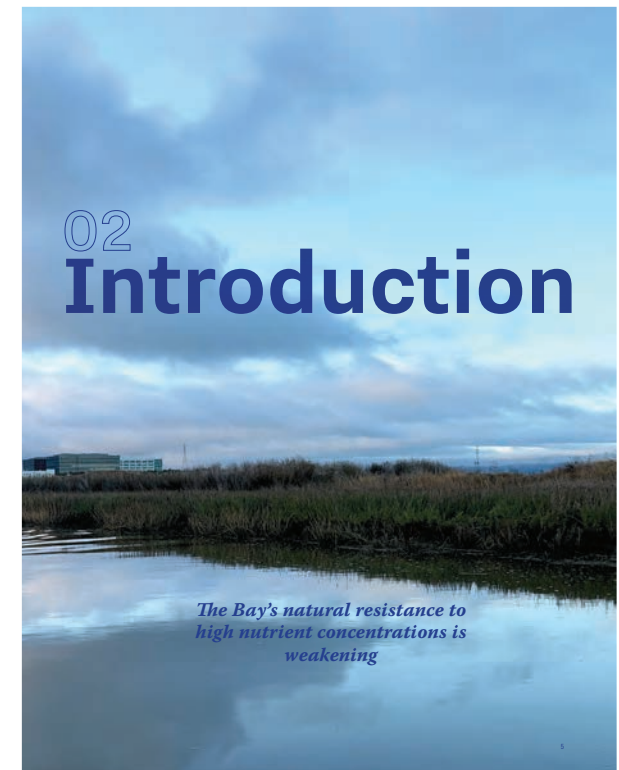
Improved predictive tools to evaluate the potential for future HAB events and the consequences of nutrient load reductions are critical for informing actions to reduce the risk of HABs in the Bay and coastal areas.



SFEI



PHOTO BY ARIELLA CHELSKY, SFEI



02 Introduction

The Bay's natural resistance to high nutrient concentrations is weakening

Nutrient Dynamics in San Francisco Bay

San Francisco Bay is a vital estuarine ecosystem that supports a complex food web dependent on regular inflows of essential nutrients like nitrogen and phosphorus.

While these nutrients are crucial for ecological health, excessive inputs can degrade water quality and disrupt habitat stability. Over-enrichment can fuel excessive phytoplankton growth, deplete dissolved oxygen, and trigger harmful algal blooms (HABs).

As one of the most nutrient-enriched estuaries globally, San Francisco Bay receives the majority of its nutrients from treated effluent discharged by 37 wastewater treatment plants in the Bay.

Historically, high suspended sediment levels limited sunlight penetration, while strong tidal mixing kept phytoplankton from remaining in the light-rich upper water column long enough to proliferate.

However, recent data suggest the Bay's natural resistance to nutrient overloading is weakening. Rising phytoplankton biomass, declining dissolved oxygen in some regions, and increasing detections of multiple HAB species signal a critical shift in the Bay's resilience.

The East Bay Municipal Utility District main wastewater treatment plant (shown in the aerial photograph below) is one of the largest treatment facilities around the Bay that collects, treats, and safely discharges wastewater to the San Francisco Bay from 1.1 million people (photograph courtesy of Alamy).



Historical Context of Monitoring Efforts

Nutrient monitoring in San Francisco Bay has its roots in the late 1960s when the U.S. Geological Survey (USGS) began systematic water quality assessments. From the early 1980s, biweekly to monthly monitoring has tracked numerous nutrient-related water quality parameters and yielded key insights into the underlying physical and biogeochemical processes that produce those conditions. This early data collection set the stage for a comprehensive understanding of how nutrient levels have influenced the Bay's ecological dynamics.

In 1993, SFEI began implementing the Regional Monitoring Program (RMP) on behalf of regulators and stakeholders. The RMP was designed to consistently assess the Bay's ecological health. It established a robust monitoring collaboration with USGS and other partners aimed at identifying pollution sources, monitoring long-term trends, and evaluating water quality improvement measures. This partnership has significantly enhanced the depth and scope of data collection, profoundly shaping our understanding of the impacts of nutrients in San Francisco Bay.



PHOTO BY SHIRA BEZALEL, SFEI

The San Francisco Bay Nutrient Management Strategy

The San Francisco Bay Nutrient Management Strategy (NMS) was established in 2012 as a response to escalating nutrient-related challenges in the Bay. The NMS Science Program, based at the San Francisco Estuary Institute (SFEI) and collaboratively managed with the Regional Water Quality Control Board and other key stakeholders, operates under a structured governance model. This framework includes a 15-member Steering Committee comprising stakeholders from various sectors, including regulators and dischargers. This committee, supported by technical advisors and specialized workgroups, oversees the strategic direction and implementation of the NMS, ensuring that it remains responsive to the evolving needs of San Francisco Bay.

Mission

The mission of the NMS is to develop a comprehensive understanding of nutrient dynamics within San Francisco Bay to inform and guide effective management and policy decisions. This mission encompasses a range of activities, including continuously monitoring water quality parameters and developing numerical models to simulate and assess the effectiveness of management alternatives. By deploying technologies like moored sensors and engaging in high-frequency biogeochemical mapping, the NMS aims to enhance the understanding of nutrient cycling and the impacts of HABs. These efforts are crucial for developing informed, science-based strategies to mitigate the negative effects of nutrient over-enrichment and to protect the Bay's ecological health.

Impact

The NMS has influenced critical water quality management decisions across San Francisco Bay through its rigorous research and monitoring efforts. Through real-time data and analyses of nutrient dynamics, the NMS delivers crucial information for the stakeholders managing the Bay's complex ecological challenges. These efforts have contributed to significant policy decisions, including the establishment of a regional permit regulating the discharge of treated effluent from thirty-seven wastewater treatment agencies into the Bay.

The urgency of addressing nutrient enrichment was underscored by the 2022 HAB event, which triggered ecological impacts from San Pablo Bay to the Lower South Bay. This incident triggered regulatory action intended to preserve the Bay's health. Consequently, there is a heightened focus on continuous monitoring and data integration to support scenario modeling and adaptive management strategies.

PHOTO BY LILIA MOURIER, SFEI



PHOTO BY EMILY CORWIN, SFEI

Advancements Under the Nutrient Management Strategy

In 2012, growing concerns over the potential impacts of nutrient overloading prompted the San Francisco Bay Regional Water Quality Control Board to initiate the NMS as a collaborative science effort targeting the highest-priority management and science questions identified by a diverse group of stakeholders, including wastewater agencies, regulators, and environmental groups. The science program was designed to proactively address the Bay's nutrient challenges before adverse conditions similar to those seen in other nutrient-enriched systems emerged. This forward-looking approach reflects a shared commitment to managing and protecting the Bay's ecosystem.

Through this collaborative effort, the NMS has advanced the understanding of nutrient dynamics, phytoplankton diversity, and harmful algal toxins, with contributions from enhanced nutrient and phytoplankton monitoring and HAB-related parameter measurements by USGS. A major innovation, the Moored Sensor Program, operates in South Bay and Lower South Bay, collecting critical data every 15 minutes in regions excluded from long-term monitoring programs, enabling detection and interpretation of phenomena missed by traditional ship-based sampling.

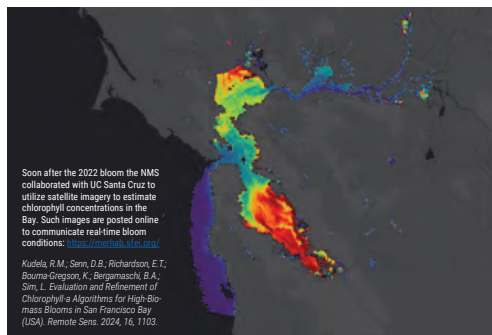
03 Monitoring Nutrients in San Francisco Bay



Enhanced Monitoring to Support Decision Making

Over the last several years the NMS incorporated multiple cutting-edge scientific methods into the nutrient monitoring framework:

- **DNA-Based Techniques:** Techniques like quantitative PCR (qPCR) precisely count specific harmful algae types, providing exact numbers of these organisms in water samples. Another method, metabarcoding, uses DNA sequencing to evaluate the relative abundance of various algae and bacteria, including harmful species, helping understand their ecological impact.
- **Biogeochemical Mapping Cruises:** In collaboration with the USGS Biogeochemistry group, these high-speed cruises target the biogeochemical processes in South Bay shoal habitats, improving our understanding of nutrient cycling and ecosystem productivity.
- **Algal Toxin Tracking:** Intended to monitor algal toxin presence, the biweekly collection of native mussels from the Bay's shoreline generates a record of toxins entering the local food web. Since 2015, its focus has been on monitoring harmful algal toxins like saxitoxin, domoic acid, and microcystin. Despite ongoing efforts, occasional exceedances of toxin thresholds highlight the persistent public health and ecological risks posed by HABs.
- **Remote Sensing for Bloom Detection:** Developed in collaboration with UC Santa Cruz to address the inadequacies of existing algorithms at detecting bloom extents, a refined two-band algorithm has proven effective in both bloom and non-bloom conditions. Near real-time data is available on a public map.



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Current and Future Directions

The NMS continues to evolve, leveraging traditional and modern scientific techniques to address the complex challenge of nutrient management in San Francisco Bay. The strategy's focus is not only on understanding current conditions but also on predicting future ecological responses and informing effective management decisions. With ongoing advancements in technology and methodology, nutrient monitoring in San Francisco Bay stands on a robust platform poised to tackle the environmental challenges of the future. This dynamic approach ensures that the Bay's management strategies remain responsive to the changing ecological landscape. [S](#)



PHOTO BY LUCY MONTGOMERY, SFI

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Nutrient Modeling: An Overview

San Francisco Bay's modeling program uses advanced computer simulations to understand how nutrients move through the Bay and impact water quality. These models simulate processes like nutrient cycling, phytoplankton growth, and dissolved oxygen levels, helping scientists simulate harmful algal blooms or predict low oxygen events. By combining real-world monitoring data with these simulations, the program evaluates different management scenarios, such as reducing nutrient inputs from wastewater treatment facilities, to determine their potential benefits for the Bay's health. This work supports informed decision-making to address the challenges of nutrient pollution and protect the Bay's ecosystem.

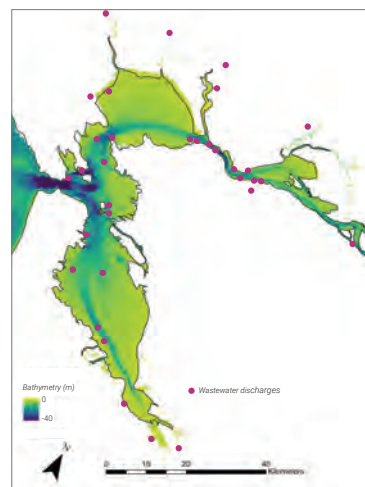
Numerical models integrate physical, chemical, and biological factors—such as wind, waves, sediment, nitrogen, phosphorus, carbon, oxygen, phytoplankton, and microbes—to predict how these elements interact and affect nutrient levels. This integration is essential for enhanced understanding and simulating management scenarios to support informed decision-making.

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Recent Advances in Nutrient Modeling Capabilities

The NMS initiated the development of sophisticated 3D hydrodynamic and biogeochemical models in 2015, which marked a significant step in applying cutting-edge numerical modeling tools to nutrient management decisions in the Bay. The models aim to explore nutrient cycling, identify source contributions, track nutrient export to the coast, and assess the impacts of nutrient reductions on water quality.

From 2015 to 2019, the focus expanded to include various regions of the Bay, including Suisun Bay, Delta, and the Lower South Bay. Since 2020, modeling efforts underwent extensive peer-reviewed analyses and were instrumental in investigating nutrient dynamics over consecutive water years.



For over ten years, the NMS modeling team has developed a coupled hydrodynamic water quality simulation tool. Eventually, the model can be used to test nutrient management actions and the consequences of future scenarios, such as population growth and climate change.

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04 Modeling Nutrient Dynamics in San Francisco Bay

PHOTO BY LILIA MOURIER, SFI

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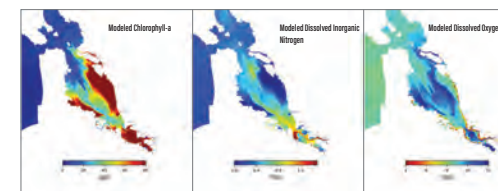
Model Applications to Inform Management Decisions

The coupled hydrodynamic and water quality model is a key tool to inform nutrient management strategies for San Francisco Bay. Following years of development and refinement, it will be used to simulate various nutrient loading scenarios and responses to management actions. This information is vital as the region implements costly wastewater upgrades to reduce nutrient inputs. The model provides detailed insights into nutrient cycling and ecological controls by integrating processes like pelagic grazing, sediment-water column nutrient exchanges, and light extinction.

The NMS's advanced modeling capabilities are essential for identifying the drivers of nutrient

cycling and understanding how nutrients move and transform within the Bay.

The evolving modeling capabilities of the NMS are crucial for regulators and decision-makers, offering vital insights that inform both short-term and long-term management strategies for San Francisco Bay. Recently, these models have been crucial in analyzing the 2022 H. akashiwo bloom and guiding strategies for nutrient load reduction. By simulating various scenarios and evaluating risks such as oxygen depletion, the models facilitate predictions of ecosystem responses, enabling informed and proactive management decisions.



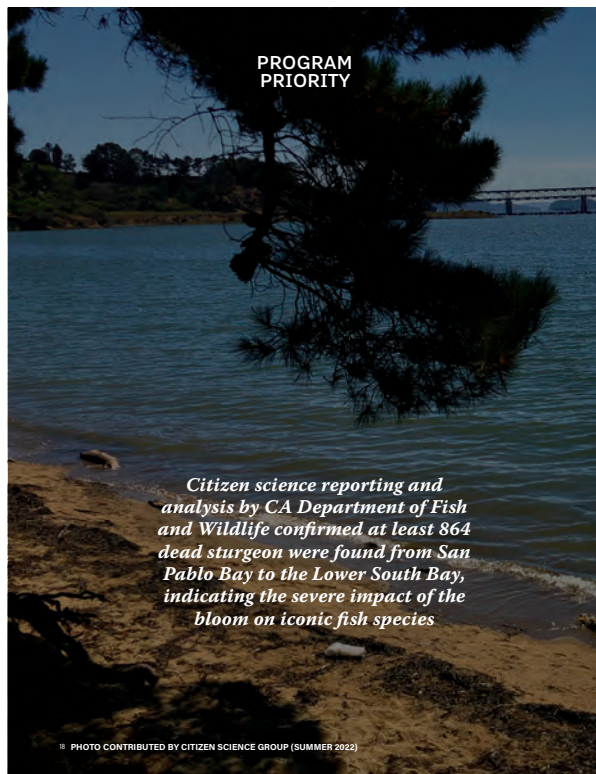
Predicted chlorophyll-a, DIN and dissolved oxygen concentrations within Central, South and Lower South bays in Spring 2018 from the NMS coupled hydrodynamic and water quality model.

Future Directions in Nutrient Modeling

Moving forward, the focus will shift from model development to application, leveraging the models to predict how human activities influence ecosystem responses and to guide nutrient management investments.

Planned analyses to provide actionable insights to manage nutrients in the Bay include:

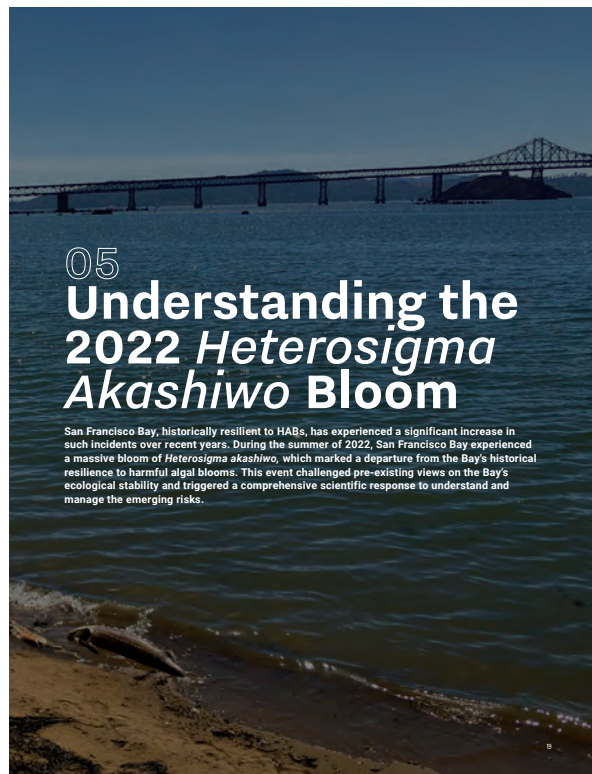
- Simulating management scenarios to evaluate the effectiveness of various nutrient reduction strategies.
- Examining nutrient load levels that trigger water quality threshold exceedances.
- Assessing hydrological and meteorological conditions contributing to major bloom events.
- Evaluating nutrient exchanges with the coastal ocean. [S](#)



PROGRAM PRIORITY

Citizen science reporting and analysis by CA Department of Fish and Wildlife confirmed at least 864 dead sturgeon were found from San Pablo Bay to the Lower South Bay, indicating the severe impact of the bloom on iconic fish species

PHOTO CONTRIBUTED BY CITIZEN SCIENCE GROUP (SUMMER 2022)



05 Understanding the 2022 *Heterosigma Akashiwo* Bloom

San Francisco Bay, historically resilient to HABs, has experienced a significant increase in such incidents over recent years. During the summer of 2022, San Francisco Bay experienced a massive bloom of *Heterosigma akashiwo*, which marked a departure from the Bay's historical resilience to harmful algal blooms. This event challenged pre-existing views on the Bay's ecological stability and triggered a comprehensive scientific response to understand and manage the emerging risks.



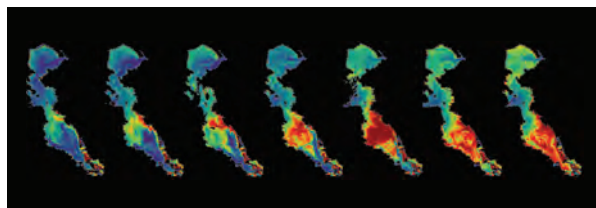
Ongoing Research and Future Directions

The 2022 *Heterosigma akashiwo* bloom underscored the critical need for enhanced monitoring and predictive modeling to manage and mitigate HABs. The NMS has responded by advancing its scientific methodologies to better understand and predict these events. By refining predictive models to analyze environmental triggers and nutrient levels, the NMS aims to proactively address HAB occurrences and minimize their impacts on the Bay's ecosystem.

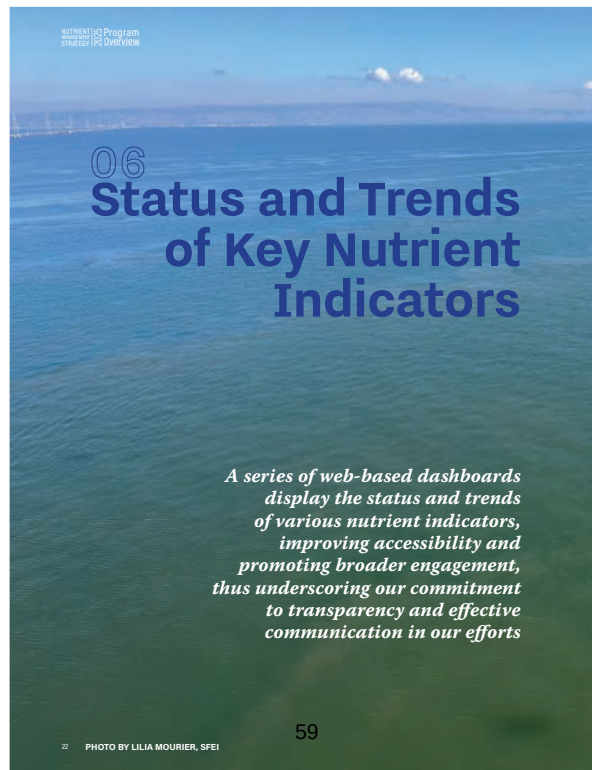
Technological advances in HAB detection, such as quantitative PCR and metabarcoding, have significantly improved the NMS's ability to gather detailed data on algal taxa. This, coupled with ongoing toxin surveillance through mussel sampling, enables a more nuanced understanding of HAB dynamics. These efforts are crucial in tracking toxin levels and adapting strategies to ensure public health and ecological safety.

Looking forward, the NMS plans to deepen its exploration of nutrient load levels and the conditions that foster algal blooms. This involves refining existing monitoring and modeling techniques and working closely with regulators and wastewater agencies to inform effective management strategies. Additionally, the increased frequency and intensity of HABs have driven the NMS to bolster its response capabilities in collaboration with regional experts and citizen scientists to detect and track blooms more rapidly.

In 2023, the NMS received a substantial boost with a \$3 million NOAA grant to enhance its HAB monitoring capabilities. This initiative, led by SFEI, USGS, and the Department of Water Resources (DWR), focuses on advancing monitoring technologies and developing an online HAB tracking dashboard. This tool is designed to improve the understanding of HAB dynamics and support the development of more effective mitigation strategies, addressing the Bay's challenges with nutrient over-enrichment and its ecological consequences. **S**



Remotely sensed chlorophyll estimates during the 2022 HAB event. The data are from the ESA Sentinel-3 satellite, processed using a locally tuned algorithm for San Francisco Bay.



06 Status and Trends of Key Nutrient Indicators

A series of web-based dashboards display the status and trends of various nutrient indicators, improving accessibility and promoting broader engagement, thus underscoring our commitment to transparency and effective communication in our efforts

Dynamics and Impact of the Bloom

The *Heterosigma akashiwo* bloom, which began in July 2022 and lasted until September, was characterized by its rapid growth and massive consumption of nutrients. This led to a critical depletion of dissolved oxygen levels in the water, with concentrations falling below 5 mg/L for more than a week and, at times, dipping under 2 mg/L for several days. The result was a severe ecological disturbance marked by extensive fish kills across various species.

Sturgeon were one of the most affected species, with the California Department of Fish and Wildlife documenting significant casualties. Citizen science reporting confirmed that at least 864 dead sturgeon were found from San Pablo Bay to the Lower South Bay and the outer coast, indicating the severe impact of the bloom on iconic fish species. Most sturgeon deaths occurred before oxygen levels plummeted, suggesting an unknown mode of non-specific toxicity. The NMS continues to derive lessons from the 2022 bloom to identify the likely timing and conditions under which a future event may occur and to inform ongoing regulatory decisions impacting all wastewater agencies in the Bay Area.

Scientific Investigation and Findings

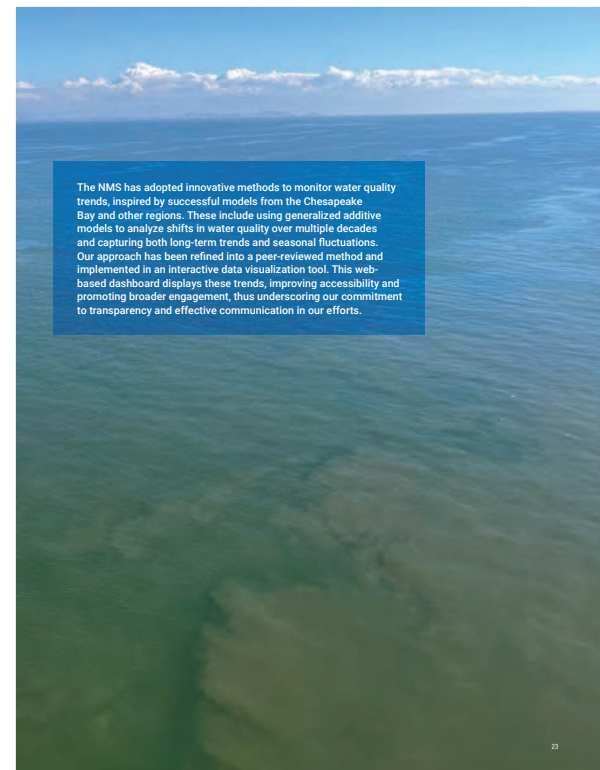
Prompted by the unprecedented scale and impact of the bloom, the NMS and its partners mobilized to investigate its dynamics and contributing factors. Utilizing moored sensor data from the NMS and USGS, along with additional targeted water quality sampling, the scientific community focused on several key aspects of the bloom:

- **Growth and Biomass Analysis:** Detailed studies quantified the bloom's biomass and growth rate. These studies helped understand how quickly *H. akashiwo* was able to exploit the nutrient-rich conditions in the Bay.
- **Nitrogen Utilization:** Nitrogen levels were closely monitored to assess how the bloom utilized available nitrogen sources, including sediment flux and point discharges. Given its critical role in algal metabolism and growth, nitrogen was a focal point in supporting the rapid growth of the bloom.
- **Model Development:** A mathematical model was developed to simulate the bloom's dynamics, from initiation to collapse. This model aimed to unravel the complex interactions between biological growth and environmental factors, providing insights into potential triggers and controls of future blooms.

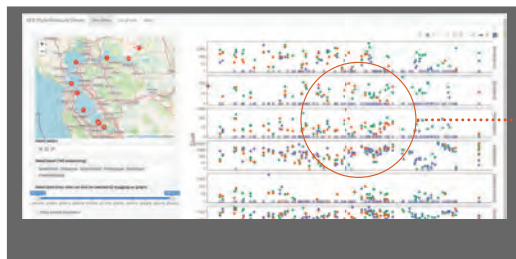


Microscopy image of *Heterosigma akashiwo*

Courtesy of Luis Solorzano, www.fishphotos.com



The NMS has adopted innovative methods to monitor water quality trends, inspired by successful models from the Chesapeake Bay and other regions. These include using generalized additive models to analyze shifts in water quality over multiple decades and capturing both long-term trends and seasonal fluctuations. Our approach has been refined into a peer-reviewed method and implemented in an interactive data visualization tool. This web-based dashboard displays these trends, improving accessibility and promoting broader engagement, thus underscoring our commitment to transparency and effective communication in our efforts.



Measuring phytoplankton communities over time

Looking at Data Online

What can we learn from looking at patterns?

Detecting trends in water quality data is essential for managing urban estuaries, which face pressures from nutrient loading, wastewater discharges, and climate variability. Tracking changes in chlorophyll-a or dissolved oxygen provides early warnings of ecosystem stress, such as harmful algal blooms or hypoxia, which can have severe ecological and economic consequences. These insights enable scientists and managers to understand the direction of ecosystem health, identify critical thresholds, and respond proactively with targeted interventions, like nutrient reduction strategies or habitat restoration efforts.

The NMS developed a trend detection tool to analyzes long-term water quality data from the USGS' ship-based monitoring program. This advanced tool identifies seasonal and long-

term trends for nutrient-related parameters like chlorophyll-a, dissolved oxygen, gross primary productivity, and dissolved inorganic nitrogen. By using Generalized Additive Models (GAMs) and meta-analysis, the tool accounts for uncertainties in the data, such as missing or irregular sampling, ensuring robust detection of significant trends.

Complementing this tool, the NMS developed additional web-based visualization tools. These platforms allow users to explore trends in nutrient loading from wastewater treatment plants, dissolved oxygen conditions in the Lower South Bay, and harmful algae and phytoplankton communities detected using cutting-edge technologies. These tools serve to equip decision-makers with actionable insights to protect and sustain this vital ecosystem.

Chlorophyll-a Trends

Chlorophyll-a serves as a key indicator of phytoplankton concentration because it is a primary pigment used in photosynthesis, directly correlating with the abundance and biomass of these microscopic algae in aquatic systems. Scientists at the USGS and other institutions have monitored chlorophyll-a concentrations in San Francisco Bay for decades to track changes in ecosystem productivity and water quality.

From 1990 to 2005, chlorophyll-a concentrations in the San Francisco Estuary showed a significant increase, driven by heightened phytoplankton biomass and primary production, particularly in the southern regions of the Bay. This trend peaked around 2005 to 2010, after which chlorophyll-a levels began to decline, with notable decreases observed through 2019. Seasonal patterns emerged, with spring chlorophyll-a peaks (January to June) consistently increasing in earlier years, while summer-fall peaks (July to December) displayed less variability across different locations.

The trends were more pronounced in the southern stations, where early increases in chlorophyll-a transitioned to significant declines after 2010. This regional variability suggests that local drivers, such as nutrient loads, hydrodynamics, and ecosystem-specific changes, played a critical role in shaping chlorophyll-a dynamics over time. These findings underscore the complexity of interactions between natural and anthropogenic influences in the estuary.

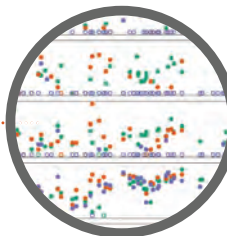
Generalized Additive Models (GAMs) were instrumental in analyzing these trends, enabling researchers to account for uncertainties in the monitoring data and identify nuanced seasonal and spatial patterns. This robust analytical approach highlights the importance of long-term monitoring and adaptive management to understand and address evolving water quality challenges in the San Francisco Estuary.

A water quality visualization tool is available to explore long-term trends in several parameters, including chlorophyll-a, dissolved oxygen, and dissolved inorganic nitrogen (DIN), based on ship-based monitoring data. The tool can be accessed at <https://nutrient-data.sfei.org/SFbaytrends/app2/>.

ADDITIONAL RESOURCES

Beck, Marcus W., et al. "Multi-scale trend analysis of water quality using error propagation of generalized additive models." *Science of the Total Environment* 802 (2022): 149927.

Cloern, J.E., and Schraga, T.S. 2016. USGS Measurements of Water Quality in San Francisco Bay (CA), 1969-2015 (ver. 4.0, March 2023): U. S. Geological Survey data release, <https://doi.org/10.5066/F7TQ5ZPB>



Available web-based visualization tools:

Long-term trends of several parameters, including chlorophyll-a, dissolved oxygen, and dissolved inorganic nitrogen, from ship-based monitoring data in the South Bay.

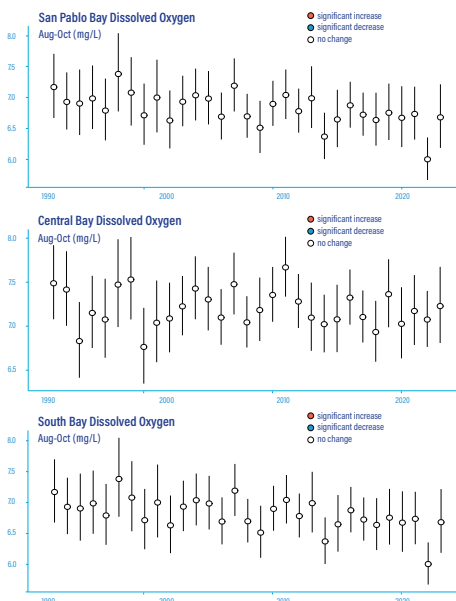
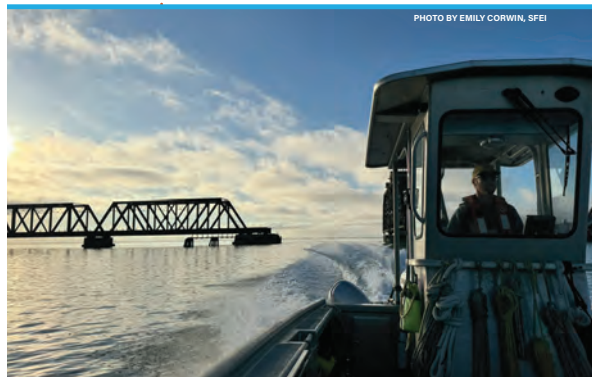
Chlorophyll-a and dissolved oxygen levels across all major long-term USGS water quality monitoring stations.

Dissolved Oxygen in Lower South Bay, based on high-frequency sensors deployed along the shallow margins.

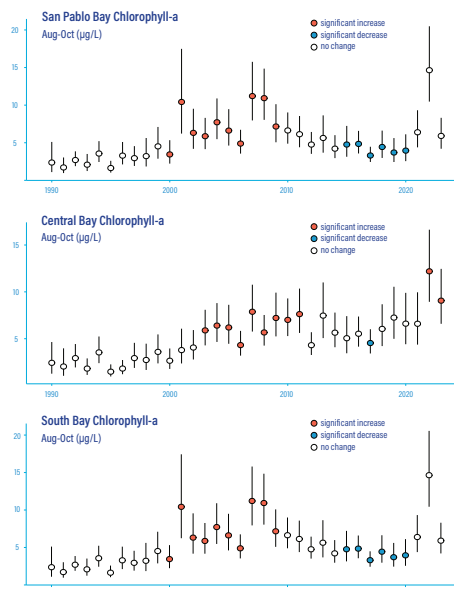
Nutrient loading over time from wastewater plants throughout the region.

San Francisco Bay HAB data obtained through molecular analysis of surface water samples collected during USGS cruises.

Phytoplankton data collected since 2017 using an Imaging Flow Cytobot, in collaboration between the UCSC Kulekja Lab and USGS CA Water Science Center.



Estimated mean Aug-Oct depth-averaged dissolved oxygen concentrations, 1990-2024 (vertical lines: 95% confidence intervals), in South Bay (SBO) and Central Bay (CBO). Symbol color represents long-term trend in Aug-Oct DO, based on an 11-year rolling window (right-justified; same legend as for chl-a).



Estimated mean Aug-Oct chl-a concentrations, 1990-2023 (vertical lines: 95% confidence intervals), in San Pablo Bay (SBO), Central Bay (CBO), near Bay Bridge), and South Bay (SBO, midway between the San Mateo and Sausalito Bridges). Symbol color represents long-term trend in Aug-Oct chl-a, based on an 11-year rolling window (right justified). Visit this webtool to explore long-term trends in chl-a, dissolved oxygen, and gross primary productivity at South Bay and Central Bay stations. Note: 2022 mean chlorophyll values are skewed by the August Heterosigma bloom event.

Dissolved Oxygen Trends

San Francisco Bay's open bay regions, which include deep subtidal habitats, exhibit relatively stable and well-oxygenated conditions despite significant nutrient loading from wastewater and urban runoff. Long-term monitoring data indicate that dissolved oxygen (DO) levels in these areas generally remain above 7 mg/L, satisfying the Basin Plan objective of 5 mg/L. Seasonal variability does occur, however, with DO levels slightly decreasing in summer and early fall due to higher temperatures and increased biological oxygen demand.

Recent events, such as the 2022 *Heterosigma akashiwo* algal bloom, underscore the Bay's vulnerability despite its historical resilience. The bloom led to transient reductions in DO, particularly in South Bay, with levels dropping to 2-3 mg/L in localized areas after the bloom's abrupt termination. Such events, while episodic, highlight the potential for nutrient enrichment and organic matter decomposition to stress the system, particularly during warm and low-flow periods. Nonetheless, the overall DO regime in the open bay has not shown a consistent trend toward hypoxia over recent decades, suggesting that the system remains generally resilient.

Proactive nutrient management and monitoring are critical to sustaining the open bay's favorable DO conditions amid changing climatic and anthropogenic pressures. While the Bay continues to demonstrate healthy oxygen in its deeper habitats, its ability to withstand high nutrient loads may decline if large-scale algal blooms and resulting crashes in oxygen levels become more frequent. Enhanced understanding of nutrient cycling and its influence on DO dynamics will be essential to maintaining ecological stability in these open bay environments. **S**

ADDITIONAL RESOURCES

Chelsky, A., D. Killam, L. Mourier, D. Senn. 2023. Updated Technical Report Virginian Province Approach to Dissolved Oxygen in Lower South San Francisco Bay Sloughs. SFEI, Richmond, CA.

MacVean, L., L. Lewis, P. Trowbridge, J. Hobbs, D. Senn. 2018. Dissolved Oxygen in South San Francisco Bay: Variability, Important Processes, and Implications for Understanding Fish Habitat. Technical Report. SFEI, Richmond, CA.



GLOSSARY

The nutrient composition of San Francisco Bay is influenced by various factors, including the inflow of freshwater, oceanic influences, and human activities. The Bay is an estuary, where freshwater from rivers and streams mixes with saltwater from the Pacific Ocean. Here are some general terms regarding nutrient status of San Francisco Bay.

Nutrients

Chemicals such as nitrogen and phosphorus essential for plant and algal growth. Excessive amounts can lead to water quality issues.

Eutrophication

A process where water bodies become overly enriched with nutrients, leading to excessive algal blooms and low oxygen levels.

Harmful Algal Blooms (HABs)

Rapid growth of algae that can produce toxins harmful to aquatic life, humans, and water quality.

Phytoplankton

Microscopic plants that form the base of aquatic food webs. While essential, their overgrowth due to nutrient pollution can disrupt ecosystems.

Chlorophyll-a

A pigment found in algae, used as an indicator of phytoplankton biomass and water quality.

Dissolved Oxygen (DO)

The amount of oxygen dissolved in water, critical for aquatic life. Low DO (hypoxia) can harm or kill fish and other organisms.

Subembayments

Specific sections of San Francisco Bay (e.g., South Bay, Lower South Bay) with unique environmental characteristics and challenges.

Point Sources

Direct sources of nutrient pollution, like wastewater treatment plants, contributing high loads of nitrogen and phosphorus to the Bay.

Resilience

The Bay's ability to withstand impacts of nutrient loading without severe water quality problems, which may be decreasing due to recent changes.

Water Quality Objectives

Standards set to ensure water remains healthy for aquatic life and human use. For example, the 5 mg/L DO threshold in San Francisco Bay.

Nutrient Management Strategy

A coordinated effort to monitor, understand, and manage nutrient inputs in San Francisco Bay to protect water quality and ecosystem health.

Assessment Framework

A structured approach to evaluate the condition of water bodies, using indicators like dissolved oxygen and chlorophyll-a to assess the health of aquatic habitats. **S**

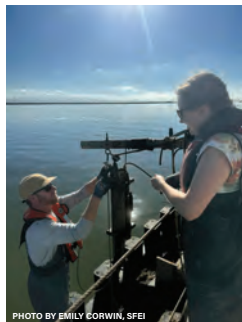
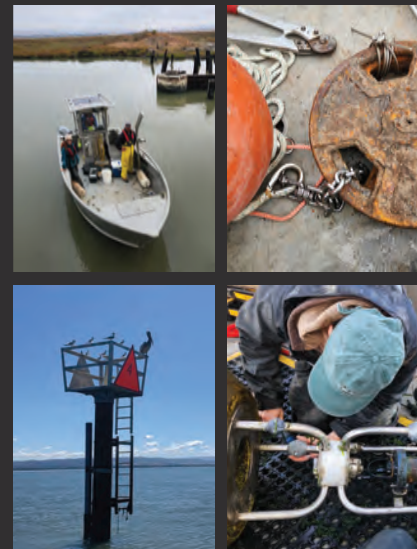


PHOTO BY EMILY EORWIN, SFEI



Photographs from NMS field work by the SFEI NMS team.

SFEI San Francisco Estuary Institute

San Francisco Estuary Institute, 2025. *Science to Inform Management: An Overview of the Nutrient Management Strategy for San Francisco Bay*. SFEI Contribution #1239. San Francisco Estuary Institute, Richmond, CA.

Transforming Shorelines Collaborative

Webinar: Regional Opportunities for Managing Nutrient Loads with Nature-Based Solutions

Date: April 10, 11:00 am – 12:00 noon

Registration link: <https://bayareametro.zoom.us/join/9tFeDD8KZPC9ITA>

Webinar goals: Provide opportunities for consultants, practitioners, municipal wastewater agencies and partners, and other interested parties to learn and ask questions about regional opportunities for nature-based solutions (NBS) for nutrient management.

11:00 Welcome to the Transforming Shorelines Collaborative

Sasha Harris-Lovett, SFEP

11:05 Introduction to NBS for nutrient removal

Lorien Fono, BACWA

11:10 Regional opportunities for NBS for nutrient removal

Ian Wren and Ellen Plane, SFEI

11:30 Panel Discussion on NBS for nutrient management

Moderated by Ian Wren

Panelists: Emily Corwin, SFEI; Robert Schlipf, Water Board; Samantha Engelage, City of Palo Alto, Jackie Zipkin, EBDA

11:55 Closing and next steps

Sasha Harris-Lovett

WaterReuse Association Northern California Chapter - Bay Area Clean Water Agencies

Joint Workshop Preliminary Agenda

Tuesday, April 29, 2025 – 9:30 am to 3:00 pm

Location: Central Contra Costa Sanitary District Multi-Purpose Room
5019 Imhoff Place, Martinez, CA 94533

Zoom Call: **Meeting ID: 331 704 7040 Passcode: 808698**

The Nexus Between Nutrient Removal Requirements and Water Recycling

9:30 – 10:00 am	Coffee & Breakfast
10:00 – 10:20 am	Welcome/Introductions Melody LaBella, President, WaterReuse Northern California Chapter Roger Bailey, General Manager, Central San/WaterReuse California Association President
10:20 – 10:40 am	Overview of the Bay Area Nutrient Watershed Permit Lorien Fono, Executive Director, BACWA
10:40 – 11:00 am	Compliance Milestone Reporting for the Bay Area Nutrient Watershed Permit Mike Falk, Wastewater Lead, HDR
11:00 – 11:30 am	How Permitting Can Support or Disincentivize Water Recycling Jan Lee, General Manager, DSRSD
11:30 – 12:30 pm	Lunch and Networking
12:30 – 1:00 pm	Advanced-Treated Recycled Water: How it Can Help with Nutrient Reduction Sanjay Reddy, Senior Vice President, Carollo Engineers
1:00 – 1:40 pm	RO Concentrate Management Medi Senaki, Senior Engineer, Valley Water Pedro Hernandez, Senior Program Manager, City of San Jose
1:40 – 2:40 pm	Opportunities for Collaboration Eric Rosenblum, CEO, Envirosppectives
2:40 – 2:55 pm	Legislative and Regulatory Update Brenley McKenna and/or Rosario Cortes, WaterReuse California Association
2:55 – 3:00 pm	Closing Remarks and Adjournment Melody LaBella, President, WaterReuse Northern California Chapter

BACWA PFAS Strategy Summit

April 18, 2025?

Goal: Direct BACWA strategy and resources on PFAS advocacy

Proposed Agenda

- Review of PFAS-related challenges to POTW operations and possible future compliance
 - Biosolids
 - NPDES
 - Recycled water
- CASA-sponsored bill to eliminate non-essential uses of PFAS – SB682
- What do we know about public awareness of PFAS?
- Existing PFAS messaging
 - Baywise and BAPPG spring campaign
 - Partner public outreach
 - [PFAS 411](#)
 - P2 West
 - [NACWA](#)
 - [CASA](#)
 - [Breast Cancer Prevention Partners](#)
 - Others
- What are POTW key messages? (following CASA's lead)
 - To public
 - To legislators and regulators
 - To NGOs
- **What can BACWA accomplish to move the needle on the above messaging?**

POTWs >10 Mgd Design Flow Chlorine and SBS Dosage and Usage (Responses as of 6/10/2020)

Discharger	Chlorine Dosage Range (mg/L)	Final Chlorine Residual Range (mg/L)	FY 18/19 Chlorine Cost (\$)	Total SBS Dosage Range (mg/L)	Excess SBS Dosage Range (mg/L)	FY 18/19 Total SBS Cost (\$)	FY 18/19 Excess SBS Cost (\$)
Central Martin Sanitation Agency (Deep Water; 10.0 mgd)	3.7-6.8	2.6-6.6	\$219,876	7.9-14	3.3-8.4	\$236,031	\$126,749
Delta Diablo (Deep Water; 19.5 mgd)	4 - 8	3 - 7	\$86,722	13 - 39	3 - 13	\$216,479	\$13,800
East Bay Dischargers Authority (EBDA) (Deep Water; 107.8 mgd)	0	0.29	0	Variable	Variable	\$182,621	\$137,000
East Bay Municipal Utility District (Deep Water; 120 mgd)	1.7 – 6.7	0.5 – 2.0	\$244,000	6.5 – 20.5	1.6 – 9.8	\$781,000	\$347,000
Napa Sanitation District (Shallow Water; 15.4 mgd)	4 - 9	3 – 4	\$74,000	6 - 7	2 - 3	\$117,000	\$53,000
San Francisco, Southeast Plant (Deep Water; 85.4 mgd)	2 – 5	1 – 2	\$1,131,000	2 – 4	1 – 2	\$615,000	\$185,000
San Jose - Santa Clara, Regional WW Facility (Shallow Water; 167 mgd)	2.5 Cl & 6:1 Cl:NH3	0.9 – 1.6	\$750,000	DCS Calc to neutralize	Avg 0.54 SBS residual	\$713,000	\$107,000
San Mateo, City of (Deep Water; 15.7 mgd)	5 - 8	3.5 - 5	\$180,000	11 - 14	2 – 4	\$400,000	\$132,000
Silicon Valley Clean Water (Deep Water; 29 mgd)	7.6 – 17.6	3.3 – 6.1	\$344,372	3.3 – 6.1	1.2 – 4.4	\$203,174	\$44,700
South San Francisco and San Bruno, Cities of (NBSU dechlorination) (Deep Water; 13 mgd)	13 - 14	8 - 9	\$293,400	12 - 14	2 - 4	\$335,400	\$80,000
Sunnyvale, City of (Shallow Water; 29.5 mgd)	4 - 11	1 - 2	\$144,000	5 - 12	2 - 3	\$128,000	\$51,000
Vallejo Flood and Wastewater District (Deep Water; 15.5 mgd)	1.5 - 4	1.0 - 3.0	\$87,000	2 - 6	1 – 1.5	\$104,000	\$20,000
West County Agency (dechlor at Richmond) (Deep Water; 28.5 mgd)	NA	2.5 – 4.5	0	6 - 10	3 - 5	\$268,000	\$133,500
TOTAL			\$3,554,370			\$4,299,705	\$1,430,749

Chlorine Dosage Range – Range of target chlorine dosages added at head of chlorine contact tanks for disinfection (e.g., 8-10 mg/L)

Final Chlorine Residual Range – Measured range of chlorine residuals end chlorine contact tanks before SBS addition (e.g., 2-3 mg/L)

FY 18/19 Chlorine Cost – Estimated annual cost of chlorine purchased for disinfection (e.g., \$80,000/year)

Total SBS Dosage Range – Target range of SBS added for complete dechlorination including excess SBS (e.g., 6-8 mg/L)

Excess SBS Dosage Range – Estimated concentration range of SBS added in excess of measured chlorine residual (e.g., 2-4 mg/L) (same as residual SBS concentration in final effluent, if measured)

FY 18/19 Total SBS Cost – Estimated annual cost of SBS purchased for dechlorination (e.g., \$100,000/year)

FY 18/19 Excess SBS Cost – Calculated annual cost of SBS based on concentration of SBS added above that theoretically needed to neutralize the measured concentration of chlorine residual present (e.g., \$20,000/year)

Flow – Applicable total annual flow (or average daily flow x 365)



KEY REGULATORY ISSUE SUMMARY

Updated February 28, 2025

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

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New updates in this version are shown in Purple highlighting

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 FY25, 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 also been successful in attracting funding from other sources, such as NOAA and EPA, complementing BACWA's contributions. - The focus of current scientific efforts is improving model representation of biogeochemistry, light attenuation, dissolved oxygen, and harmful algal bloom dynamics. - The science team is currently working with stakeholders to develop a multi-year work plan for 2025-2029. - The science team is preparing to release a summary of recently completed and ongoing studies of nutrients in San Francisco Bay. The summary will be suitable for wide distribution.	Continue to participate in NMS steering committee, Nutrient Technical Workgroup, and planning subcommittee meetings, and provide funding for scientific studies via the Nutrient Surcharge. - Continue to work with NMS scientists to obtain summaries of scientific accomplishments for public use. - Continue to engage with Nutrient Technical Team and BACWA's Nutrient Management Strategy technical consultant, Mike Connor, to provide review of recent work products and charge questions for the science team.	BACWA Nutrients Page SFEI Nutrient Management Strategy Page NMS FY25 Science Program Plan Materials NMS Steering Committee Meeting Materials NMS Work Products Real-Time Satellite Data on Harmful Algae Blooms Baywise Website

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
SF BAY NUTRIENT WATERSHED PERMIT			
• The Nutrient Watershed Permit was first adopted in 2014. It required effluent monitoring and a regional study on Nutrient Treatment by Optimization and Upgrades, completed in 2018. • The 2019 Nutrient Watershed Permit required continued monitoring and reporting of nutrient loads, significantly increased funding for scientific studies, and completion of a regional assessment of nutrient diversions through nature-based systems and recycled water, completed in 2023. • The Nutrient Watershed Permit was reissued in 2024 and requires: - o Continued individual POTW nutrient monitoring and reporting; - o Continued funding for science; - o Effective in the 2025 dry season, interim performance-based effluent limits for Total Inorganic Nitrogen (TIN); - o Effective in the 2035 dry season, final water quality-based effluent limits for TIN; - o Continued group annual reporting for each water year (Oct. 1 – Sep. 30), with additional reporting related to the permit’s 10-year compliance schedule; - o Recognition of “early actors” that began implementing nutrient removal projects before October 1, 2024; and - o Completion of a regional planning study.	• The final effluent limits in the 2024 Nutrient Watershed Permit are 40% lower than actual loads from the 2022 dry season, when San Francisco Bay experienced a harmful algae bloom. • The 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. • To address this challenge, the Regional Water Board is working to identify a regulatory mechanism to extend the compliance schedule beyond 10 years where necessary. This commitment is outlined in a Board resolution and will likely require a change in the State Water Board compliance schedule policy. • Through the nutrient surcharge levied on permittees, BACWA will fund compliance with the following provisions of the 2024 Nutrient Watershed Permit behalf of its members: - o Funding for scientific studies - o Group Annual Reporting, including compliance milestone reporting - o Completion of a regional planning study • BACWA has hired the consulting firm HDR to assist with the completion of Group Annual Reports and the Regional Planning study. • In August 2024, BACWA assisted with hosting a technical seminar on nutrient removal technology at Bay Area wastewater treatment plants.	• By early 2024, POTWs must identify their preliminary alternatives for meeting final effluent limits, per Table 5 of the Nutrient Watershed Permit. “Early actors” will instead submit status updates. BACWA has circulated a Request for Information for agencies to provide this information for inclusion in the Group Annual Report due April 1st. • Review the Draft Scoping Plan, which will be circulated in Spring 2025. The scoping plan is due by July 1st, and will outline the approach BACWA intends to take on regional planning to reduce TIN loads. The Regional Planning study, due in March 2029, will address elements such as schedule, cost, cross-media impacts to air and biosolids, opportunities for multi-benefit projects, nutrient trading, and more. • Work with Regional Water Board staff and other stakeholders to identify a regulatory mechanism for extending compliance schedules beyond 10 years. Preliminary work is focusing on possible edits to the State’s 2008 Compliance Schedule Policy. • Agencies will continue to report nutrient monitoring data directly to CIWQS, which HDR will compile for Group Annual Reports. For the 2025 Group Annual Report and beyond, separate submittal of nutrient monitoring data to BACWA is no longer needed. •	2024 Nutrient 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)

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.” • 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 Ocean Acidification & Hypoxia caused by wastewater discharges. However, future regulations could limit coastal discharges of nutrients in order to reduce the potential for Ocean Acidification & Hypoxia.	• The Ocean Protection Council is the main State agency supporting scientific efforts related to Ocean Acidification & Hypoxia along the California coast. • The Ocean Protection Council has funded the Southern California Coastal Water Research Project (SCCWRP) to conduct research and modeling on Ocean Acidification & Hypoxia due to nutrient pollution in southern California and along the San Francisco and Monterey coasts. • 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. In 2024, the expert panel provided a final report with recommendations for improving the model to make it suitable for application in a regulatory context. • The State Water Board is scoping an amendment to the California Ocean Plan amendment to address ocean acidification, hypoxia, and the effects of anthropogenic sources of nutrients in ocean waters.	• 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 BAPPG's 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). Funding for pesticide regulatory outreach in FY25 is \$72k. - 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: - Carbendazim, a preservative found in paints and other products - 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. Comments on the proposal are due February 26th, 2025.	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. - 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

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. For FY25, BACWA has budgeted \$12,500 to support risk reduction activities related to fish consumption. • 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. • 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 Triennial Review determines the prioritization of Basin Plan amendments, including designation of new beneficial uses. The February 2025 revised draft Triennial Review staff report identified this effort as a high priority. • BACWA intends to support risk reduction activities related to the new subsistence fishing beneficial use. In 2024, SFEI worked with stakeholders to develop a fish consumption survey for subsistence fishers. BACWA is funding a small pilot project in 2025 related to this fish consumption survey. • Recent consolidations among contract laboratory providers of PCB analysis via EPA Method 1668C has led to difficulties with electronic reporting. BACWA prepared a guidance document to assist members with reporting, which Water Board staff endorsed. • In late 2024, EPA proposed a Methods Update Rule that would withdraw the existing analytical methods for Aroclors (PCB mixtures). The Mercury & PCBs permit uses Aroclors for compliance monitoring. However, even if the proposed rule is finalized, there will be no change to monitoring until the Permit is reissued (2027 or beyond).	• Work with members and contract laboratories to implement new guidance on sampling and reporting for PCB congeners analyzed via EPA Method 1668C. • Work with Regional Water Board staff to understand the potential impact of a withdrawal of the EPA analytical method for PCBs Aroclors. • Providing funding for one or more community-based organizations to test the fish consumption survey for subsistence fishers. This effort will inform a future large-scale survey effort. • 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. • Continue to track the outcome of the 2024 Triennial Review of the Basin Plan. It is currently scheduled to be considered for adoption in May 2025.	2022 Mercury & PCBs Watershed Permit (Effective Feb. 1, 2023) BACWA Risk Reduction Materials Mercury and PCB Load Trends 2013- 2023 Updated June 2024 2024 Triennial Review of the Basin Plan 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: - o Use of Test of Significant Toxicity (TST) as statistical method to determine toxicity, replacing EC25/IC25; - o 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; - o Regional Water Board discretion on whether to require RPAs for acute toxicity - o For POTWs with Ceriodaphnia dubia as most sensitive species, numeric targets rather than limits were initially in effect until completion of a statewide quality assurance study in December 2023. • EPA approved the Statewide Toxicity Provisions in May 2023, and they became effective in June 2023. 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. • From 2016 to 2023, agencies had the option to skip sensitive species screening upon permit reissuance and pay the avoided funds to the RMP to be used for CECs studies. Under the Toxicity Provisions, agencies are now required by the provisions to do sensitive species screening once every 15 years. • 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 November 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.	• 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 some tips related to sensitivity screening studies for member agencies’ use. • Members hiring a contract laboratory to perform testing using Ceriodaphnia 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)

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.	- 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 April 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 2025, the Emerging Contaminants Workgroup plans to support studies of plastic additives in Bay water and sediment (OPEs, bisphenols, and other plastic additives); QACs in Bay water and sediment; synthetic dyes in Bay sediment, water, wastewater, and stormwater; and several other stormwater-related studies. - Work with RMP staff to assist with study design for any new studies of CECs in wastewater. In 2024, BACWA updated the white paper on POTW participation in CECs studies. It now includes a summary of recent CECs studies, in addition to updated statistical information about POTWs to assist with future CECs study design.	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)

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. BACWA has participated in the Workgroup and developed a POTW Fact Sheet. 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 February 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. - Ongoing microplastics investigations by the RMP are focused on tire particles in stormwater.	- OPC funded a study of microplastic removal through wastewater treatment processes. The study commenced in 2021 with a pilot study involving BACWA member agency participation. Full-scale sampling and analysis of influent, effluent, and biosolids was completed in 2023, and three BACWA members participated. 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. - The 2024 California Integrated Report (303(d) List) was adopted by the State Water Board, and the majority of the report was approved by EPA in 2024. The Integrated Report notes that San Francisco Bay is “potentially threatened” by microplastics. Due to data limitations, the Bay was <u>not</u> 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.	- Continue to participate in the RMP Microplastics Workgroup. - 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 microplastics. - 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. - All 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 for several PFAS compounds in drinking water. California has not yet adopted the EPA's drinking water limits, although this 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. - In December 2025, EPA released draft national recommended human health water quality criteria for PFOS, PFOA, and perfluorobutanesulfonic acid (PFBS). If finalized, local regulators could apply these criteria to San Francisco Bay and other inland water bodies for use in NPDES permitting. The draft criteria for PFOS and PFOA are several orders of magnitude lower than measured concentrations in wastewater effluent, measured concentrations in San Francisco Bay, and method detection limits. - In January 2025, a new EPA administrator was appointed, and EPA has already announced modifications to some portions of the PFAS Strategic Roadmap. The status of previous EPA efforts on source control is now uncertain. - For example, EPA had previously planned to develop pretreatment standards for industrial users (Metal Finishing, Organic Chemicals, Plastics and Synthetic Fibers, and landfills) and to conduct a nationwide POTW Influent PFAS Study to collect nationwide data on industrial and domestic sources of PFAS.	- BAPPG is developing materials for a public outreach campaign and website content related to PFAS. Materials will be shared with members prior to the April 2025 outreach campaign. BACWA will host a forum to strategize PFAS messaging to regulators pertaining to practical PFAS management. 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). Member agencies are encouraged to support legislative efforts to limit the use of PFAS in consumer products. SB 682 (Allen), recently introduced for the 2025 California legislative session, would "phase out the sale of products with avoidable PFAS use."	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

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
SANITARY SEWER SYSTEMS GENERAL ORDER			
- 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.	- The first annual reports under the reissued SSS-WDR were due April 1, 2024. - Due dates for the first audits and SSMPs under the reissued SSS-WDR vary by agency. Audit due dates begin later in 2024, and SSMP due dates begin in 2025. The State Water Board has prepared an online tool to assist agencies in determining compliance dates. - Maintaining an updated SSMP continues to be a core requirement of the SSS-WDR. SSMP updates are now required every six years (instead of five) and must contain the 11 updated elements described in the reissued SSS-WDR. BACWA has assisted members by preparing a Guide for Developing and Updating SSMPs, now available through the BACWA and State Water Board websites. - In May 2024, BACWA completed a member survey of sewer lateral ordinances in the region. Agencies are using sewer lateral replacement ordinances and incentive programs to address ongoing concerns about infiltration and inflow (I&I).	- 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. The Summit Partners are tentatively planning to host the next virtual workshop on SSS-WDR compliance in Spring 2025.	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)

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
LABORATORY ACCREDITATION			
• In May 2020, the State Water Board adopted new comprehensive regulations for the Environmental Laboratory Accreditation Program. • Adoption of the new regulations was required by AB 1438, legislation that became effective in 2018. • 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. • For FY25, ELAP restructured its fees to increase fees for large laboratories with more than 500 fields of accreditation. Smaller laboratories had no fee increase. In March 2025, the State Water Board will begin stakeholder outreach related to FY26 ELAP fees. • 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. The BACWA Laboratory Committee has provided member training on changes to Standard Methods affected by this Methods Update Rule, and will provide additional training later in 2025. 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 provide member training on the Methods Update Rule finalized in April 2024. • Review the EPA's December 2024 proposed Methods Update Rule to help members understand its potential impact on monitoring for PCBs and PFAS. • 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

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. BABC is a BACWA Project of Special Benefit.	- 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, USEPA released a draft risk assessment for PFOA and PFOS in biosolids. 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.	- Continue to review the draft risk assessment for PFOA and PFOS in biosolids, and consider submitting comments. 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 in biosolids, particularly related to 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

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. - In 2019, Governor Newsom signed Executive Order N-10-19 directing State Agencies to recommend a suite of priorities and actions to build a climate-resilient water system and ensure healthy waterways through the 21st century. - 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. - In 2022, the State released a Climate Adaptation Strategy, including an updated climate change assessment for the Bay Area region. - 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 about current and future depth-to-groundwater maps is summarized in a January 2023 report now available from Pathways Climate Institute and SFEI.	- 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. The amendment is awaiting Office of Administrative Law approval. - 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 December 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. - 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.	- 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 webinars on technical topics related to climate change, such as sea level rise projections and changes in precipitation. The BACWA Climate Change Community of Practice will provide a forum to discuss these topics. - Work with Regional Water Board staff 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.	Regional Water Board Basin Plan Amendment on Climate Change and Aquatic Habitat SFEI Report on Shallow Groundwater Response (2023) OPC 2024 Sea Level Rise Guidance California Coastal Commission Sea Level Rise Policy Guidance Update (Nov. 2024) California Coastal Commission's Critical Infrastructure at Risk (2021) BayCAN Funding Tracker BCDC's Regional Shoreline Adaptation Plan (2024) Bay Adapt Joint Platform including information about the Regional Shoreline Adaptation Plan

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CLIMATE CHANGE MITIGATION			
• The California Air Resources Board's (CARB's) Climate Change Scoping Plan Update lays out the approach for the State to meet its greenhouse gas (GHG) emissions reduction targets through 2030. The latest Scoping Plan was updated in 2022 targeting carbon neutrality by 2045, including policies addressing: - o Short-lived climate pollutants - o Carbon sequestration on Natural and Working Lands - o 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 (Air District, formerly known as the Bay Area Air Quality Management District) developed a Clean Air Plan that outlines local strategies to address climate pollutants. • The Air District proposed the development of Regulation 13 (climate pollutants) targeting methane and nitrous oxide reductions related to organics diversion and management. After a pause of several years, the Air District began revisiting Regulation 13 in 2024.	• CARB has pursued rapid fleet conversion to zero-emission vehicles (ZEVs), including medium and heavy-duty vehicles, through the Advanced Clean Fleet rule. • In 2024, CARB re-opened the Advanced Clean Fleet regulations to incorporate requirements of AB 1594 by expanding ZEV purchase and daily usage exemptions for public agency utilities. Rulemaking is expected to be complete by early 2025. • In January 2025, CARB withdrew its waiver requests to EPA for key portions of the Advanced Clean Fleet rule. CARB plans to continue to enforce the State and Local Government Agency Fleets portion of the regulation, pointing to a 9th Circuit federal court decision from 2007 as the basis of their legal authority. • In early 2025, CARB released a streamlined ZEV purchase exemption list identifying vehicles that are not currently available as ZEVs, so no exemption request would be required. • In addition to pushing for ZEVs, CARB is revising the Low Carbon Fuel Standard to emphasize hydrogen rather than biomethane as a transportation fuel. CARB adopted amendments to the Low Carbon Fuel Standard in November 2024, and they are awaiting review by the Office of Administrative Law. • In fall 2024, as a first step in revisiting Regulation 13, Air District staff are developing a white paper on anaerobic digesters and potentially associated emissions.	• Support the Air District's development of a white paper on anaerobic digestion by providing applicable information on digestion and associated energy generation infrastructure. • Continue to track implementation of the Advanced Clean Fleet rule. This includes modifications to the rule that will exempt some traditional utility-specialized vehicles used by public agency utilities, per AB 1594. CARB plans to release draft regulatory revisions addressing AB1594 later in 2025. Although CARB plans to enforce the State and Local Government Agency Fleets portion of the regulation, regulatory uncertainty for other portions of the rule could impact ZEV availability. • 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.	CARB Climate Change Scoping Plan CARB Low Carbon Fuel Standard Rulemaking (Updated Jan. 2025) CARB Advanced Clean Fleet Rule (Updated Jan. 2025) CARB's ZEV Purchase Exemption List CARB AB 1594 Information CalRecycle and SB 1383 Bay Area Clean Air Plan Bay Area Air District's Regulation 13 for Climate Pollutants EPA Renewable Fuel Standards PG&E Procurement

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 conduct site-specific Health Risk Screening Analyses and 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 the threshold will have to implement a Risk Reduction Plan that may include employing Best Available Retrofit Control Technology for Toxics (TBARCT). - 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) - Establishes a statewide program for the inventory of air toxics emissions from individual facilities, as well as requirements for risk assessment and public notification of potential health risks. 2020 updates expanded compound list from >500 to >1,700.	- In April 2024, the Air District finalized updated Implementation Procedures for Rule 11-18 describing how the Air District will conduct HRAs. It also establishes rules for vendors or contractors to conduct HRAs, if allowed by the Air District. The Air District plans to update the regulation again in 2025. - 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 FY25, BACWA collected approximately \$500,000 from participating BACWA member agencies to fund the effort. In early 2025, the project team is meeting with CARB and staff from Air Districts across the State to discuss concepts for sampling locations, analytes, and analytical methods. Regulator approval of the study plan is required before sampling can begin. - 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. - CARB maintains a list of approved independent contractors for source testing. Using the list may be helpful, but is not required.	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 pooled emissions study, as described below. Review and provide comment on proposed rule changes expected later in 2025. 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 Updates (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 (CO₂) emissions standards.	• In December 2020, the Air District issued a BACT determination for Tier 4 emissions standards for large standby generators (≥ 1,000 bhp). The determination applied retroactively to applications deemed complete after January 1, 2020. The retroactive BACT designation resulted in cost increases and schedule delays for standby generator installations at some BACWA member agencies. • Based on this experience, BACWA has been working with BAAQMD to provide better notice of future BACT determinations. • In October 2024, the Air District issued a BACT determination for Tier 4 emissions standards for standby generators > 50 bhp and < 1,000 bhp. The BACT determination is effective as of December 2, 2024 and is not retroactive. 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 October 2024, CARB proposed amendments to the off-road diesel engine emissions standards (Tier 5 rulemaking). A workshop was also held in October 2024.	• 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.	Air District BACT/TBACT Workbook Air District October 2024 Workshop on BACT Determination Slides and Video CARB Tier 5 Rulemaking

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 December 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 Non-Potable Reuse is slated to begin in April 2025; once rulemaking begins, it must be completed within one year. - In June 2023, BACWA completed a Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling, as required by the 2nd Nutrient Watershed Permit. - In December 2023, the Regional Water Board approved a Basin Plan Amendment that will allow greater flexibility for NPDES permitting of reverse osmosis concentrate discharges to San Francisco Bay. As of August 2024, this Basin Plan Amendment has received all necessary approvals and is now in effect. - The Direct Potable Reuse regulations were finalized in August 2024 upon approval from the state's Office of Administrative Law. The regulations go into effect October 1, 2024.	- Review draft regulations for Onsite Non-Potable Reuse when they are released by State Water Board staff, which is expected in April 2025. - 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 the September 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 Nutrient Watershed Permit (see page 2). In spring 2025, BACWA plans to co-host workshop with WaterReuse's Northern California chapter that will focus on topics related to nutrient removal and recycled water. - Track California legislation with potential impacts on recycled water funding, mandates, or regulations.	Water Boards Recycled Water Policy and Regulations Direct Potable Reuse Regulations Onsite Nonpotable Reuse Regulations BACWA Special Studies of Recycled Water and Nature-Based Systems California's Water Supply Strategy (August 2022) Basin Plan Amendment affecting Water Recycling (now also incorporated into the Basin Plan)

Previously covered issues with no updates can be found in previous [BACWA issues summaries](#).

ACRONYMS

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

Committee Request for Board Action: None

39 attendees participated virtually. Participants represented 23 member agencies, the Regional Water Board, and one guest speaker.

Updates on Committee Activity and Announcements

- **Regional Water Board Announcements:** Agencies that need guidance on pollution prevention reporting can refer to last year's tips ([link to slides](#)).
- **BACWA Updates:** The BACWA Annual Members Meeting will be held May 2nd.
 - o **PFAS** - BACWA is following several USEPA PFAS initiatives, including the [POTW Influent Study](#), [Draft Risk Assessment for PFOA and PFOS in Biosolids](#), [Draft Human Health Water Quality Criteria](#). The CA legislative session is also likely to include PFAS bills. BACWA plans to begin Phase 3 of the regional PFAS Study in FY26 ([link to BACWA PFAS study results](#)).
 - o **Nutrients** - A science summary will be released soon for members' use. The next Group Annual report will be released by April 1st, and a regional planning study is kicking off soon.
 - o **Communications** – Civic Edge is providing BACWA with public outreach support on wastewater infrastructure; resources will be shared with BAPPG as they become available.
- **Steering Committee:** The spring campaign will focus on PFAS, and work is underway with Sagent on messaging. The steering committee is also at work on the BAPPG Annual Report ([link](#)).
- **CWEA** held its Annual [P3S Conference](#) in San Jose in early February.

BACWA Pesticide Workgroup – Annual Update to BAPPG

Stephanie Hughes, who leads the consultant team that provides pesticides regulatory support to BAPPG/BACWA, provided a comprehensive update from the pesticides workgroup. [Link to slides](#). Highlights from the presentation included:

- **Coordination with Regulators.** The workgroup submits letters to USEPA, and has also been meeting regularly with the CA Dept. of Pesticide Regulation (DPR) and the CA Dept. of Toxic Substances Control (DTSC). DTSC's Jen Jackson also recently provided an update on the Safer Consumer Products Program to the BACWA Executive Board ([link to slides](#)). This DTSC program has the potential to address many pollutants of concern, including QACs, which are antimicrobial products (but may not be officially registered as pesticides).
- **Watch List.** The pesticides workgroup maintains a Watch List that prioritizes pesticides based on their hazard and potential exposure pathways. The most recent [BAPPG/BACWA Wastewater Pesticides Watch List](#) (Dec. 2024) identifies several insecticides as "high concern:" pyrethroids, fipronil, and imidacloprid. The pesticides workgroup is focused on reducing the down-the-drain pathway for two particularly concerning pathways: topical uses on pets or humans, and general indoor uses (sprays, foggers, etc.).
- **Flea and Tick Outreach.** For flea and tick pet pesticides, the workgroup has developed a workplan for continued education to the veterinary community and public outreach to pet owners. **The pesticides workgroup requests assistance from all BAPPG members in this pesticide outreach effort.**

Following the meeting, the pesticides workgroup sent out additional details to BAPPG committee members about how they can support the BAPPG outreach campaign for on-pet and indoor flea and tick pet pesticides. Suggestions included amplifying the messages from the [Baywise vets page](#) and [Baywise pet owner page](#), including the topic in customer newsletters, and using BAPPG's [Flea and Tick Outreach Toolkits](#).

Next BAPPG General Meeting: April 2, 10am – 12pm, Virtual

Committee Request for Board Action: None

49 attendees participated remotely, including representatives from 30 member agencies, the Regional Water Board, and one guest speaker.

Constant Temperature Monitoring

Kim Nguyen, Sr. Microbiologist at Valley Water, shared information about her agency's experience piloting the use of temperature data loggers to comply with monitoring requirements for microbiological and chemical methods. Use of the data loggers was motivated by the desire to avoid having laboratory staff come in on weekends and holidays solely for temperature monitoring. The data loggers can send out automated alerts via text, email, or phone. The Valley Water lab tested the devices in freezers, incubators, ovens, refrigerators, and water baths. The devices did not work in the autoclave because they prevented proper sealing. Pilot monitoring showed how various locations (e.g., freezer or water baths) cycle through a set temperature range. The lab then had to determine acceptability criteria for interpreting the continuous data set (for example, acceptability criteria could be 30 min. out of a pre-determined range). Kim shared that the temperature data loggers seem to be useful for refrigerator and freezer monitoring. They are more challenging to use for recording temperature during sample analysis, and they also produce a large amount of data.

After Kim's presentation, other members shared that data security was an obstacle, as agency rules may prohibit wireless data transfer for laboratory instruments. Hard-wired loggers are an option in this scenario. One member reported testing [this Autoclave temperature data logger](#).

Tips on ELAP Certification and Lab Construction

Kristy Fournier (DSRSD) shared tips from a recent interaction with ELAP regarding laboratory relocation. DSRSD's facility is planning a construction project, and recently held a meeting with ELAP to present their plan for operating the laboratory and maintaining data quality during the construction period. ELAP staff advised DSRSD that they do not need an amendment application. Other BAWA members are encouraged to meet with ELAP as early as possible if they are planning a relocation or construction project, and to invite key staff involved with the project that can provide information about lab operations and possible impacts (vibration, HVAC, etc.).

PCB Monitoring Updates

In Dec. 2024, EPA proposed [Methods Update Rule 22](#) (MUR 22), which would remove all PCB Aroclor methods (608.3 and 625.1). The 2022 [Hg & PCBs Watershed Permit](#) requires BACWA members to use PCB Aroclor methods for compliance monitoring. Even if MUR 22 is finalized, Regional Water Board staff have advised that that PCB compliance monitoring using Aroclors will **not** change until the permit is reissued (c. early 2028). If MUR 22 is finalized, BACWA will work with the Regional Water Board to revise PCB monitoring requirements, as needed.

Complying with Methylene Chloride Regulations

Ngoc Le (City of San Jose) shared her agency's plan for complying with the EPA's regulations for [Methylene Chlorine](#) (aka Dichloromethane or DCM). Laboratories using DCM must have a workplace chemical protection plan, and initial exposure level monitoring is due May 5, 2025. Additional control measures are needed if the initial monitoring shows workers will be exposed above certain threshold criteria. The City's exposure plan includes annual exposure monitoring, fume hood inspections, and incorporation of requirements into their chemical hygiene plan and staff training protocols. The City plans to use [these vapor monitoring badges](#) for initial screening.

Member Survey - The committee plans to circulate a survey soon regarding agency requirements for laboratory staff to have CWEA and/or AWWA certifications. Please respond to the survey!

Discussion Topics – Members are advised to triple-check that Third Party Assessment reports include **all** of the analytes that the agency need to be renewed or added to its FOA.

Committee Request for Board Action: None

42 attendees participated remotely, including representatives from 18 member agencies, the CWEA Lab Committee, and one guest speaker.

Analyzing Chronic Toxicity Results using the Test of Significant Toxicity

Alex Anderson, Technical Manager and Head of R&D at [McCampbell Analytical](#), led a training session on the [Test of Significant Toxicity \(TST\)](#). Since the State Water Board's [Toxicity Provisions](#) went into effect in 2023, the TST has been the required statistical method for interpreting whole effluent toxicity results to comply with NPDES permits. Presentation highlights included:

- An explanation of how the TST mathematically compares whole effluent toxicity test results from two different concentrations, usually a control and the Instream Waste Concentration, to determine whether they are statistically different by an unacceptable threshold determined by the regulatory agency (in this case the Water Boards).
- Details about how the TST incentivizes data quality, because higher-quality data reduces the probability of a non-toxic sample being mistakenly declared as toxic. This can be accomplished by adding replicates (which increases cost) or by reducing test variance through the use of better laboratory quality control procedures, such as feeding protocols.
- The presentation also covered how to read laboratory reports (typically produced by the software program CETIS), how to use the TST Spreadsheet Tool provided by the [State Water Board](#), and how to interpret the results of species sensitivity screening studies.

For more information, see the [presentation slides](#).

[Upcoming NPDES Permits](#)

The group discussed the reasonable potential analysis for dissolved oxygen in the FSSD [Tentative Order NPDES Permit](#).

Climate Change Update

Volunteers were recruited to help test drive a planned update of the Regional Water Board's 2021 [Climate Change Information Request](#). Regional Water Board staff have found that the information from the survey is useful for NPDES permitting and related Water Board programs.

Other Announcements

- EPA's proposed [Methods Update Rule 22](#) (Dec. 2024) would remove PCB Aroclor methods (608.3, 625.1) from the list of approved Clean Water Act methods. Regional Water staff have confirmed that PCB compliance monitoring using Aroclors will **not** change until the permit is reissued (c. early 2028), even if the rule is finalized.
- EPA is currently soliciting comments on the [Draft Human Health Water Quality Criteria](#) for PFOS, PFOA, and PFBS and the [Draft Biosolids Risk Assessment](#) for PFOS and PFOA.
- For the Nutrient Watershed Permit, responses to BACWA's [Request for Information](#) on nutrient removal planning for the Group Annual Report are due February 19th.
- The BACWA Recycled Water Committee and Northern California WaterReuse chapter are planning to host a workshop on the recycled water / nutrient removal nexus in spring 2025.

Next Meeting: Tuesday, April 8th, Virtual
BACWA Annual Members Meeting: Friday, May 2nd

Committee Request for Board Action: None

46 attendees (including 2 guest speakers) from 25 member agencies.

California Sewer System Spills Dashboard

Lars Stenstedt from [V&A](#) demonstrated the capabilities of the [California Sewer System Spills Dashboard](#). The ArcGIS-based website is updated by V&A about once per quarter using data from the [Sanitary Sewer System Data Flat Files](#), which compiles spill data reported to the State Water Board via CIWQS. Data reported under the current (2022) [Sanitary Sewer Systems General Order](#) excludes Category 4 spills. Each agency also has a unique page on the dashboard (e.g., <https://californiasewerspills.com/hillsborough>). After the presentation, members shared their own approach to implementing internal dashboards, such as incorporating real-time linkages to CIWQS and/or incorporating information beyond spills, such cleaning and root foaming locations.

Roundtable Discussion: Responding to Third Party Lawsuits

Agencies shared their experiences responding to third party lawsuits alleging violations of the Clean Water Act due to sanitary sewer system operations. Recent third-party lawsuits have alleged that “collection system subsurface discharges” (e.g., exfiltration) are responsible for water quality impacts. This would theoretically be a violation of the [Sanitary Sewer Systems General Order](#) if sewage reaches a groundwater basin, MS4 stormwater system, and/or surface water body, but may be difficult to prove or disprove in court. Agencies that are targeted by such lawsuits should expect to produce records related to inspections and actions taken to prevent exfiltration, such as capital projects and O&M plans. Attendees shared that it is also useful for agencies to have GIS maps that show MS4 systems, including elevation / profile information; information about septic tanks that may also be a source of bacteria; and, if possible, information about the depth to groundwater.

Exfiltration Update

Steve Jepsen from [Clean Water Social](#) shared an update on scientific studies of exfiltration. [Link to Steve’s Slides](#). A study recently completed by researchers at SCCWRP estimated exfiltration and other possible sources of fecal pollution to the San Diego River watershed ([link to study](#)). Clean Water Social is working on follow-up studies to refine field methods for estimating exfiltration rates and to refine understanding of subsurface transport pathways. Steve recommended that agencies have a program to look for exfiltration, as this can now be considered a spill per the General Order.

Compliance with Sanitary Sewer Systems General Order

BACWA and other collection system agency representatives have been meeting periodically with State Water Board staff to discuss technical issues with CIWQS data and reporting. Agencies should make sure to check the [CIWQS Collection System Operational Report](#) for accuracy. Agencies should also check spill 10-year spill history in CIWQS; there is an opportunity to correct reports now before the Annual Reports are due April 1st.

BACWA Announcements

- CASA is planning a Rate Study to provide information similar to the State Water Board’s [Wastewater User Fee Survey](#). Please plan to participate.
- The California Air Resources Board (CARB) has stated that it plans to enforce the State and Local Government Fleets portion of the [Advanced Clean Fleet rule](#), even though other portions of the rule were withdrawn. Litigation is expected. CARB has also released a [Streamlined ZEV Purchase Exemption List](#) for vehicle types that do not require a waiver application, because CARB also knows that the vehicles are not available.
- The BACWA Annual Members Meeting will be held May 2nd in Downtown Berkeley (Free)

Next Meeting: Tuesday, May 8th - **In Person at Central San in Walnut Creek**

Central San is [CWEA Collection System of the Year](#) – Congrats!

Committee Request for Board Action: None

22 attendees representing 11+ member agencies participated remotely.

Lubrication and the Different Levels of Success at the Central San Treatment Plant

[Link to Presentation Slides](#)

[Brian Walters](#), Lead Maintenance Technician at Central San and [CWEA's Mechanical Technician of the Year for 2024-2025](#), provided an overview of how Central San has employed best practices for lubrication to extend the useful life of 80 classes of assets such as pumps, blowers, fans, conveyor belts, and more. Key points from Brian's presentation included:

- A large fraction of machine failure (28% by Brian's estimate) can be attributed to particle contamination, which is a controllable factor. Precision lubrication practices can reduce maintenance costs, extend the useful life assets, and reduce safety hazards.
- At Central San, the agency's journey to improve lubrication practices included:
 - o Setting up a centralized storage area and satellite storage areas that are designed to minimize particle contamination.
 - o Getting staff certified through the [International Council for Machinery Lubrication \(ICML\)](#).
 - o Obtaining better transport and fill containers that help minimize contamination and that are well-suited for the viscosity of different lubricants. These containers are offered by suppliers such as [Des-Case](#) and [OilSafe ForFluids](#). [Des-Case](#) also offers training for ICML certification.
 - o Ensuring that all new oil is filtered 7x and tested to ensure particle removal.
 - o Adding desiccant breathers and quick-couple adapters to lubrication ports.
 - o Using a mobile cart to filter and test oil at different sites around the plant.
 - o Using an ultrasound device to monitor bearings, which can help the technician determine whether lubrication is needed based on the sound that equipment makes while operating. In Central San's case, this device allowed them to reduce the lubrication frequency for some equipment.
 - o Setting up dedicated sampling ports and routinely monitoring plant equipment for particle contamination in the lubricant.
 - o Using a database to track lubrication needs of different equipment, and linking to the source of that information.

Committee Request for Board Action: None

In-person meeting at the Richmond Water Pollution Control Plant, with 15 attendees representing 8 member agencies.

Plant Tour of Richmond Water Pollution Control Plant

General Manager Tommy Stickles, Collection Systems & Maintenance Manager Mitchell Hendricks, and capital program manager Rodrigo Vignau Loría led the group on a tour of the plant. All three are employees of Veolia, the contract operator of the City of Richmond's treatment plant and collection system. In 2024, a plant upgrade was completed that included new mechanical fine screens, grit washing, a biofilter for odor control, a new blower building with mechanical turbo blowers and new fine bubble diffusers for the aeration tanks ([link to more info](#)). A new storage and dewatering system for waste activated sludge has been also constructed to replace the existing DAF, but cannot be operated until air permitting is complete. As currently configured, the plant has basins in the secondary treatment train that can be used as anoxic zones, and Veolia plans to conduct a nutrient removal study at the plant this summer. The tour also included discussions of wet weather operations, when flows exceed the secondary treatment capacity.



Next Meeting: Potential future meeting locations include CMSA or San Jose.



Executive Director's Report to the Board

February 2025

EXECUTIVE BOARD MEETING AND SUPPORT

- Worked with BACWA staff to plan and manage 2/21 Executive Board meeting
- Conducted the Executive Board meeting agenda review with the BACWA Chair
- Hosted 2/21 Executive Board meeting and developed meeting notes
- Continued to track all action items to completion
- Continued planning 2025 BACWA Annual Members meeting

COMMITTEES:

- Attended Permits committee (2/11)
- Met with AIR Committee leadership to discuss contract/budget issues

REGULATORY:

- Met with SFEI to discuss PFAS Phase 3 planning
- Hosted meeting with SFEI/R2/members to discuss how Phase 3 PFAS study could address data gaps in Zone 7 service area (2/25)
- Participated in Pooled Emissions SC meeting (2/27)
- Reviewed EPA material on proposed PFAS regulation

NUTRIENTS:

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

- Discussed potential market assessment with consultant
- Attended presentation on South Bay Salt Ponds (2/11)
- Attended and chaired NMS science planning meeting at SFEI (2/14)
- Met with NMS Science Manager on programmatic issues
- Reviewed Science priorities and proposed projects
- Reviewed program overview document
- Met with HDR to discuss regional scoping plan elements
- Held Regional Plan Scoping document kickoff (2/25)
- Met with BACWA NMS leads to discuss program goals (2/28)
- Met with NWRI to discuss BACWA collaborative model lessons for Colorado (2/28)

COMMUNICATIONS

- Discussed PFAS communications with members
- Discussed communications planning with members
- Reviewed draft budget for different alternatives prepared by Civic Edge

FINANCE:

- Reviewed the monthly BACWA financial reports
- Reviewed and approved invoices
- Worked with AED on draft budget for FY26
- Updated 5-year plan
- Recalculated Nutrient Surcharge

COLLABORATIONS:

- Met with BACWA RW Comm and WaterReuse Norcal leaders to plan workshop (2/3, 2/19)
- Attended Microplastic Workgroup meeting (2/12)
- Attended OneWater reboot planning meeting (2/13)
- Attended CASA ACE meeting (2/13)
- Checked in with EPA on SF Bay Program Office funding and non-compete memo for nutrient management
- Attended California Water Quality Management Council meeting (2/20)
- Attended CASA RWG Biosolids and Water Committees (2/20)

ASC (AQUATIC SCIENCE CENTER)

- Reviewed materials sent via email by ASC ED

BABC (BAY AREA BIOSOLIDS COALITION)

- Attended and drafted notes for BABC meeting (2/10)
- Developed draft approval for BABC integration as a BACWA committee
- Worked with consultant on budget for F26 BABC support through BACWA

BACC (BAY AREA CHEMICAL CONSORTIUM)

- Reviewed issues that came up as part of bid

BACWWE (BAY AREA COALITION FOR WATER/WASTEWATER EDUCATION)

- none

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.
- Worked with AED to address website issues
- Worked with RPM in the preparation of the monthly BACWA Bulletin.
- Developed and responded to numerous emails and phone calls as part of the conduct of BACWA business on a day-to-day basis.
- Met with Chair/Vice-chair to discuss ED Performance Evaluation

MISCELLANEOUS MEETINGS/CALLS:

- Worked with BACWA Chair and Committee Chairs on items that arose during the month
- Other miscellaneous calls and inquiries regarding BACWA activities
- Responded to Board members' requests for information



Board Calendar

April 2025 – June 2025 Meetings

DATE

April 18, 2025
EBMUD Downtown

AGENDA ITEMS

Approvals & Authorizations:

-
-

Policy / Strategic Discussion:

- Engage RWB on scoping plan

Operational:

- FY26 Budget Adoption
- ED Performance Plan

Annual Meeting

May 2, 2025
David Brower Center

June 20, 2025
SFPUC

Approvals & Authorizations:

- FY26 Contract Approval
-

Policy / Strategic Discussion:

-

Operational:

- Pardee planning
-



BACWA ACTION ITEMS

Number	Subject	Task	Responsibiity	Deadline	Status
Action Items from Feb 21 2025 BACWA Executive Board Meeting			resp.	deadline	status
2025.2.24	OAH Modeling off the Northern California Coastline	BACWA ED to work with Martha & David to bring this discussion to stakeholders in the Bay Area soon	ED		on going
2025.2.25	NBC Bay Area OpenRoad segment	BACWA ED to share talking points for the segment with the Board	ED	3/14/2025	complete
2025.2.26	GAR and Compliance Milestones update	BACWA RPM to share a review schedule for the draft GAR with BACWA members.	ED	3/14/2025	complete
2025.2.27	Draft approval on BABC Integration into BACWA	BACWA ED to bring a resolution regarding BABC integration for Board approval at the March meeting.	ED	3/1/2025	complete
2025.2.28	Non-member fees for committee participation	BACWA ED to bring a revised Class of Membership policy to the Board for consideration at a future meeting	ED	3/17/2025	complete
2025.2.29	Annual meeting preliminary agenda	BACWA ED to set up brainstorming sessions for the climate change and pollution prevention panels	ED	3/17/2025	complete
Action Items Remaining from Previous BACWA Executive Board Meetings					
2022.3.42	Plain-language review of nutrient science program	BACWA ED to work with SFEI to augment plain-language review to include graphics, simplified text, and a summary of what we have learned so far.	ED		complete
2025.08.08	Summary of Watershed Permit activities	BACWA ED to work with member agencies on roles, responsibilities & timeline.	RPM		complete

FY25: 28 of 29 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



Regulatory Program Manager's Report to the Executive Board

February 2025

BACWA BULLETIN: Completed and circulated February Bulletin.

CWEA CONFERENCE: Attended CWEA Pretreatment, Pollution Prevention, and Stormwater (P3S) conference in San Jose, and hosted panel discussion about pretreatment audits.

NUTRIENTS: Participated in Nutrient Management Strategy (NMS) science planning meeting; reviewed draft NMS science team work products; coordinated with HDR and contract management group regarding information for Group Annual Report; participated in kickoff meeting for Scoping Plan; responded to member questions about BACWA's Request for Information (RFI) on nutrient removal planning; reviewed member responses to RFI.

REGULATORY MATRIX: Prepared updated matrix of key regulatory issues for BACWA members.

PFAS: Prepared draft comment letter on human health water quality criteria; discussed spring campaign with BAPPG steering committee; created landing page for PFAS for Baywise website; discussed Phase 3 of BACWA study with SFEI staff; coordinated with Regional Water Board and member agencies regarding opportunities for sampling during Phase 3.

COMMITTEE SUPPORT:

Asset Management – Assisted with February committee meeting; prepared Board report.

BAPPG – Circulated Annual Report to BAPPG members; participated in February pesticides committee meeting. See also PFAS items above.

Collection Systems – Attended Data Review Group meeting with State Water Board staff to discuss spill data; assisted with preparation and hosting of February committee meeting; prepared meeting summary; participated in CASA-led discussion on compiling information about sewer service rates.

Laboratory – Prepared for and participated in February committee meeting; prepared meeting summary; assisted with survey on laboratory certification.

Permits – Prepared regulatory updates for February committee meeting; prepared meeting summary; assisted with contract documents for fish consumption survey (Hg & PCBs watershed permit compliance task).

Recycled Water – Assisted with planning April workshop on nutrients and recycled water

Executive Board – Provided regulatory updates for Executive Board meeting.

ADMINISTRATIVE: Staff meeting, website, email lists, Annual Meeting, & attendance certificates.

BACWA MEETINGS ATTENDED:

Lab Committee (2/11)

Permits Committee (2/11)

Collection Systems Committee (2/13)

Executive Board (2/21)

Contract Management for HDR (2/25)

Asset Management (2/26)

BAPPG Pesticides Committee (2/26)

EXTERNAL EVENTS ATTENDED:

Data Review Group with SWRCB (2/10)

NMS Science Planning Meeting (2/14)

CASA Regulatory Workgroup (2/20)

SFEI/BACWA/RWQCB Coordination (2/25)