Executive Board Meeting
AGENDA
Friday, July 15, 2022 9:00 AM - 12:30 PM (PDT)

To attend the meeting via Zoom or submit a comment please request access.

Agenda Item			Time	Pages
ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE			**9:00 AM**	
PUBLIC COMMENT	Guidelines		**9:05 AM**	
CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER				
1 BACWA Board members, introductions and succession			**9:10 AM**	**3**
CONSENT CALENDAR			**9:15 AM**	
2 Resolution to continue teleconferencing Executive Board meetings (AB361)				**4-5**
3 June 17, 2022 BACWA Executive Board meeting minutes				**6-12**
4 June 30, 2022 Special Board Meeting/NST minutes				**13-14**
5 May 2022 Treasurer's Report				**15-24**
APPROVALS AND AUTHORIZATIONS			**9:25 AM**	
6 Approval: Recycled Water Site Training video editing				**25-27**
POLICY/STRATEGIC			**9:30 AM**	
7 Discussion: Nutrients				
a. Technical Work				**28-31**
i. BACWA Comments on Draft Virginia Province Approach for LSB	VPA doc with BACWA redlines			
b. Regulatory				
i. Recycled Water Evaluation and NBS Study Progress updates to Board				**32-33**
ii. Agenda for 7/26 NST meeting				**34**
c. Fundraising				
i. Release of WQIF RFA	EPA WQIF page			
BREAK				
8 Discussion: Agenda for 7/18 BAAQMD workgroup meeting				**35**
9 Discussion: Scope for enhanced ACE engagement				
10 Discussion: Key topics for discussion at Pardee technical seminar				**36**
11 Informational: BAOWN update - NBS report and conservation workshop	Conservation Workshop slides			**37-61**
12 Discussion: Sea Level Rise round table August 23				**62**
OPERATIONAL			**11:10 AM**	
13 Discussion: Draft BACWA representatives policy update				**63**
14 Discussion: Representative and Committee Leadership Succession planning				**64-70**
15 Informational: BACC Update				
16 Informational: update FY23 Meeting Schedule and location				**71**
17 Discussion: FY23 NMS payment schedule				
REPORTS			**12:20 PM**	
18 Committee Reports				**72-79**
19 Member highlights				
20 Executive Director Report				**80-81**
21 Board Calendar and Action Items				**82-83**
22 Regulatory Program Manager Report				**84**
23 Other BACWA Representative Reports				
a. RMP Technical Committee		Mary Lou Esparza, Yuyun Shang, Samantha Engelage		
b. RMP Steering Committee		Karin North; Amanda Roa; Eric Dunlavey		
c. Summit Partners		Lorien Fono; Amit Mutsuddy		
d. ASC/SFEI		Lorien Fono; Eileen White		
e. Nutrient Governance Steering Committee		Eric Dunlavey; Eileen White; Lori Schectel		
e.i Nutrient Planning Subgroup		Eric Dunlavey		

e.ii NMS Technical Workgroup	Eric Dunlavey		
f. SWRCB Nutrient SAG	Lorien Fono		
g. NACWA Taskforce on Dental Amalgam	Tim Potter		
h. BAIRWMP	Cheryl Munoz; Florence Wedington		
i. NACWA Emerging Contaminants	Karin North; Melody LaBella		
j. CASA State Legislative Committee	Lori Schectel		
k. CASA Regulatory Workgroup	Lorien Fono; Mary Cousins		
l. RMP Microplastics Liaison	Artem Dyachenko		
m. Bay Area Regional Reliability Project	Eileen White		
n. WateReuse Working Group	Cheryl Munoz		
o. San Francisco Estuary Partnership	Eileen White; Lorien Fono		
p. CPSC Policy Education Advisory Committee	Colleen Henry		
q. California Ocean Protection Council	Lorien Fono		
r. Countywide Water Reuse Master Plan	Karin North, Pedro Hernandez		
s. CHARG - Coastal Hazards Adaptation Resiliency Group	Jackie Zipkin		
t. California Water Quality Monitoring Council	Lorien Fono		

26 **SUGGESTIONS FOR FUTURE AGENDA ITEMS**	**12:29 PM**	

NEXT MEETING		
The next meeting of the Board is scheduled for August 19, 2022		

ADJOURNMENT	**12:30 PM**	

BAY AREA CLEAN WATER AGENCIES
SUCCESSION PLANNING
Fiscal Year 2022

A. BACWA Principal Representatives

Agency	Representatives	Title & Roles	Succession Planning
CCCSD	Lori Schectel	CASA State Legislative Committee, Nutrient Governance Steering Committee Alternate	
	Roger Bailey (Alternate)		
	Mary Lou Esparza ~~Jean-Marc Petit~~ (Alternate)		
EBDA	Jacqueline Zipkin	BACWA Executive Board Vice-Chair, ~~ReNUWIt Industrial Advisory Committee Member~~	
	David Donovan (Hayward) ~~Jason Warner, Oro Loma~~ (Alternate)		
EBMUD	~~Eileen White~~	~~BACWA Executive Board Vice Chair, Nutrient Management Strategy Governance Steering Committee, Bay Area Regional Reliability Project, SF Estuary Partnership, Joint SFEI/ASC Board~~	
	Alicia Chakrabarti (Alternate)		
	Yun Shang (Alternate)		
SFPUC	Amy Chastain	BACWA Executive Board Rep,	
	Greg Norby (Alternate)		
	Jennie Pang (Alternate)		
San Jose	Amit Mutsuddy	BACWA Executive Board Chair, Summit Partners	
	Eric Dunlavey (Alternate)	RMP Steering Comm; Nutrient Management Strategy Comm;	

Changes to Principal Representation require submission of a Designation Letter and a Statement of Economic Interest Form within 30 days

BAY AREA CLEAN WATER AGENCIES
RESOLUTION NO. R-23-01

RESOLUTION AUTHORIZING REMOTE TELECONFERENCE MEETINGS PURSUANT TO AB 361

WHEREAS, all Bay Area Clean Water Agencies (BACWA) meetings are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch BACWA's legislative bodies conduct their business; and

WHEREAS, on March 4, 2020, Governor Newsom declared a State of Emergency to make additional resources available, formalize emergency actions already underway across multiple state agencies and departments, and help the State prepare for an anticipated broader spread of the novel coronavirus disease 2019 ("COVID-19"); and

WHEREAS, On March 17, 2020, in response to the COVID-19 pandemic, Governor Newsom issued Executive Order N-29-20 suspending certain provisions of the Ralph M. Brown Act in order to allow local legislative bodies to conduct meetings telephonically or by other means; and

WHEREAS, as a result of Executive Order N-29-20, staff set up virtual meetings for all BACWA Executive Board meetings; and

WHEREAS, on June 11, 2021, Governor Newsom issued Executive Order N-08-21, which, effective September 30, 2021, repealed the provisions of Executive Order N29-20 that allowed local legislative bodies to conduct meetings telephonically or by other means; and

WHEREAS, on September 16, 2021, Governor Newsom signed AB 361 (2021), which allows for local legislative bodies and advisory bodies to continue to conduct meetings via teleconferencing under specified conditions and includes a requirement that the BACWA Executive Board make specified findings. AB 361 (2021) took effect immediately; and

WHEREAS, in order for legislative bodies to continue to conduct meetings via teleconferencing pursuant to AB 361 (2021), a proclaimed State of Emergency must exist; and

WHEREAS, AB 361 (2021) further requires that State or local officials have imposed or recommended measures to promote social distancing, or, requires that the legislative body determines that meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, such conditions now exist in BACWA's jurisdiction, specifically, Governor Newsom has declared a State of Emergency due to COVID-19; and

WHEREAS, the Centers for Disease Control and Prevention ("CDC") continues to recommend physical distancing of at least 6 feet from others outside the household; and

WHEREAS, local county health jurisdictions continue to recommend physical and social distancing as a COVID-19 mitigation strategy and

WHEREAS, because of the prevalence of highly contagious variants of COVID-19, the BACWA Executive Board is concerned about the health and safety of all individuals who intend to attend BACWA Executive Board and Committee meetings; and

WHEREAS, the BACWA Executive Board desires to provide a way for Executive Boarders, staff, and members of the public to participate in meetings remotely, without having to attend meetings in person; and

WHEREAS, the BACWA Executive Board hereby finds that the presence of COVID-19 and the prevalence of cases due to the Omicron variant would present imminent risks to the health or safety of attendees, including the legislative bodies and staff, should BACWA's legislative bodies hold in person meetings; and

WHEREAS, BACWA shall ensure that its meetings comply with the provisions required by AB 361 (2021) for holding teleconferenced meetings.

BAY AREA CLEAN WATER AGENCIES
RESOLUTION NO. R-23-01

NOW, THEREFORE, BE IT RESOLVED that the Executive Board of the Bay Area Clean Water Agencies hereby declares as follows:

1. The above recitals are true and correct, and incorporated into this Resolution.
2. In compliance with AB 361 (2021), and in order to continue to conduct teleconference meetings without complying with the usual teleconference meeting requirements of the Brown Act, the BACWA Executive Board makes the following findings:
    a. The BACWA Executive Board has considered the circumstances of the State of Emergency; and
    b. The State of Emergency, as declared by the Governor, continues to directly impact the ability of the BACWA Executive Board and BACWA's legislative bodies, as well as staff and members of the public, from meeting safely in person; and
    c. The CDC continues to recommend physical distancing of at least six feet due to COVID-19 and as a result of the presence of highly contagious variants of COVID-19, meeting in person would present imminent risks to the health or safety of attendees, the legislative bodies and staff.
3. The BACWA Executive Board may continue to meet remotely in compliance with AB 361, in order to better ensure the health and safety of the public.
4. The BACWA Executive Board will revisit the need to conduct meetings remotely within thirty (30) days of the adoption of this resolution.

PASSED AND ADOPTED THIS 15th DAY OF JULY, 2022.

Amit Mutsuddy
Chair of the Bay Area Clean Water Agencies Executive Board

ATTEST:

Lorien J. Fono
Executive Director, Bay Area Clean Water Agencies

ROLL CALL AND INTRODUCTIONS

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

Other Attendees and Guests:

Name	**Agency/Company**
Aaron Winer	West County Wastewater District
Amanda Roa	Delta Diablo
Christopher Bolt	City of Petaluma
David Donovan	City of Hayward
Dave Richardson	Woodard & Curran
Diane Griffin	DSRSD
Don Gray	EBMUD
Eric Dunlavey	City of San Jose
Jennie Pang	SFPUC
Jennifer Dyment	BACWA
Lorien Fono	BACWA
Mary Cousins	BACWA
Meg Herston	FSSD
Melody Tovar	City of Sunnyvale
Michael Connor	Consultant
Robert Wilson	City of Santa Rosa
Sarah Deslauriers	Carollo Engineers
Stefanie Olson	DSRSD
Taylon Sortor	FSSD
Tom Hall	EOA

Amit started meeting at 9:03

ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE

PUBLIC COMMENT

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER None

CONSENT CALENDAR

1 Resolution to continue teleconferencing Executive Board meetings (AB361)

2 April 15, 2022 BACWA Executive Board meeting minutes

3 April 29, 2022 Joint Meeting with R2 staff Special Board Meeting minutes

4 April 2022 Treasurer's Report

Consent Calendar Items 1 thru 4: *A motion to approve was made by Jackie Zipkin (East Bay Discharges Authority) and seconded by Eileen White (EBMUD).*

APPROVALS AND AUTHORIZATIONS

5 Approval: BAR BACWA Chair and Vice-Chair for FY23

Approval Item 5*: A motion to appoint Jackie Zipkin as Vice Chair was made by Amit Mutsuddy (City of San Jose) and seconded by Eileen White (EBMUD). The motion was approved by City of San Jose, East Bay Municipal Utility District, San Francisco Public Utilities Commission, and Central Contra Costa Sanitary District. East Bay Dischargers Authority abstained.*

A motion to appoint Amit Mutsuddy as Chair was made by Jackie Zipkin (East Bay Dischargers Authority) and seconded by Amy Chastain (San Francisco Public Utilities Commission). The motion was approved by East Bay Dischargers Authority, East Bay Municipal Utility District, San Francisco Public Utilities Commission, and Central Contra Costa Sanitary District. City of San Jose abstained.

6 Approval: BAR BACWA FY23 Staff contract amendments

7 Approval: BAR BACC FY23 Administration contract, $36,000

8 Approval: BAR for As-Needed Legal and IT support FY23

9 Approval: BAR Quality Assurance Solutions contract for FY23, $5,200

10 Approval: Amendment #3 for Carollo Engineers FY23 AIR committee support, $95,000

11 Approval: Amendment #5 for Stephanie Hughes for FY23 BAPPG professional outreach support for FY23, $16,000

12 Approval: Stephanie Hughes pesticides regulatory support FY23 Contract, $60,000

13 Approval: CIEA No-cost Extension for Risk Reduction in FY23

14 Approval: SGA Amendment # 4 for FY23 BAPPG Support - $30,000

15 Approval: Amendment # 2 Carollo Contract for FY23 BABC Support - $120,000

16 Approval: Amendment #2 for FY23 NMS Reviewer Contract - $50,000

Approval Items 6-16: *A motion to approve was made by Lori Schectel (Central Contra Costa Sanitary District) and seconded by Amy Chastain (San Francisco Public Utilities Commission). The motion was approved unanimously.*

POLICY/STRATEGIC

17 Discussion: R2 Announces new Executive Officer - Eileen White, EBMUD, spoke of her departure and gratitude to BACWA community. The BACWA community expressed how much Eileen will be missed but everyone looks forward to working with Eileen at the Regional Water Board.

Action item: BACWA ED to review rules and roles for representation to external committees.

18 Discussion: Agenda for 7/18 BAAQMD workgroup meeting - Sarah Deslauriers shared information about the BAAQMD workgroup goals and process. The workgroup wants to make sure that the collaboration is effective, and decisions are long lasting. Group discussed agenda ideas and noted that the agenda should contain a prompt to check in on the PM 2.5 and odor studies that BAAQMD shared at the BACWA Annual Members Meeting.

Action Item: BACWA ED to follow up with BAAQMD staff on the minutes and action items from the first workgroup meeting .

Action Item: BACWA ED to share revised draft agenda with group.

BREAK 10:30 AM

19 Discussion: Nutrients

a. Technical Work

i. Update on SCCWRP Ocean Modeling efforts - BACWA ED discussed presentation given by SCWRRP to San Diego Regional Water Board and the impact it may have on our region. BACWA ED shared scope of SCWRRP science and concerns around this. BACWA ED shared slides and summarized ocean modeling scenarios.

b. Regulatory

i. Summer NST meetings and Watershed Permit Workshop - BACWA ED shared that there will be Nutrient Strategy Team Meetings on June 30 and July 26, and a workshop with Regional Water Board on July 28. The group discussed if the July 28 meeting should be in hybrid or fully remote. EBMUD's conference room in Orinda is currently reserved for a hybrid meeting. BACWA ED discussed agenda topics for each of the above meetings.

ii. Holistic Approach to Improved Nutrient Management: - BACWA ED shared that the Phase 1 executive summary for WRF Project # 4974 is available in the meeting packet. BACWA is a highlighted case study in the executive summary report.

c. Governance

i. Minutes from 4/19 Planning Subcommittee meeting #67 - BACWA ED mentioned meeting notes are in the packet.

ii. Minutes from 5/3 Steering Committee meeting - BACWA ED mentioned draft minutes are in the packet.

d. Fundraising

i. Update on projects for WQIF Grant - BACWA ED summarized parallel efforts for the WQIF grant. One effort, from SFEI, is a proposal for a sediment transport and nutrient modeling toolbox. Another effort, coordinated through SFEP, is for implementation of projects in Palo Alto, FSSD, and Hayward service areas. Discussion followed on grant funding requests and appropriate funding levels.

20 Informational: BACWA comments to Alameda County BOS on proposed composting facility - BACWA ED summarized that BACWA and CASA coordinated on a support letter for a proposed compost facility at Jess Ranch in Alameda County. The project has received a conditional use permit from Alameda County Planning Commission. In June, a third-party appeal of the EIR to the Board of Supervisors was denied.

21 Informational: BAOWN Update - BACWA ED shared that BAOWN will host a conservation workshop on June 27th. Ross Valley Sanitary District will participate to represent the collection system perspective and DSRSD will participate to represent a recycled water perspective.

22 Informational: BAPPG Updates: Steering Comm; Teng Chung Wu Pollution Prevention Award - Nominate by July 15 - BACWA RPM requested nominations for the award. The BAPPG steering committee meets monthly and looking for new members.

23 Informational: Regulatory Issues Matrix - The May 2022 version of the BACWA Regulatory Issues Matrix is in the packet. It will next be updated before the Pardee Meeting in September.

24 Informational: Climate Change Basin Plan Amendment update - BACWA RPM shared that these items are in the packet. In April, BACWA submitted a comment letter on the climate change basin plan amendment. A response to comments and revised draft is expected in July, prior to the July 13th adoption hearing at the Regional Water Board.

25 Discussion: Sea Level Rise round table proposal - BACWA RPM asked for volunteers to help organize a round table discussion on sea level rise scenarios used for wastewater planning. The group discussed related efforts at BCDC to provide assistance with shoreline adaptation planning (see project description), as well as proposed legislation to require shoreline resiliency planning (SB 867).

Action item: BACWA RPM to organize a sea level rise planning roundtable to occur this summer via Zoom.

OPERATIONAL

26 Discussion: 2022 Annual Meeting debrief and survey responses - BACWA ED shared that the survey responses were in the packet. BACWA ED asked for feedback on Annual Meeting. General discussion and feedback followed.

27 Informational: BACC Update - BACWA AED shared that BACC agencies are setting up their contracts with the awarded vendors and the annual meeting will be in late August. Group discussed that some vendors are not honoring their prices. BACC to discuss best course of action at annual meeting.

28 Informational: FY23 Meeting Schedule and location - BACWA ED shared proposed Executive Board Meeting schedule for FY23. BACWA ED asked group if we should have Pardee Meeting in person, when should we have the annual meeting and feedback on the proposed meeting dates. General discussion followed.

Action item: BACWA Staff to explore hybrid meeting options at Pardee.

Action Item: BACWA staff to work with David Brower Center on booking Annual Members Meeting for May 5, 2023.

29 Informational: Committee Accomplishments 2021-22 - BACWA ED shared that a list of Committee Accomplishments is in the packet and will form part of the annual report.

REPORTS

30 Committee Reports - BACWA RPM shared that we will be bringing a contract for approval for videographer to support Recycled Water committee work. Lab Committee representatives have met with CA ELAP staff and learned that ELAP operations are challenged by outdated software.

31 Member highlights - EBMUD's Eileen White said goodbye and thank you to BACWA group. EBDA shared that their NPDES permit reissuance is on the Regional Water Board's July agenda. Central San shared that their NPDES permit was recently reissued, and that CASA's cosponsored bill, AB2247 requiring PFAS disclosure, is now in the CA Senate. Central San also shared that Jean-Marc Petit will be retiring in July 2022. SFPUC shared that they are tentatively opening their Oceanside water recycling plant this summer. City of San Jose shared that a contractor had a fatality at one of their construction sites.

32 Executive Director Report - BACWA ED shared that report is in the packet.

33 Board Calendar and Action Items - BACWA ED shared that report is in the packet.

34 Regulatory Program Manager Report - BACWA ED shared that report is in the packet.

35 Other BACWA Representative Reports

a. RMP Technical Committee Mary Lou Esparza, Yuyun Shang, Samantha Engelage

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

c. Summit Partners Lorien Fono; Amit Mutsuddy

d. ASC/SFEI Lorien Fono; Eileen White

e. Nutrient Governance Steering Committee Eric Dunlavey; Eileen White; Lori Schectel

e.i Nutrient Planning Subgroup Eric Dunlavey

e.ii NMS Technical Workgroup Eric Dunlavey

f. SWRCB Nutrient SAG Lorien Fono

g. NACWA Taskforce on Dental Amalgam Tim Potter

h. BAIRWMP Cheryl Munoz; Florence Wedington

i. NACWA Emerging Contaminants Karin North; Melody LaBella

j. CASA State Legislative Committee Lori Schectel

k. CASA Regulatory Workgroup Lorien Fono; Mary Cousins

l. ReNUWIt Jackie Zipkin; Karin North

m. ReNUWIt One Water Jackie Zipkin, Eric Hansen

n. RMP Microplastics Liaison Artem Dyachenko

o. Bay Area Regional Reliability Project Eileen White

p. WateReuse Working Group Cheryl Munoz

q. San Francisco Estuary Partnership Eileen White; Lorien Fono

r. CPSC Policy Education Advisory Committee Colleen Henry

s. California Ocean Protection Council Lorien Fono

t. Countywide Water Reuse Master Plan Karin North, Pedro Hernandez

u. CHARG - Coastal Hazards Adaptation Resiliency Group Jackie Zipkin

v. California Water Quality Monitoring Council Lorien Fono

35 SUGGESTIONS FOR FUTURE AGENDA ITEMS

NEXT MEETING The next meeting of the Board is scheduled for July 15, 2022

ADJOURNMENT 12:00 PM

Nutrient Strategy Team
June 30, 2022 Meeting Summary

ATTENDEES:

Executive Board Representatives: Lori Schectel (Central Contra Costa Sanitary District); Amit Mutsuddy (San José); Eileen White (East Bay Municipal Utility District); Jacqueline Zipkin (East Bay Dischargers Authority); Jennie Pang (San Francisco Public Utilities Commission)

Other Attendees:

Name	Agency/Company
Lorien Fono, Mary Cousins	BACWA
Mary Lou Esparza, Blake Brown	CCCSD
Amanda Roa	Delta Diablo
Don Gray	EBMUD
Jordan Damerel	FSSD
David Donovan	Hayward
Liz Falejczyk	Novato
Karin North, Samantha Engelage	Palo Alto
Nohemy Revilla	SFPUC
Eric Dunlavey	San José
Monte Hamamoto	SVCW
Ramana Chinnakotla, Melody Tovar, and Rohan Wikramanayake	Sunnyvale
Armando Lopez, Tim Grillo	USD

Amit Mutsuddy called the meeting to order at 10:03 am, and led introductions.

The primary objectives of the meeting were to (1) continue developing a technical understanding of how baseline conditions for Total Inorganic Nitrogen (TIN) loads could be calculating using the Upper Tolerance Limit; (2) discuss potential implementation of baseline loading as caps and/or triggers in the 3rd watershed permit, and (3) plan for the July 28th workshop with Regional Water Board staff.

The BACWA Executive Director (ED) shared an Excel spreadsheet that can be used to calculate the Upper Tolerance Limit (UTL). It is available here (without macros) and here (with macros). As previously discussed in April, the UTLs for individual dischargers are larger than the Planning Level Targets from the 2019 Watershed Permit. For the Bay taken as a whole, though, the UTL is smaller than the sum of Planning Level Targets from the 2019 Watershed Permit.

The BACWA ED shared an estimated loading trajectory of TIN through 2040 that accounts for the following: (1) treatment upgrades currently planned by early actors, (2) organics diversion projects, (3) recycled water projects, and (4) population growth of 1% per year. Taken together,

TIN loads to the Bay are expected to be remain approximately stable. Members noted that recently completed treatment upgrades at Regional San may also be a relevant consideration. Also, members noted that there is significant uncertainty about the effect of organics diversion projects, because some agencies are planning projects but have not generated an associated TIN load projection. The projects are financially complex, because costs cannot be passed on to ratepayers. The 3rd Watershed Permit will need to discuss how increased loads from organics diversion will be considered.

Any agency listed as an "early actor" should provide BACWA with an update on anticipated completion date. Staff from Hayward, SFPUC, USD, and Palo Alto plan to provide BACWA with schedule updates. Members discussed the pros/cons of including cost information in addition to schedule information for planned treatment upgrades. Having unit cost information that could be compared among agencies might be helpful, especially for facilitating future trading. Both capital costs and operating costs would need to be considered.

Members discussed how to account for population growth within the near 5-year permit term. The Planning Level Targets in the 2019 Watershed Permit were intended to describe load conditions in 2029, so there is a desire for consistency with this approach. However, as noted at the April meeting, a growth buffer may be inappropriate if a longer time period (i.e., past 2017) is used to establish baseline conditions.

Finally, the group discussed potential implementation of load caps in the 3rd Watershed Permit. The permit will need to identify consequences for individual dischargers that exceed their individual load caps, including scenarios where the whole-Bay cap is also exceeded or not exceeded. The 3rd Watershed Permit will also need to identify a consequence for the unlikely scenario in which the whole-Bay cap were exceeded, but no discharger exceeds their individual caps.

NEXT STEPS

- BACWA will circulate a memo summarizing agency data to support key tenets.

- The NST will reconvene on July 26 to finalize the presentation of key tenets to the Regional Water Board at the July 28th workshop.

- On July 28, BACWA will hold a hybrid or fully remote (tbd) workshop with Regional Water Board staff to discuss the key tenets, including implementation of load caps.

Bay Area Clean Water Agencies
A Joint Powers Public Agency
Leading the Way to Protect our Bay

May 21, 2022

MEMO TO: Bay Area Clean Water Agencies Executive Board

MEMO FROM: Samuel Feldman-Crough, Treasurer, East Bay Municipal Utility District

SUBJECT: Eleventh Month FY 2022 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, 2021 through May 31, 2022** (Eleven months of Fiscal Year 2022). 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),
- Water/Wastewater Operator Training (WOT),

Houck, Matt

From: Feldman, Samuel
Sent: Thursday, June 23, 2022 5:56 PM
To: Houck, Matt
Subject: Re: May 2022 Treasurer's Report

Forgot to reply yesterday. Approved!

-Sam

From: Houck, Matt <matt.houck@ebmud.com>
Sent: Wednesday, June 22, 2022 8:35 AM
To: Feldman, Samuel <samuel.feldman@ebmud.com>
Subject: May 2022 Treasurer's Report

Hi Samuel,

Please approve BACWA – May 2022 Treasurer's Report for distribution.

Congratulations on your promotion!! Has anyone mentioned to you if you will continue to be BACWA's Treasurer?

Thanks,

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

Fund Balances

In FY22 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 31st, 2021, revenues are recognized when billed, not when payments are received.

BACWA Fund: This fund provides the resources for BACWA staff, its committees, and other administrative needs. The ending fund balance on May 31, 2022, was $513,061 which is significantly higher than the target reserve of $201,612 which is intended to cover 3 months of normal operating expenses based on the BACWA FY22 budget. $187,934 of the ending fund balance is shown on the BACWA Fund & Investments Balance Report May 31, 2022, as 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. This leaves actual unencumbered reserves of $123,515 (i.e., actual fund balance of $325,127 less target reserves) as May 31, 2022.

CBC Fund: This fund provides the resources for completing special investigations as well as meeting regulatory requirements. The ending fund balance on May 31, 2022, was $2,238,835 which is higher than the target reserve of $1,000,000. $622,803 of the ending fund balance is encumbered to meet line-item expenses for completion of the Group Annual Report contract, completion of the NBS Study, Recycled Water Evaluation, and the PFAS Regional Study. This leaves an actual unencumbered reserve balance of $616,032 (i.e., actual fund balance of $1,616,032 less target reserves) as of May 31, 2022. 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 May 31, 2022 (92% of the FY) are at 99.3%

Expenses as of May 31, 2022 (92% of the FY) are at 70%.

FY 2022
BACWA BUDGET to ACTUAL

BACWA FY22 BUDGET	*Line Item Description*	FY 2022 Budget	Projected Revenue as of May 2022 Changes from budget in blue	Actual May 2022	Actual % of Budget May 2022	Variance	NOTES
REVENUES & FUNDING							
Dues	Principals' Contributions	$516,909	$516,909	$516,910	100%	$1	FY22: no increase. 5 @ $103,382
	Associate & Affiliate Contributions	$187,793	$187,793	$183,175	98%	-$4,618	FY22: no increase. 13 Assoc: $8,364; 45 Affiliate: $1,675.
Fees	Clean Bay Collaborative	$675,000	$675,000	$675,000	100%	$0	Prin: $450,000; Assoc/Affil: $225,000
	Nutrient Surcharge	$1,700,000	$1,700,000	$1,699,999	100%	-$1	See Nutrient Surcharge Spreadsheet
	Voluntary Nutrient Contributions	$0	$0	$0	0%	$0	
Other Receipts	AIR Non-Member	$7,075	$7,075	$7,074	100%	-$1	no increase (Santa Rosa)
	BAPPG Non-Members	$3,954	$3,954	$3,954	100%	$0	no increase (Sta Rosa, Sac Reg'l, Vacaville) $1,292/each
	Other	$0	$0	$3,601		$3,601	BAWSCA membership and Scottish Rite Refund
Fund Transfer	Special Program Admin Fees (WOT)	$5,202	$5,202	$2,601	50%	-$2,601	FY22: no increase
	Special Program Admin Fees (BACC)	$27,200	$27,200	$27,200	100%	$0	400 hours of AED support $68 / hr
	Special Program Admin Fees (BABC)	$6,000	$6,000	$2,051	34%	-$3,949	ED, AED and RPM support
Interest Income	LAIF	$20,000	$10,000	$6,312	32%	-$13,688	BACWA, Legal, & CBC Funds invested in LAIF, LAIF yields lower than anticipated
	Higher Yield Investments						
	Total Revenue	**$3,149,133**	**$3,139,133**	**$3,127,877**	**99.33%**	**-$21,257**	

BACWA FY22 BUDGET	*Line Item Description*	FY 2022 Budget	Projected Expense as of May 2022 Changes from budget in blue	Actual May 2022	Actual % of Budget May 2022	Variance	NOTES
EXPENSES							
Labor							
	Executive Director	$190,000	$190,000	$158,333	83%	-$31,667	No change from FY20/FY21 budget
	Assistant Executive Director	$108,800	$108,800	$96,756	89%	-$12,044	2.0% CPI (SF Bay Metro Area Dec 2020); $68/hour; Reflects 1600 hours (incl. 400 hours for BACC)
	Regulatory Program Manager	$127,400	$127,400	$92,226	72%	-$35,175	$98/hour, Reflects 1300 hours
	Total	**$426,200**	**$426,200**	**$347,315**	**81%**	**-$78,885**	
Administration							
	EBMUD Financial Services	$42,448	$42,448	$16,891	40%	-$25,557	No change from FY20/21 budget
	Auditing Services	$5,345	$5,345	$0	0%	-$5,345	Finanical Auditors through EBMUD; per auditor rate schedule
	Administrative Expenses	$7,959	$7,959	$116	1%	-$7,843	No change from FY20/21 budget
	Insurance	$5,071	$7,072	$7,072	139%	$2,001	2% increase over FY21 actual, reflects actual cost
	Total	**$60,823**	**$62,824**	**$24,079**	**40%**	**-$36,744**	
Meetings							
	EB Meetings	$2,653	$2,653	$335	13%	-$2,319	No change from FY20/21 budget
	Annual Meeting	$14,369	$14,369	$10,918	76%	-$3,451	No change from FY20/21 budget
	Pardee	$6,537	$648	$648	10%	-$5,889	No change from FY20/21 budget
	Misc. Meetings	$5,306	$5,306	$1,386	26%	-$3,920	No change from FY20/21 budget
	Total	**$28,865**	**$22,976**	**$13,286**	**46%**	**-$15,579**	
Communication							
	Website Hosting	$700	$700	$220	31%	-$480	Website hosting $600, Go Daddy domain registration $100
	File Storage	$765	$765	$720	94%	-$45	No change from FY20/21 budget, box.net
	Website Development/Maintenance	$1,530	$1,530	$770	50%	-$760	No change from FY20/21 budget
	IT Support	$2,652	$2,652	$0	0%	-$2,652	No change from FY20/21 budget
	Other Commun	$1,785	$1,785	$896	50%	-$889	No change from FY20/21 budget; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile
	Total	**$7,432**	**$7,432**	**$2,606**	**35%**	**-$4,826**	
Legal							
	Regulatory Support	$2,815	$2,815	$0	0%	-$2,815	2% increase, Downey Brand LLP

FY 2022
BACWA BUDGET to ACTUAL

EXPENSES							
	Executive Board Support	$2,264	$2,264	$120	5%	-$2,144	2% increase, Day Carter & Murphy LLP
	Total	**$5,079**	**$5,079**	**$120**	**2%**	**-$4,959**	
Committees							
	AIR	$76,000	$76,000	$70,861	93%	-$5,139	$75k consulting support, $1k misc expenses. Carollo Engineers
	BAPPG	$130,000	$130,000	$94,392	73%	-$35,608	Includes CPSC @ $10,000, OWOW @ $10,000, and Pest. Reg Spt. @ $60,000
	Biosolids Committee	$0	$0	$0		$0	
	Collections System	$1,000	$0	$0	0%	-$1,000	
	InfoShare Groups	$1,750	$0	$0	0%	-$1,750	Funds for 2 workgroups ($750 for Asset Mgmt - new in FY21; $1,000 for O&M)
	Laboratory Committee	$1,000	$1,000	$1,000	100%	$0	
	Permits Committee	$1,300	$0	$20	2%	-$1,280	All meetings moved to include lunch hour for commuting purposes
	Pretreatment	$1,000	$0	$0	0%	-$1,000	
	Recycled Water Committee	$1,000	$0	$0	0%	-$1,000	
	Misc Committee Support	$45,000	$23,600	$4,140	9%	-$40,860	Lab Committee TNI Training; Assistance for SSS WDR Comments; Enhanced ACE support by AIR
	Manager's Roundtable	$1,000	$0	$0	0%	-$1,000	
	Total	**$259,050**	**$230,600**	**$170,413**	**66%**	**-$88,637**	
Collaboratives							
	Collaboratives						
	State of the Estuary (SFEP-biennial)	$0	$0	$0	0%	$0	Biennial in Odd Fiscal Years. (Paid bienniely in odd years for even year conference)
	Arleen Navarret Award	$2,500	$2,500	$0	0%	-$2,500	Biennial in Even Fiscal Years. Award amount increased in FY20
	BayCAN	$5,000	$5,000	$0	0%	-$5,000	New in FY22
	Stanford ERC (ReNUWIt)	$10,000	$0	$0	0%	-$10,000	Renuwit is coming to an end, no invoice this year
	Misc	$1,500	$5,000	$5,000	333%	$3,500	NBWA, Support for One Water
	Total	**$19,000**	**$12,500**	**$5,000**	**26%**	**-$14,000**	
Other							
	Unbudgeted Items						
	Other	$0	$0	$0	0%	$0	
		$0		**$0**	**0%**	**$0**	
Tech Support							
	Technical Support						
	Nutrients						
	Watershed	$2,600,000	$2,200,000	$2,200,000	85%	-$400,000	Advance funding for 2nd Watershed Permit Science Studies. No advance funding was sent this fiscal year.
	NMS Voluntary Contributions	$0	$0	$0	0%	$0	
	Additional work under permit	$100,000	$100,000	$0	0%	-$100,000	Includes HDR PO for $225k spread out over FY20-24.
	Regional Study on Nature based systems	$248,811	$248,811	$41,091	17%	-$207,720	SFEI PO for $500K, expires 6/30/2022
	Regional Recycling Evaluation	$63,525	$63,525	$0	0%	-$63,525	HDR PO for $154K FY20-24
	Nutrient Workshop(s)	$0	$0	$0	0%	$0	Pilot Studies/Plant Review/Innovative Technologies
	NMS Reviewer	$50,000	$50,000	$11,550	23%	-$38,450	
	General Tech Support	$100,000	$0	$0	0%	-$100,000	AB617 emission factors, nutrient technical review, other nutrient support. No anticipated technical support needs.
	CEC Investigations	$140,000	$140,000	$60,420	43%	-$79,580	PFAS Study Phase II
	Risk Reduction	$7,500	$12,500	$0	0%	-$7,500	APA FSS completed $12,500 contract in FY20, CIEA will complete $12,500 contract in FY22
	Total	**$3,309,836**	**$2,814,836**	**$2,313,061**	**70%**	**-$996,775**	
	TOTAL EXPENSES	**$4,116,285**	**$3,582,447**	**$2,875,881**	**69.87%**	**-$1,240,404**	
	PROJECTED EXPENSE DEVIATION FROM BUDGET		**-$533,838**				
	NET INCOME BEFORE TRANSFERS	**-$967,152**	**-$443,314**				
	TRANSFERS FROM RESERVES	**$967,152**	**$443,314**				aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS	**$0**	**$0**				
	TOTAL OPERATING BUDGET	**$806,449**					
	OPERATING RESERVE	**$201,612**					

BACWA Fund Report as of May 31, 2022

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	1,320,542	720,939	1,528,420	513,061	187,934	325,127
604	LEGAL RSRV	300,000	-	-	300,000	-	300,000
605	CBC	1,172,157	3,379,738	2,313,060	2,238,835	622,803	1,616,032
	SUBTOTAL 1	*2,792,699*	*4,100,677*	*3,841,480*	*3,051,896*	*810,737*	*2,241,159*
602	BABC	*112,737*	85,800	102,760	95,777	*21,791*	73,986
606	BACC	*29,091*	*72,366*	*69,143*	32,314	-	32,314
607	BACC LEGAL RSRV	-	*30,000*	-	30,000	-	30,000
610	WOT	275,143	-	3,291	271,852	-	271,852
	SUBTOTAL 2	*416,971*	*188,166*	*175,194*	*429,943*	*21,791*	*408,152*
	GRAND TOTAL	**3,209,670**	**4,288,843**	**4,016,674**	**3,481,839**	**832,528**	**2,649,311**

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

*Begginning fund balance adjusted October 2021 due to change in reported accounting basis.

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
800	BACWA	1,320,542	720,939	1,528,420	513,061	-	3,832	516,893	516,893	-	0%	-		priority # 3 for allocation
804	LEGAL RSRV	300,000	-	-	300,000	-	-	300,000	-	300,000	13%	-		priority # 1 for allocation
805	CBC	1,172,157	3,379,738	2,313,060	2,238,835	-	-	2,238,835	276,235	1,962,600	87%	-		priority # 2 for allocation
	SUBTOTAL 1	2,792,699	4,100,677	3,841,480	3,051,896	-	3,832	3,055,728	793,128	2,262,600	100%	-		
802	BABC	112,737	85,800	102,760	95,777	-	-	95,777	95,777	-	0%	-		pass-through funds, no allocation
806	BACC	29,091	72,366	69,143	32,314	(17,050)	-	15,264	15,264	-	0%	-		
807	BACC LEGAL RSRV	-	30,000	-	30,000	-	-	30,000	30,000	-	0%	-		
810	WOT	275,143	-	3,291	271,852	-	-	271,852	271,852	-	0%	-		pass-through funds, no allocation
	SUBTOTAL 2	416,971	188,166	175,194	429,943	(17,050)	-	412,893	412,893	-	0%	-		
	GRAND TOTAL	**3,209,670**	**4,288,843**	**4,016,674**	**3,481,839**	**(17,050)**	**3,832**	**3,468,621**	**1,206,021**	**2,262,600**	**-**			
						-	-	-	-					

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

Reconciliation to Trial Balance

Per Report above:			STB	14930	2,262,600	
General	4,100,677		STB	15050	1,206,021	
WOT, BABC, & BACC	188,166				**3,468,621**	-
PROP	-		STB	16300	17,050	
subtotal	**4,288,843**		STB	21350	(3,832)	
					3,481,839	-

Trial Balance Revenue Accounts

40100	Interest	(6,312)
40101	Mem Contrib	(1,350,076)
40102	Transfer	(1,034,652)
40103	Assoc Contrib	(183,175)
40104	Other	(1,714,628)
47310	State Grant	-
47320	Grant Retention	-
subtotal		**(4,288,843)**
Difference		**-**

BACWA Revenue Report as of May 31, 2022

Cost Center Code	Cost Center Description	Program Segment Description	Program Segment Value	Amended Budget	Current Period	FY22 - Year to Date	Unobligated
600	Bay Area Clean Water Agencies	BABC - AED and RPM Support	6200	(6,000.00)	-	(2,051.30)	3,948.70
		BACC - AED Support	6199	(27,200.00)	-	-	27,200.00
		BDO Affil/CS/Assoc Dues	6104	-	-	(38,087.00)	(38,087.00)
		BDO Affiliate/Associate Dues	6103	-	-	(39,295.50)	(39,295.50)
		BDO Assoc.&Affiliate Contr	6102	(187,793.00)	-	(105,792.36)	82,000.64
		BDO Fund Transfers	6141	(5,202.00)	-	(2,601.00)	2,601.00
		BDO Member Contributions	6101	(516,909.00)	-	(516,910.00)	(1.00)
		BDO Non-Member Contr AIR	6136	(7,075.00)	-	(7,074.72)	0.28
		BDO Non-Member Contr BAPPG	6135	(3,954.00)	-	(3,953.52)	0.48
		BDO Other Receipts	6105	-	-	(1,000.00)	(1,000.00)
		BDO Other Receipts (Misc)	6140	-	-	(2,601.00)	(2,601.00)
		BDO- Interest Income from LAIF	6142	(20,000.00)	-	(1,572.63)	18,427.37
		BDO-Alternative Investment Inc	6143	-	-	-	-
600 Total				**(774,133.00)**	**-**	**(720,939.03)**	**53,193.97**
602	Bay Area Biosolids Coalition	BDO Fund Transfers	6141		-	-	-
		BDO Member Contributions	6101		-	(85,800.00)	(85,800.00)
602 Total				**-**	**-**	**(85,800.00)**	**(85,800.00)**
605	Clean Bay Collaborative	BDO Fund Transfers	6141	-	-	(1,000,000.00)	(1,000,000.00)
		BDO Member Contributions	6101	(675,000.00)	-	(675,000.00)	-
		BDO Other Receipts	6105	(1,700,000.00)	-	(1,699,999.00)	1.00
		BDO- Interest Income from LAIF	6142	-	-	(4,739.05)	(4,739.05)
605 Total				**(2,375,000.00)**	**-**	**(3,379,738.05)**	**(1,004,738.05)**
606	Bay Area Chemical Consortium	BDO Member Contributions	6101	-	(757.76)	(72,366.08)	(72,366.08)
606 Total				**-**	**(757.76)**	**(72,366.08)**	**(72,366.08)**
607	BACC Legal RSRV	BDO Fund Transfers	6141	-	-	(30,000.00)	(30,000.00)
607 Total				**-**	**-**	**(30,000.00)**	**(30,000.00)**
Grand Total				**(3,149,133.00)**	**(757.76)**	**(4,288,843.16)**	**(1,139,710.16)**

BACWA Expense Detail Report for May 31, 2022

Cost Center Code	Program Segment Description	Program Segment Value	Balance Type	Current Period Activity	FY22 - Year to Date
600	AIR-Air Issues&Regulation Grp	6153	Actual	4,825.00	70,861.25
			Encumbrance	(4,825.00)	14,138.75
			Obligated	-	85,000.00
	AS-Assistant Executive Directo	6175	Actual	9,384.00	62,356.00
			Encumbrance	(9,384.00)	46,444.00
			Obligated	-	108,800.00
	AS-Audit Services	6180	Actual	-	-
			Encumbrance	-	5,345.00
			Obligated	-	5,345.00
	AS-BACWA Admin Expense	6173	Actual	91.83	116.07
			Obligated	91.83	116.07
	AS-EBMUD Financial Services	6176	Actual	6,793.78	16,891.22
			Encumbrance	(6,793.78)	25,556.78
			Obligated	-	42,448.00
	AS-Executive Director	6174	Actual	15,833.33	158,333.30
			Encumbrance	(15,833.33)	31,666.70
			Obligated	-	190,000.00
	AS-Insurance	6177	Actual	-	7,072.34
			Obligated	-	7,072.34
	AS-Regulatory Program Manager	6179	Actual	10,094.00	92,225.50
			Encumbrance	(10,094.00)	22,638.00
			Obligated	-	114,863.50
	Administrative Support	6178	Actual	-	1,000,000.00
			Obligated	-	1,000,000.00
	BC-BAPPG	6152	Actual	9,109.36	94,392.11
			Encumbrance	(9,109.36)	33,493.49
			Obligated	-	127,885.60
	BC-InfoShare Groups	6148	Actual	-	-
			Obligated	-	-
	BC-Laboratory Committee	6149	Actual	-	1,000.00
			Encumbrance	-	-
			Obligated	-	1,000.00
	BC-Manager's Roundtable	6154	Actual	-	-
			Obligated	-	-
	BC-Miscellaneous Committee Sup	6150	Actual	601.25	4,140.00
			Encumbrance	(601.25)	1,040.00
			Obligated	-	5,180.00
	BC-Permit Committee	6145	Actual	-	20.00
			Obligated	-	20.00
	BC-Pretreatment Committee	6151	Actual	-	-
			Obligated	-	-
	BC-Water Recycling Committee	6146	Actual	-	-
			Obligated	-	-
	CAR-BACWA File Storage	6165	Actual	-	720.00
			Obligated	-	720.00
	CAR-BACWA IT Software	6167	Actual	96.00	895.79
			Obligated	96.00	895.79
	CAR-BACWA IT Support	6166	Actual	-	-
			Encumbrance	-	2,652.00
			Obligated	-	2,652.00
	CAR-BACWA Website Dev/Maint	6163	Actual	-	770.00
			Obligated	-	770.00
	CAR-BACWA Website Hosting	6164	Actual	-	220.44
			Obligated	-	220.44
	CAS-Arleen Navaret Award	6160	Actual	-	-
			Obligated	-	-
	CAS-Misc Collaborative Sup	6162	Actual	-	5,000.00

Cost Center Code	Program Segment Description	Program Segment Value	Balance Type	Current Period Activity	FY22 - Year to Date
			Obligated	-	5,000.00
	CAS-Stanford ERC	6159	Actual	-	-
			Obligated	-	-
	GBS-Meeting Support-Annual	6170	Actual	4,517.00	10,917.62
			Obligated	4,517.00	10,917.62
	GBS-Meeting Support-Exec Bd	6169	Actual	-	334.50
			Obligated	-	334.50
	GBS-Meeting Support-Misc	6172	Actual	44.15	1,385.98
			Obligated	44.15	1,385.98
	GBS-Meeting Support-Pardee	6171	Actual	-	648.12
			Obligated	-	648.12
	LS-Executive Board Support	6156	Actual	-	120.00
			Encumbrance	-	2,144.00
			Obligated	-	2,264.00
	LS-Regulatory Support	6155	Actual	-	-
			Encumbrance	-	2,815.00
			Obligated	-	2,815.00
	WQA-CE-Nature Based Solutions	6196	Actual	-	-
			Obligated	-	-
	Write-Off Doubtful Accounts	6208	Actual	-	-
			Obligated	-	-
600 Total			**Actual**	**61,389.70**	**1,528,420.24**
600 Total			**Encumbrance**	**(56,640.72)**	**187,933.72**
600 Total			**Obligated**	**4,748.98**	**1,716,353.96**
602	AS-Assistant Executive Directo	6175	Actual	-	-
			Obligated	-	-
	AS-Regulatory Program Manager	6179	Actual	-	-
			Obligated	-	-
	Academia Research & Development	6203	Actual	-	-
			Obligated	-	-
	Administrative Support	6178	Actual	-	-
			Obligated	-	-
	BDO Contract Expenses	6186	Actual	-	-
			Obligated	-	-
	Collateral Development	6197	Actual	-	-
			Obligated	-	-
	Program Manager Expense	6202	Actual	6,578.00	100,260.30
			Encumbrance	(6,578.00)	21,791.00
			Obligated	-	122,051.30
	Technology Research & Development	6206	Actual	-	2,500.00
			Obligated	-	2,500.00
602 Total			**Actual**	**6,578.00**	**102,760.30**
602 Total			**Encumbrance**	**(6,578.00)**	**21,791.00**
602 Total			**Obligated**	**-**	**124,551.30**
605	Recycled Water Evaluation	6198	Actual	-	-
			Encumbrance	-	-
			Obligated	-	-
	WQA - CEC Investigations	6201	Actual	17,088.80	60,419.75
			Encumbrance	(17,088.80)	301,220.00
			Obligated	-	361,639.75
	WQA-CE Addl Work Under Permit	6191	Actual	-	-
			Encumbrance	-	-
			Obligated	-	-
	WQA-CE Risk Reduction	6190	Actual	-	-
			Encumbrance	-	25,000.00
			Obligated	-	25,000.00
	WQA-CE Voluntary Nutr Contrib	6193	Actual	-	-
			Obligated	-	-
	WQA-CE-Nature Based Solutions	6196	Actual	5,971.50	41,091.00
			Encumbrance	(5,971.50)	258,133.50

Cost Center Code	Program Segment Description	Program Segment Value	Balance Type	Current Period Activity	FY22 - Year to Date
			Obligated	-	299,224.50
	WQA-CE-Nutrient WS Permit Comm	6188	Actual	-	2,200,000.00
			Obligated	-	2,200,000.00
	WQA-CE-Technical Support	6181	Actual	-	-
			Obligated	-	-
	WQA-NMSReviewer	6205	Actual	750.00	11,550.00
			Encumbrance	(750.00)	38,450.00
			Obligated	-	50,000.00
605 Total			**Actual**	**23,810.30**	**2,313,060.75**
605 Total			**Encumbrance**	**(23,810.30)**	**622,803.50**
605 Total			**Obligated**	**-**	**2,935,864.25**
606	Administrative Support	6178	Actual	-	39,142.79
			Encumbrance	-	-
			Obligated	-	39,142.79
	BDO Fund Transfers	6141	Actual	-	30,000.00
			Obligated	-	30,000.00
606 Total			**Actual**	**-**	**69,142.79**
606 Total			**Encumbrance**	**-**	**-**
606 Total			**Obligated**	**-**	**69,142.79**
610	Administrative Support	6178	Actual	51.16	2,703.19
			Obligated	51.16	2,703.19
	BDO Contract Expenses	6186	Actual	-	587.61
			Obligated	-	587.61
610 Total			**Actual**	**51.16**	**3,290.80**
610 Total			**Encumbrance**	**-**	**-**
610 Total			**Obligated**	**51.16**	**3,290.80**
Grand Total Actual				**91,829.16**	**4,016,674.88**
Grand Total Encumbrance				**(87,029.02)**	**832,528.22**
Grand Total Obligated				**4,800.14**	**4,849,203.10**

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 6

MEETING DATE: July 15, 2022

TITLE: Request for BACWA Executive Board Approval for Agreement with Eric Gouldsberry Art Direction for Recycled Water Training Videos

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

RECOMMENDED ACTION

Authorize contract with Eric Gouldsberry Art to provide professional training, prepare comment letters, and provide policy support in an amount not to exceed $9,650.00 for FY23.

SUMMARY

In 2021, the Recycled Water Committee determined that training videos for recycled water site supervisors would be a beneficial tool for BACWA member agencies. Site supervisors are the individuals responsible for maintaining recycled water distribution systems and use areas. Site supervisor training is a required element of recycled water programs under the State General Order for Recycled Water Use (Order No. 2016-0068-DDW), in which many BACWA member agencies were enrolled in 2020. Training is offered in-person and online.

In early 2022, the Recycled Water Committee leadership and Regulatory Program Manager reached out to several video editing firms to provide quotes for assistance with this project; although BACWA member agencies will be collecting the raw footage, a professional video editor is needed to produce the final videos. Eric Gouldsberry Art Direction was selected based on price and ability to complete the work. At the April 15, 2022 Executive Board meeting, the BACWA Executive Board approved a budget of $20,000 for FY23 to cover this work, contingent upon consultant support contracts being brought to the Executive Board for approval. This contract covers video editing for four (4) 10-minute videos that will cover site supervisor responsibilities, cross connection control, water quality, and other recycled water topics.

FISCAL IMPACT

The funding for this contract is consistent with the Fiscal Year 2023 workplans and budget for BACWA and Special Programs.

ALTERNATIVES

1. Do not approve consultant support. This alternative is not recommended since this work was included in BAPPG's approved FY23 budget and will assist BACWA members in more efficiently fulfilling regulatory requirements.
2. Select another consultant to conduct the work. This alternative is not recommended since BACWA has already selected a qualified consultant through a competitive process.

Attachments: FY23 Contract, including Exhibit A (Estimate from EGAD)

Approved: _____ Date: July 15, 2022

Amit Mutsuddy, Chair,
BACWA Executive Board

Date: 07/8/22

BAY AREA CLEAN WATER AGENCIES

CONSULTING AGREEMENT

TO:	Eric Gouldsberry Eric Gouldsberry Art Direction (EGAD) 4101 Ashbrook Circle San Jose, CA 95124	egad@gouldsberry.com 408.394.8455
FROM:	Lorien Fono, Executive Director Bay Area Clean Water Agencies (BACWA) PO Box 24055, MS702 Oakland, CA 94623	lfono@bacwa.org 510.684.2993

RE: BACWA Agreement for FY23, Recycled Water Committee Support

This Agreement covers professional services to be performed by Eric Gouldsberry Art Direction (EGAD) to produce BACWA Recycled Water training videos for the BACWA Recycled Water Committee. This work is described in the attached estimate (Exhibit A) and will be completed under the direction of Mary Cousins, BACWA Regulatory Program Manager, on behalf of the Recycled Water Committee co-chaired by Stefanie Olson (Dublin San Ramon Services District) and Reena Thomas (East Bay Municipal Utility District). The total cost of professional services to be performed by EGAD is not to exceed $9,650. This contract will be funded by the BACWA Budget for FY23 under the Recycled Water Committee line item.

This Agreement may be terminated by either party at any time for convenience with 30 day's notice. In the event of termination by BACWA, BACWA shall pay EGAD for professional and competent services rendered to the date of termination upon delivery of assigned work products to BACWA. Otherwise, this contract shall terminate on June 30, 2023.

The schedule for this agreement is as follows:

- EGAD will deliver draft videos within 6 weeks of receiving all audio and video source files from BACWA.
- After BACWA provides comments on the draft videos, EGAD will produce finished videos within 2 weeks. This schedule assumes that extensive revisions will not be required, as noted in Exhibit A.

BACWA shall pay EGAD based on the estimate in Exhibit A. EGAD shall submit invoices via email to Jennifer Dyment, Assistant Executive Director (jdyment@bacwa.org) with a copy to Lorien Fono, Executive Director (lfono@bacwa.org). Invoices shall include the a brief description of the work performed. Invoices will be paid via check payable to Eric Gouldsberry Art Direction and mailed to the address above within thirty (30) days of receipt.

Approved:

By _____
Amit Mutsuddy
Chair, BACWA Executive Board

By _____
Eric Gouldsberry
Eric Gouldsberry Art Direction

Date _____

Date _____

BACWA EIN: 94-3389334

Tax Identification No. _____

ERIC GOULDSBERRY ART DIRECTION

ESTIMATE

BACWA Training Videos

CONTACT Mary Cousins
EMAIL mcousins@bacwa.org
DATE Revised July 7, 2022

Art direction, design and production/editing of four separate 10-minute training videos. Project milestones will consist of: Review of BACWA script/storyline, visual template concepts, recommendation of imagery, search for stock background music, review of provided video/imagery, consultation of audio process and enhancement of audio narration, production/editing and uploading of all finished videos. BACWA will provide all text, video and other imagery. Assumes no onsite meetings or onsite photo/video direction. Sales tax not included as final product will be delivered digitally.

Design/Art Direction	$1,500
Visual/Template Concepts	450
Audio Consulting/Mixing	600
Video Production/Editing	6,500
Video/Phone Meetings	300
General/Administrative	100
Expenses (Stock Music/Sound Effects)	200
EGAD Total	**$9,650**

TERMS & CONDITIONS

This estimate is based on the description of the project as discussed, and could change depending on any different direction client chooses to take. Remember, this is just an estimate; the figures here represent what the actual cost will be in as accurate a manner as possible.

Revision stages are included within the price; **extensive client revisions could raise the final cost above this estimate**. Revisions for which Eric Gouldsberry Art Direction is responsible will not be billed. If there are changes in the requirements or scope of the project, Eric Gouldsberry Art Direction reserves the right to change the proposal. If the project is completed below estimate, the fee will be lowered accordingly.

If the project is canceled or postponed prior to completion, Eric Gouldsberry Art Direction will be paid for all services and expenses incurred up to that point.

Final billing terms are net 30 days. A 6% per month service charge will be made on unpaid balances after 30 days.

July 11, 2022

Subject: BACWA Comments on Draft VPA Analysis

Dear Dr. Chelsky:

Thank you for the opportunity to review the May 2022 Tetra Tech draft ***Technical Report Virginian Province Approach to Dissolved Oxygen in Lower South San Francisco Bay Sloughs***. As requested, the following BACWA recommendations pertain to the science and regulatory policy issues that the draft illuminates and which the Assessment Framework (AF) Committee should consider. In addition to the comments herein, we are enclosing a redlined Word file with editorial comments directly in the document.

1. **Apply lessons from Suisun Marsh effort to Lower South Bay.** In general, the draft indicates that the VPA can be adapted reasonably easily to the Lower South Bay (LSB), despite the geographical distance and the different mix of organisms. The successful use of the approach to set standards for Suisun marshes is a powerful argument to use for the LSB. In fact, it might make more sense to start with the Suisun Bay standards (Flippin et al. 2021) as the basis and determine if there are any parts of the LWB where they are not relevant. In addition, the success of the standards in the Chesapeake Bay (Tango and Batiuk 2013) and Florida (FDEP 2013) provide strong support for the use of a similar process in LSB.

2. **Revise the structure of the LSB AF Work Plan.** At its inception, the work plan consisted of three tasks: (1) Apply the Virginia Province Approach (VPA) to develop thresholds relevant to LSB sloughs and tidal creeks; (2) Explore approaches that estimate protective DO levels based on biota metabolic requirements that vary with temperature: , and (3) Analyze fish community data from LSB to examine relationships between habitat conditions and fish abundance. By its nature the VPA requires some elements of fish community analysis to decide which species to use for the VPA comparison. This overlap is most strongly felt in Task 1.4, and in fact, the selection of relevant species will dramatically affect the outcome. One possible way of addressing the issue would be to remove the Task 1.4 section and address it in a separate document. Another alternative would be to have one inclusive final document and simply use the Tetra Tech work and the work from the other two tasks as feeder into one final document.

3. **Designate beneficial use boundaries.** The Tetra Tech draft makes clear the complications of considering the LSB as a single habitat used by both annual residents and by seasonal migratory species at varied life stages. The final report should provide an easily understood table of how these designated uses fit together for the LSB. An

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example from the Chesapeake Bay Program (Table 1) is attached below as a potential model.

4. **Consider LSB's current and future water quality.** Tetra Tech has some discussion of the available flows and water quality in the sloughs (Task 1.4; p. 25) and how they will control the suitability of that habitat for juvenile salmon and sturgeon and for adult or subadults migrating to upstream spawning areas. Given their finding that the choice of designated-use species will drive the selection of the dissolved oxygen (DO) criteria, it will be crucial that all the stakeholders are working with the same assumptions. Much of the state's water policy in response to the drought emphasizes water recycling and reuse, with the outcome that the LSB habitat will have significant increases in salinity and temperature due to the corollary decrease in freshwater effluent volume.

TABLE 1. Chesapeake Bay Water Quality Criteria (from USEPA, 2003a).

Designated Use	Criteria Concentration/Duration	Protection Provided	Temporal Application
Migratory fish spawning and nursery use	Seven-day mean ≥6 mg/l (tidal habitats with 0-0.5 salinity)	Survival/growth of larval/juvenile tidal-fresh resident fish; protective of threatened/endangered species	February 1-May 31
	Instantaneous minimum ≥5 mg/l	Survival and growth of larval/juvenile migratory fish; protective of threatened/endangered species	
	Open water fish and shellfish designated use criteria apply		June 1-January 31
Shallow water bay grass use	Open water fish and shellfish designated criteria apply		Year-round
Open water fish and shellfish use[1]	30-day mean ≥5.5 mg/l (tidal habitats with ≤0.5 salinity)	Growth of tidal-fresh juvenile and adult fish; protective of threatened/ endangered species	Year-round
	30-day mean ≥5 mg/l (tidal habitats with >0.5 salinity)	Growth of larval, juvenile, and adult fish and shellfish; protective of threatened/endangered species	
	Seven-day mean ≥4 mg/l	Survival of open water fish larvae	
	Instantaneous minimum ≥3.2 mg/l	Survival of threatened/endangered sturgeon species[1]	
Deep water seasonal fish and shellfish use	30-day mean ≥3 mg/l	Survival and recruitment of bay anchovy eggs and larvae	June 1-September 30
	One-day mean ≥2.3 mg/l	Survival of open water juvenile and adult fish	
	Instantaneous minimum ≥1.7 mg/l	Survival of bay anchovy eggs and larvae	
	Open water fish and shellfish designated use criteria apply		October 1-May 31
Deep-channel seasonal refuge use	Instantaneous minimum ≥1 mg/l	Survival of bottom-dwelling worms and clams	June 1-September 30
	Open water fish and shellfish designated use criteria apply		October 1-May 31

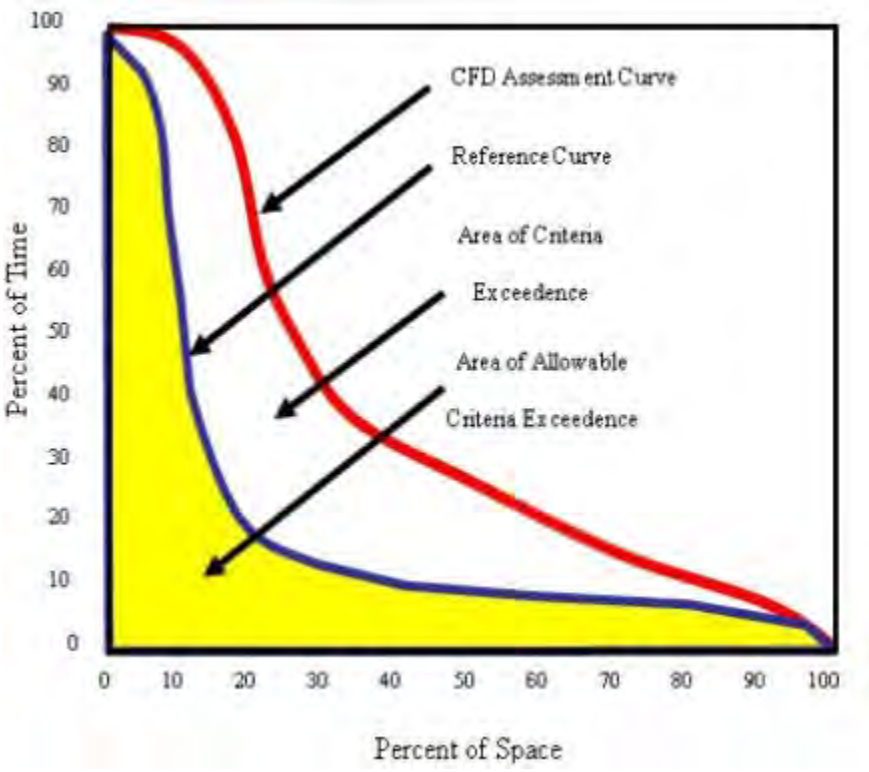
[1]At temperatures considered stressful to shortnose sturgeon (*Acipenser brevirostrum*) (>29°C) dissolved oxygen concentrations above an instantaneous minimum of 4.3 mg/l will protect survival of this list sturgeon species.

5. **Explain the impact of DO concentration vs. percent saturation.** Insufficient information is presented to fully understand the impact of the decision to use percent saturation rather than concentration as a standard. Particularly problematic is the complication raised in Tetra Tech's discussion (Sec. 1.4, p. 22): "DO toxicity data for these species were derived from tests conducted in fresh water. Available information suggests that DO sensitivity for euryhaline species is greater as salinity decreases. Thus, the DO sensitivity data used in the VPA for these species may overestimate their sensitivity as juveniles in brackish or saline water in the sloughs." Tetra Tech should consider how to adjust its DO toxicity criteria for the high temperature and salinity in the LSB seasons when DO concentrations are lowest.

6. **Use appropriate data for characterizing LSB temperature and salinity.** Tetra Tech uses the data set from Lewis et al., 2018 to define mean concentrations in the four sloughs (Table 9). The volume of data of these data sets are only a small subset of SFEI's extensive monitoring and modeling program. Tetra Tech should specify and define a request for an SFEI temperature/salinity data product that defines the frequency distribution of these data from its monitoring and modeling program.

7. **Closely link water quality criteria to water quality attainment assessment.** While the LSB is small in spatial extent, it has some quite distinct sub-habitats, which are used quite differently by its flora and fauna. Within these locations, DO concentrations can vary dramatically from 0–10+ ppm, a result of daily and seasonal diurnal and tidal forcing. It is not clear that traditional water quality standard approaches of acute and

chronic criteria are relevant. The Chesapeake Bay Program addressed this issue (Tango and Batiuk 2013) by developing Biological Reference Curves for local "reference" areas that could be used to describe natural variation in DO profiles. In adapting the VPA approach to LSB, the next Tetra Tech draft report should specify locations and frequency of LSB DO monitoring sites that would clearly indicate to all the stakeholders how DO compliance will be assessed.



On behalf of the BACWA agencies, thank you for the opportunity to review the document. We look forward to reviewing future SFEI products.

Sincerely yours,

Dr. Lorien Fono
Executive Director, BACWA

July 6, 2022

James Parrish
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

VIA EMAIL: James.Parrish@waterboards.ca.gov

Subject: 2022 Nutrient Watershed Permit - Special Studies Status Report

Dear James Parrish,

On behalf of BACWA's member agencies covered by the Nutrient Watershed Permit (R2-2019-017), BACWA is pleased to submit this 2022 status update on our work to perform 1) the Regional Evaluation of Potential Nutrient Discharge Reduction by Natural Systems; and 2) the Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling. This update is required by the Nutrient Watershed Permit Provisions VI.C.2.c and VI.C.3.c.

Following the submission of the two Scoping and Evaluation Plans in December 2019, BACWA has worked with its consulting teams to make significant progress on both of the Special Studies. The teams working on the two projects are collaborating to ensure that their work products will be comparable to one another as well as to the data provided in the Optimization and Upgrade Report submitted in compliance with the first Watershed Permit.

For the Regional Evaluation of Potential Nutrient Discharge Reduction by Natural Systems, the team has completed the following tasks:

- Performed outreach to all of the region's wastewater agencies to refine the desk-based report released in early-2021: *Nature-based Solutions for Nutrient Removal: Opportunities and Constraints Analysis.*
- Performed site inspections and interviews with staff at eight (8) Bay Area water resource recovery facilities (WRRFs).
- Completed site-specific reports identifying nature-based solutions (NbS) alternatives for two (2) WRRFs. An additional six (6) reports are in draft form.
- Gave periodic presentations to BACWA representatives and stakeholders representing other projects intending to advance NbS for shoreline resiliency and pollution reduction in the region. Such projects include the Bay Area One Water Network (BAOWN), a ReNUWiT initiative.
- Conducted on-going efforts involving convening or participating in meetings to encourage coordination among projects aligned to the NbS project, including BAOWN, Transforming

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Shorelines, Bay Adapt, and project-specific actions involving effort to address obstacles to NbS implementation and management.

For the Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling, the team has completed the following tasks:

- Drafted approximately half of the individual plant reports. Each plant report (about 20-25 pages) has a similar layout as the 1st Watershed Permit with an Executive Summary Table/Brief Write-Up, Intro, Methods, and Results/Discussion
- Compiled recycled water data including projections in flows/nutrient loads through 2045. The data will be refined as plants review their plant reports.
- Included recycled water data in the 2022 Group Annual Report submission.

The Final Report will have a similar layout to the first Watershed Permit Optimization and Upgrade Report, in that it will include a main body that summarizes and synthesizes the individual agency reports. The individual agency reports will be included as appendices.

BACWA anticipates submitting the Final Reports for the two Special Studies in advance of the July 1, 2023 deadline.

Please do not hesitate to contact me if you have any questions.

Respectfully,

Lorien Fono

Executive Director
Bay Area Clean Water Agencies

cc: BACWA Board
BACWA Watershed Permit Points of Contact
Tom Mumley, Regional Water Quality Control Board
Robert Schlipf, Regional Water Quality Control Board

AGENDA

BACWA Nutrient Strategy Team Meeting

Thursday July 26, 2022

10:00am – 12:00 pm

1. Introductions and Public Comment

2. Review Presentation to Water Board
    a) Points of Agreement between BACWA and Water Board
        i Establish caps based on antidegradation
        ii All agencies in compliance in 2024
        iii Enforcement based on Baywide cap
        iv Avoid unintended consequences
        v Incentivize early actors and multibenefit projects
    b) Data Variability and need to methods of developing caps
    c) Review of known factors impacting TIN loads (growth, RW, upgrades, etc)
    d) Proposal – Upper Tolerance Limit
    e) Accommodation of growth
    f) Compliance calculations
    g) Baywide vs individual cap
    h) Consequences for exceedance of Caps
    i) Early Actors
    j) Multi-benefit projects
    k) Cogeneration and solids projects

3. Update presentation based on group input

4. Adjourn

AIR ISSUES & REGULATIONS COMMITTEE
A Committee of the Bay Area Clean Water Agencies

BACWA-BAAQMD
Implementation Workgroup
Meeting Agenda

Date:	July 18, 2022
Time:	3-5 pm
Zoom Link:	Access link in meeting invite
Call-in:	Included in meeting invite

1) **Introductions**
2) **Overview of Previous Meeting: Decisions and Action Items**
3) **Collaborative Fact-Finding: BACWA and Regional Water Board**
4) **Air Toxics: Intersection of BAAQMD and State Regulations**
   a) BAAQMD Rule 2-5
   b) BAAQMD Rule 11-18
   c) CARB Criteria Air Pollutant and Air Toxics Reporting Regulation (CTR, AB 617)
   d) CARB Air Toxics "Hot Spots" Program Emission Inventory Criteria and Guidance Regulation (EICG, AB 2588)
5) **Wastewater Sector Two-Step Process**
   a) Summary of negotiated statewide "Two-Step Process" to comply with CARB's CTR Regulation (including list of CARB staff involved, approach to engaging air districts, timeline, and relevance to emission estimates required by BAAQMD Rules 2-5 and 11-18)
   b) California Association of Sanitation Agencies' Role, Initial Scoping, and Participating Agency Governance Structure
   c) Identify BAAQMD staff to engage
6) **Other Opportunities for Collaboration between BACWA and BAAQMD**
   a) South Bay Odor Study
   b) $PM_{2.5}$ Local Risk Methodology Development
   c) Other?
7) **Action Item Summary**
8) **Schedule Next Quarterly Meeting**
9) **Adjourn**

Pardee Technical Seminar 2022

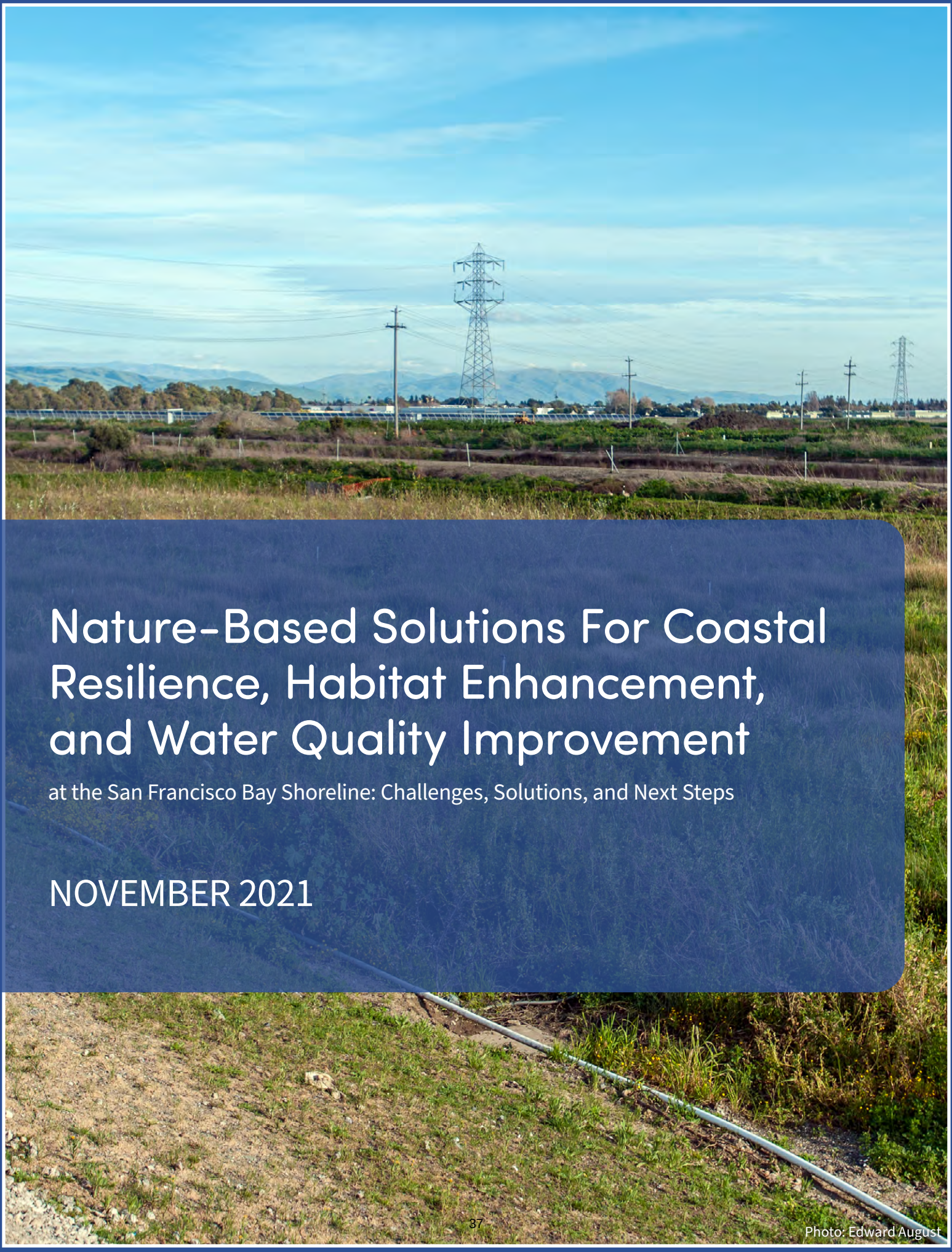
Key topics

Thursday September 8

- Financial Review
- Strategic Plan review and ED performance eval/plan
- What's on the regulatory horizon for the next year?
- BAAQMD check in – how is the workgroup going and how can we improve?
- CASA 2-step process SOW for air toxics study - how does BACWA fit in?
- Plan for engagement with Water Board on 9/9

Thursday September 9

- Nutrient science plan review
    - Progress on assessment framework
    - Interface with SCCWRP on Ocean modeling
- Update on Nutrient Watershed Permit Special Studies
    - Recycled Water
    - Nature-Based Solutions
- Follow-up to 7/28 Nutrient Discussion with Water Board
- Additional regulatory items
    - CECs and PFAS
    - Biosolids
    - Climate Change
    - SSS WDR



Nature-Based Solutions For Coastal Resilience, Habitat Enhancement, and Water Quality Improvement

at the San Francisco Bay Shoreline: Challenges, Solutions, and Next Steps

NOVEMBER 2021

Photo: Edward August

San Francisco Estuary Partnership

Bay Area Metro Center
375 Beale Street, Suite 700,
San Francisco, CA 94105

sfestuary.org

Bay Area One Water Network

4120 O'Brien Hall,
University of California Berkeley,
Berkeley CA 94720

bayareawater.org

Nature-Based Solutions For Coastal Resilience, Habitat Enhancement, and Water Quality Improvement at The San Francisco Bay Shoreline: Challenges, Solutions, and Next Steps

By Sasha Harris-Lovett,[1] Josh Bradt,[2] Liz Juvera,[2] Heidi Nutters,[2] and Ian Wren[3]

Suggested Citation
Harris-Lovett, S., Bradt, J., Juvera, L., Nutters, H., and Wren, I. *Nature Based Solutions for Coastal Resilience, Habitat Enhancement, and Water Quality Improvement at the San Francisco Bay Shoreline: Challenges, Solutions, and Next Steps*. San Francisco Estuary Partnership and Bay Area One Water Network, 2022.

1. Bay Area One Water Network, University of California - Berkeley; 2. San Francisco Estuary Partnership; 3. Consultant.

Executive Summary

The successful implementation of Nature-based Solutions (NbS) along the San Francisco Bay shoreline offers a pathway to sustainable coastal resilience that is equitable, economical, and long-lasting. However, this pathway is not easily paved without careful planning and collaboration.

Over the course of a three-day workshop hosted by the San Francisco Estuary Partnership (SFEP) and Bay Area One Water Network, participants shared insights on the cross-sectoral challenges facing stakeholders impacted by NbS, goals and drivers behind NbS for shoreline resilience in the Bay Area, and opportunities for working together to create shared solutions that lead to the implementation, funding, and regulation of NbS. Participants represented diverse stakeholder groups including regulatory agencies, community-based organizations, wastewater agencies, academic institutions, and shoreline planning groups. The workshop was facilitated by staff from SFEP, the Bay Area One Water Network, and the Meridian Institute.

Emerging from this workshop were a set of both expected and innovative ideas for how to proceed, as well as lessons learned that can help guide work in this field for years to come. The throughline of these ideas rang clear: there is no one-size-fits-all approach to designing, planning, or implementing NbS. These varied infrastructural assets (such as horizontal levees, floating wetlands, oyster reefs, etc.) are place-based, nuanced, and have tangible impacts on all stakeholders. Their planning and implementation should be guided by several key goals: be cost-effective, adaptable, achievable, provide long-term value, steward the natural environment, and serve the surrounding communities.

This report provides a summary of workshop themes and outcomes, along with key near-term milestones to strategically advance towards multi-benefit shoreline resilience in the Bay Area. Important audiences for the report include regional, state, and local partnerships working to advance NbS in communities, elected officials, project funders, technical experts, community groups, and academics.

This report also calls on decision makers to examine the lens with which they execute place-based infrastructural work to ensure that community members and Tribes with local knowledge are empowered to lead and have ample representation throughout the entire process.

Photo: Rick Lewis

Key Takeaways

- Current pathways to permitting NbS are complex, expensive, and time-consuming. Regulatory agencies must collaborate to increase transparency, streamline cross-agency planning, and incentivize multi-benefit NbS.
- The voices and lived experience of communities and Tribes have historically been excluded from the planning process, including for NbS. Developing meaningful partnerships and a formalized, capacity-building system for community and tribal engagement will create a sustainable route to improved and expedited project implementation.
- Funding for NbS is dispersed and difficult to access. Opportunities for collaborative funding for partnerships, innovations, and pilot projects should be explored and encouraged.
- Working with landowners, multiple agencies, and businesses, and involving community members in the process is often slow and cumbersome. Public-private partnerships or new entities (such as joint powers authorities) may be critical mechanisms to address the development of multi-benefit solutions given the complex landscape of land ownership, land use, and infrastructure on the SF Bay shoreline.

NbS for shoreline resilience will not occur without concerted, sustained effort. Regional opportunities for building partnerships, defining performance criteria, engaging in a master-planning process that builds upon previous work, evaluating permitting processes, and investing in community and tribal engagement are critical for advancing NbS for shoreline resilience.

Photo: San Francisco Estuary Partnership Archive

About This Report

This report reflects a synthesis of discussions held at a virtual roundtable discussion on nature-based solutions for shoreline resilience (NbS) in the San Francisco Bay Area. The roundtable, held on November 2-4, 2021, was hosted by the San Francisco Estuary Partnership and the Bay Area One Water Network. The roundtable aimed to:

- Characterize the key cross-sectoral barriers to adopting NbS and identify practical strategies for overcoming them while still protecting ecosystems and communities.
- Develop a strategy and roadmap of next steps to advance funding and regulatory support for NbS in the San Francisco Bay Area.
- Identify allies and forge partnerships for collaboration on the planning, implementation, and maintenance of NbS projects.

The roundtable and report are part of the San Francisco Estuary Partnership's Transforming Shorelines Project, which works to:

- Build regional capacity for NbS through technical support and analyses
- Advance a suite of NbS projects through design, permitting, and implementation
- Advance state-of-the-art approaches to water quality improvement at the Oro Loma Horizontal Levee site.

This report complements a series of documents developed by the Bay Area One Water Network intended to assess options for advancing water system sustainability, resilience, and security in the San Francisco Bay Area (Bay Area). By sharing lessons learned, showcasing successes, and identifying best practices, the Bay Area One Water Network aims to inform decision-makers about approaches that can enable them to meet the Bay Area's future water needs.

This report acknowledges the need to reevaluate planning strategies to meaningfully engage communities, starting by centering frontline and tribal stakeholders in the conversation early in the planning process. The NbS roundtable planners engaged professionals with diverse expertise to participate in this workshop. Invitees included regulators, land-use planners, wastewater and flood control managers, leaders from community-based groups, businesses and researchers (see Appendix A for a list of participants). The varied backgrounds and insights of roundtable participants included in this synopsis are a critical piece of our regional effort towards a resilient, vibrant, and ecologically healthy shoreline. This cross-sector collaboration is starting, but more must be done to make regional environmental planning processes more inclusive and equitable.

The Bay Area One Water Network and the San Francisco Estuary Partnership prepared this report with support from the sponsors of the Bay Area One Water Network and the US Environmental Protection Agency. The workshop was facilitated by staff from SFEP, the Bay Area One Water Network, and Molly Mayo of the Meridian Institute. While this report synthesizes the themes and ideas presented in the November 2021 roundtable discussion, this document does not represent a comprehensive assessment of NbS opportunities in the Bay Area. Instead, the intent is to identify key challenges and potential solutions to spur discussion and facilitate action.

Photo: Karl Nielsen

Land Acknowledgement

The report authors honor and acknowledge the many Ohlone tribal groups and families, including the Ramaytush and Chochenyo, as well as the Coast and Bay Miwok, Southern Pomo, Wappo, and Patwin peoples as the rightful stewards of the lands on which we reside. Work to protect and restore the margins of the Bay should acknowledge and be informed by the history of injustices, by the fact that we are working on the land of Native people who were forced to relocate, and by the fact that our work is often adjacent to or even on top of sacred cultural sites. Recognizing the intersections between wetland restoration, shoreline recreation, and historical sacred sites can facilitate opportunities throughout our estuary to restore, create, and protect for multiple purposes. We do this work in good faith, knowing it is centrally important that we work toward repair, reconciliation, and reparations wherever possible.

Introduction

Sea level rise poses major challenges to the San Francisco Bay Area. Mean water levels at the Golden Gate Bridge in 2018 were 7 inches (18 cm) higher than they were in 1900 (Office of Environmental Health Hazard Assessment and California Environmental Protection Agency 2018) and experts expect an additional 40 inches (100 cm) of sea level rise by 2100 (California Natural Resources Agency 2018).

Collective action is necessary to protect the region's communities and infrastructure from sea level rise. A broad set of stakeholders make decisions about, and will be affected by, the complex challenge posed by sea level rise. Stakeholders with an interest in these discussions include tribal organizations, community-based groups, water managers, regulatory agencies, governmental agencies, businesses, environmental advocates, and science institutions. Cross-sector collaboration among these groups is imperative to achieving effective and equitable outcomes.

Transforming shorelines for resilience requires innovative, boundary-spanning approaches. Over the coming years and decades, the Bay Area faces complex, interrelated, and expensive water management and infrastructure decisions. The region must simultaneously reduce the amount of contaminants in treated wastewater and stormwater, restore ecological health to aquatic and coastal ecosystems, engage underrepresented communities in planning processes, secure reliable potable water resources, mitigate sea level rise impacts, and replace aging infrastructure.

Nature-based Solutions (NbS) are particularly promising for providing multiple benefits to address the Bay Area's shoreline challenges. The International Union for Conservation of Nature defines nature-based solutions as "actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits." NbS benefits can include habitat improvement, public access to open space, protection of infrastructure or habitat in the face of rising sea levels, access for traditional cultural uses, and water quality improvement. In comparison, while appropriate in certain circumstances, hardening shorelines (i.e., sea walls) in response to sea level rise provides a sole benefit of local flood risk reduction, but will likely exacerbate flooding elsewhere in the estuary (Hummel et al. 2021).

A great deal of funding at the local, state, and federal levels is available to engage communities to plan and implement NbS for shoreline resilience. Measure AA, which 70% of Bay Area voters supported, provides $500 million for wetland restoration over 20 years ("San Francisco Bay Restoration Authority" 2016). The Federal Emergency Management Agency (FEMA) allocated $919 million to fund climate hazard mitigation through its 'Building Resilient Infrastructure and Communities' (BRIC) program in 2021 alone. The State of California has designated $3.7 billion to climate resilience projects in the next three years, with 1.37 billion of that specifically earmarked for "multi-benefit and nature-based solutions" (State of California 2021a; 2021b).

Planning for the shoreline's future is critical for Bay Area communities to be resilient to a changing climate. Many local and regional plans and guidance documents exist, prepared by community-based groups, government agencies and other stakeholders. Project staff worked in coordination with these efforts during the planning and follow up process. Opportunities are being explored to transfer the key findings of this report to the decision-makers and audiences associated with these efforts. Some key plans that informed the scope and focus of the roundtable include:

- The **Recovery Plan for Tidal Marsh Ecosystem for Northern California** clarifies the scale of habitat restoration necessary to support endangered marsh species in the face of a changing climate in the Bay Area (U.S. Fish and Wildlife Service 2013).
- The **Adaptation Atlas** develops a science-based framework for adaptation strategies at the scale of operational landscape units, which take advantage of natural processes along the diverse Bay shoreline (San Francisco Estuary Institute and SPUR 2019).
- The BayAdapt process convened stakeholders to delineate a roadmap for adaptation to sea level rise. The emergent **BayAdapt Joint Platform** focuses on people, information, plans, projects, and progress to catalyze shoreline protection (San Francisco Bay Conservation and Development Commission 2021).
- The Bay Area Regional Water Quality Control Board is evaluating potential amendments to the **Basin Plan** to better understand the permitting challenges and opportunities for habitat restoration and nature-based shoreline resilience projects (San Francisco Bay Regional Water Quality Control Board 2019b).
- The **Estuary Blueprint**, led by the SF Estuary Partnership, maps out the regional actions needed for a healthy, resilient San Francisco Estuary, including a suite of measures on water, climate change, habitat, and stewardship (San Francisco Estuary Partnership 2016).
- The San Francisco Bay Joint Venture's **Implementation Plan** identifies habitat needs for fish and wildlife species, identifies projects that will address those needs and helps identify and achieve funding for those projects, some of which will be NbS.

Several community-based groups are also organizing and planning around sea level rise and climate adaptation, and staff members from several of these groups attended the roundtable. As communities and agencies across the region grapple with climate change, deeper partnerships will need to be established. Ongoing inequities and past mismanagement affect relationships between marginalized communities and government institutions seeking to co-create solutions. Some of the recommendations in this report point to the need for building trust and stronger relationships among staff members at government agencies, community-based groups, tribal partners and residents in historically marginalized communities. Agencies are in an iterative learning process to build cultural competency, capacity for ongoing engagement, and trust within the communities they serve. This process will be important to implementing some of the community and equity recommendations in this report.

Bay Area wastewater agencies are important stakeholders for regional shoreline transformation efforts due to the proximity of most of their treatment plants to the Bay and the recognized vulnerability to sea level rise. Some wastewater agencies are considering adopting NbS for the multiple benefits they can provide, including water quality improvement and protection from sea level rise. Concern about excessive nutrient levels in the San Francisco Bay (i.e., eutrophication) drives wastewater agency interest in NbS: wastewater treatment plants discharge up to 120,000 pounds (54,000 kg) of nitrogen to the Bay each day (HDR 2022), which threatens to cause nutrient excessive algal growth in parts of the Bay (Novick and Senn 2014). Conventional approaches to upgrading wastewater treatment operations around the Bay to reduce nutrient levels in effluent are estimated to cost up to $12 billion (HDR 2018). The San Francisco Bay Regional Water Quality Control Board has mandated that all the wastewater agencies around the Bay evaluate the potential for NbS for nutrient removal from wastewater effluent (San Francisco Bay Regional Water Quality Control Board 2019a).

Linking NbS to wastewater infrastructure could provide a suite of benefits including:

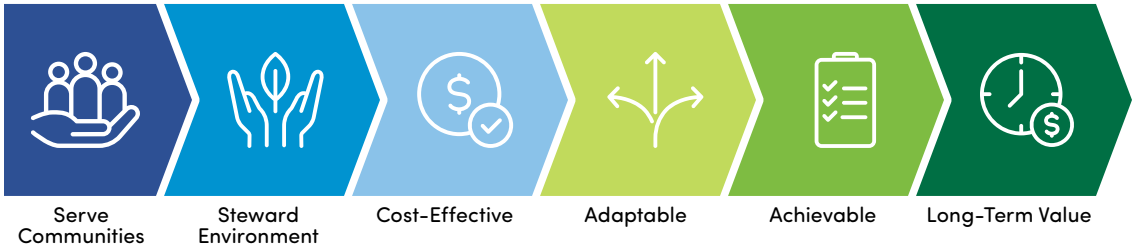
- Employing wastewater effluent as a freshwater source for vegetated habitat at the margins of the Bay
- Enhancing protection of wastewater infrastructure and nearby communities from flooding due to sea level rise
- Reducing nutrient discharges to the Bay
- Reducing discharges of constituents of emerging concern, such as pharmaceuticals.

Several pilot projects that incorporate NbS are in various stages of development and implementation in the region. Pilot projects provide important opportunities to test innovative approaches that incorporate treated wastewater (either for additional water treatment or for irrigation) as well as identify challenges and opportunities for full-scale implementation. Notable pilot projects are the Oro Loma Horizontal Levee, Palo Alto Horizontal Levee, San Leandro Treatment Wetland, and North Richmond Horizontal Levee. In addition, several wastewater agencies are testing out pilot-scale approaches for designing NbS to meet specific needs, such as the productive use of biosolids, treatment of reverse osmosis concentrate from water recycling projects, and detention and treatment of stormwater. These pilot projects shine a light on many of the opportunities NbS can provide to communities, as well as the myriad challenges for design, permitting, construction, and maintenance of these unique places.

This report provides a nuanced view of the goals and multiple drivers for NbS for shoreline resilience in the Bay Area. It identifies challenges and highlights a suite of potential solutions for overcoming barriers to NbS implementation. Finally, it lists key near-term milestones to strategically advance towards multi-benefit shoreline resilience. Key audiences for this report include regional, state, and local partnerships working to advance NBS in communities, elected officials, project funders, technical experts, community groups, and academics.

Goals for NbS for shoreline resilience in the San Francisco Bay Area

Overall, NbS for shoreline resilience in the San Francisco Bay Area should provide multiple benefits. There is a crucial opportunity to make shoreline infrastructure investments, such as those planned for improved water quality and transportation, more resilient by employing NbS.



1. Serve Communities
   - Provide public access to the shoreline and green space, including for traditional uses
   - Protect communities and infrastructure from flooding
   - Create jobs for local community members
   - Publicly recognize the history and original inhabitants of the place
   - Support outreach and education by providing materials that are accessible to community members
   - Improve public health
   - Center local community engagement in the process from the start - including the problem definition and goal-setting stage
2. Steward Natural Environment
   - Integrate shoreline solutions into a regional ecosystem view with the goal of preserving the Bay's ecological health, recognizing its international importance for biodiversity and for waterbird and aquatic migratory species
   - Create and protect habitat in the face of sea level rise
   - Provide habitat connectivity
   - Improve water quality
3. Be Cost Effective
   - Employ funding in a manner that provides multiple benefits
   - Include mechanisms for cost-sharing among agencies and organizations
   - Use pilot studies to inform engineering of larger projects
   - Consider innovation construction methods
4. Be Adaptable
   - Create dynamic systems that are adaptable to changing conditions
   - Create systems of ongoing monitoring and governance that can facilitate adaptation if needed
   - Create project timelines that allow for adaptation and learning by doing

5. Be Achievable
    - Find the "right size" for shoreline resilience projects - large enough to achieve a meaningful and measurable impact, but not so big that they become too unwieldy to plan and maintain
    - Develop appropriate governance structures to facilitate leadership, permitting, and long-term oversight
    - Be implementable in terms of permitting, design, and long-term maintenance
6. Provide Long-Term Value
    - Find the right metrics to assess success over time
    - Have a feasible long-term maintenance and governance plan

Insights

- A **diversity of viewpoints about goals** for NbS for shoreline resilience exists. Project proponents will benefit from the development of a framework to **equitably balance the varied goals** for specific projects.
- Once stakeholders establish project-specific goals, they must then **identify metrics and conduct monitoring** to assess project success.

> "Honor the past to shape the future." –Kanyon Coyote Woman Sayers-Rood
>
> We have an opportunity to develop shoreline resilience in a way that recognizes the missteps taken by agency leaders and learns from the rich history of Indigenous stewardship in the region.

Photo: Karl Nielsen

CHALLENGE: PERMITTING PATHWAYS

Permitting pathways to NbS are currently complex and expensive for project proponents to navigate. Furthermore, it is inefficient and risky for proponents to interpret regulatory issues during individual permitting processes. As a result, a streamlined approach to developing more efficient regulatory pathways for NbS is necessary. The complexity of permitting NbS is a deterrent to many potential champions of future projects, such as community-based organizations, landowners, municipalities, and wastewater agencies.

Required permits for NbS include approvals at multiple levels of government. Efforts like the Bay Restoration Regulatory Integration Team (BRRIT), funded by the SF Bay Restoration Authority, are leading efforts to ensure early consultation with regulatory agencies as a means of providing more efficiency in the permitting process. The Bay Adapt Joint Platform identified several options to improve regulatory pathways for multi-benefit NbS projects.[1]

NbS projects at the shoreline often require a host of permitting approvals and regulatory processes, outlined below.

Key Federal Approvals:

i. Clean Water Act (CWA), Section 404
ii. Rivers and Harbors Act, Section 10
iii. Endangered Species Act (ESA), Section 7/10
iv. Magnuson-Stevens Fishery Conservation and Management Act, including provisions for essential fish habitat
v. Federal Aviation Administration / US Department of Agriculture (relating to potential for bird strikes)
vi. National Environmental Policy Act (NEPA)
vii. Marine Mammal Protection Act
viii. National Historic Preservation Act Section 106

Key State Approvals:

i. CA Environmental Quality Act (CEQA)
ii. Porter-Cologne Water Quality Control Act Waste Discharge Requirements (WDRs) and NPDES Permit
iii. Clean Water Act (CWA), Section 401
iv. State Endangered Species Act
v. Streambed Alteration Agreement (CDFW)
vi. State Lands Commission (ownership of tidal lands)
vii. Bay Conservation & Development Commission- Coastal Zone Management Act (CZMA)
ix. CalTrans (where relevant)

Key Local Approvals:

i. County Mosquito Abatement Districts (for design as well as operations and maintenance)
ii. Air Quality Management District (construction-phase)
iii. Department of Toxic Substances Control (for development on contaminated lands)

1 See Bay Adapt Joint Platform Action 7: Refine and accelerate regulatory approvals processes. https://www.bayadapt.org/wp-content/uploads/2022/01/BayAdapt_JointPlaform_Final_Oct2021.pdf

SOLUTIONS: PERMITTING PATHWAYS

- **Permitting agencies or the legislature can develop regulatory integration processes** to facilitate coordination among agencies involved in NbS projects. This integration is essential to lower costs and make projects more achievable for NbS project developers engaging in the permitting process. As a first step, NbS project proponents can **engage early with the Policy and Management Committee (PMC)** of the BRRIT to identify regulatory flexibilities and permitting pathways for NbS projects.
- Regulatory agencies can make **institutional commitments** to provide information to project proponents and to identify processes to establish clear regulatory pathways for NbS, including:
  - Provide information on statutory authority for each agency.
  - Clarify how permitting for NbS for shoreline resilience differs from permitting for shoreline housing development or other land uses beyond restoration or recreation and establish the steps in the NbS permitting process.
  - Develop shared guidance for performance metrics between regulators and project developers to ensure adaptive management of projects.
  - Incentivize NbS projects by pre-negotiating terms for permits on topics like obtaining mitigation credit for the habitat created on the slopes.
- Regulators and researchers can **quantify the regulatory risk of inaction** or the threat of delayed action, particularly around the critical challenges of habitat protection and wetland fill in the face of a changing climate.
- Regulatory agencies can **increase regulatory incentives for multi-benefit** NbS projects across all phases of projects from design to construction and long-term operations and maintenance.
- Regulatory agencies could consider **penalties or compensation fees** for the development of hardened barriers against sea level rise that exacerbates flooding elsewhere.
- **Programmatic permits and plans** may be developed for the region or on a sub-regional basis to promote NbS projects as an alternative to projects that harden the Bay margins, such as sea walls.[2]
- Develop **early, open, and consistent communication** between regulators and project proponents.
- Create incentives for projects that **provide multiple benefits**, including for community uses, water quality and flood control. Project developers should allocate resources for monitoring performance metrics.
- **Conduct scientific research** to demonstrate how well different types of NbS for shoreline resilience meet project goals over time.

2 Programmatic permits, including sub-regional planning documents typically related to habitat management and compliance with state or federal endangered species laws, tend to increase transparency among federal agencies but might not align with state and regional agencies.

CHALLENGE: ELEVATE COMMUNITY AND TRIBAL VOICES AND PERSPECTIVES

Engaging community and tribal partners early and throughout NbS project conceptualization, design, and implementation, is a crucial facet of equitable shoreline resilience. NbS projects require unique partnerships, bringing together stakeholders who have sometimes never worked together before. Not all stakeholders possess skills or best practices for racial justice and community engagement, and some NbS project proponents lack experience in the kind of broad, inclusive community engagement necessary for successful implementation of projects.

SOLUTIONS: ELEVATE COMMUNITY AND TRIBAL VOICES

- **Support ecoliteracy** in frontline community members who can meaningfully engage with planning processes and be part of the workforce. To do so, **invest in technical capacity-building** for local community-based organizations and provide them with **funding opportunities for educational program development**.
- **Develop a formalized system** for planners, engineering consultants, and other NbS project proponents to engage with a broad range of community members and access information about the relevant community partners for their area.
- **Convene potential partners early** from tribal and community groups and stakeholders from the public and private sectors. **Planning and technical assistance grants** can assist with strategic planning to center projects based on community needs.
- Tap into **public-private partnerships** to fund convenings to build upon community vision before any particular project's outcome is decided upon.
- Create **regular opportunities to meet** with stakeholders, **create shared definitions and timelines**, and **establish shared goals**. These long-term, routine processes can help build trust between all stakeholders.
- Consider **community engagement at the scale of Operational Landscape Units**, which are areas defined in the Adaptation Atlas that are expected to support a coherent suite of ecosystem functions, to create collaborative visions for the shoreline.
- Establish a **sustainable funding stream** to support genuine community engagement on particular projects and sub-regional planning efforts, following the Climate Equity Consortium model, described by Bay Adapt (BCDC 2021).
- Compensate **low-income community members and groups** for participating in planning processes to ensure equitable access. **Provide training in cultural competency and inclusive practices** to project proponents who start community engagement processes.
- **Leverage pilot or demonstration projects**, like the Oro Loma Horizontal Levee, to educate and engage stakeholders regionally.
- **Engagement fatigue is real**, and a similar pool of participants are frequently asked to engage in similar efforts in a manner that alienates communities. Agencies and project proponents must **develop opportunities to engage that are accessible to community members** and reduce the barriers to engagement by meeting in places and at times most appropriate for the objective at hand.

- **Provide multilingual resources** and make meetings more accessible by **providing childcare and food**.
- Utilize adaptive management frameworks that incorporate iterative learning during project development **to build capacity** for community engagement and racial justice in this work.
- Agencies, funders, and grantees should **develop performance metrics** for community engagement and equitable decision making. Many state and federal grants maintain community engagement requirements - though success in this realm is undefined.

CHALLENGE: FUNDING

Funding for NbS is dispersed, originating in a complex patchwork of grant programs and opportunities. Community-based planning requires a nuanced, place-based approach that doesn't always fit funding guidelines. While more funding has become available in recent years, accessing it can be challenging for project proponents of NbS. In addition, funding programs focus on projects that are farther along in the process and thus don't always support the principle of early community engagement needs or the complex stakeholder engagement process that are important to the success of NbS projects.

SOLUTIONS: FUNDING

- Develop **mechanisms for pooling resources** among multiple private and public entities. These may include new purpose-driven agencies, joint-powers authorities, or other entities that operate independently from short-term political or funding cycles.
- Develop **legal frameworks** so that everyone who benefits from NbS for shoreline resilience projects helps pay for them. For example, **tolls or micropayments for transportation corridors at the shoreline** could support resilience efforts that will help protect road infrastructure.
- Identify **multiple funding sources** that can help support the different stages of projects, including capacity-building and project planning, design and construction, operations and maintenance, and research.
- **Establish a regional institutional resource** to help NbS projects facilitate collaboration, fundraising, and capacity building. This entity would have the resources needed to track interested parties, apply for funding, enable capacity building, and act as a matchmaker across interest groups for particular projects or at the subregional scale (i.e., Operational Landscape Unit). An additional role for this institutional resource could be to **establish a sustainable funding model** to support regional and sub-regional planning, fundraising, and engagement with community-based organizations or stakeholders.
- **Cultivate funding for collaborative partnerships, innovation, and pilot projects** to help develop NbS for and by communities.

CHALLENGE: LAND USE, PLANNING, AND GOVERNANCE

Working with landowners, multiple agencies and businesses, and involving community members in the process is often cumbersome. Public-private partnerships or new entities (such as joint powers authorities) may be critical mechanisms to address the development of multi-benefit solutions given the complex landscape of land ownership, land use, and infrastructure on the SF Bay shoreline.

SOLUTIONS: LAND USE, PLANNING AND GOVERNANCE

- Consider **incentivizing the development of public NbS projects on private land** through mechanisms such as easements, buyouts, or land trusts.
- **Identify regulatory incentives** to encourage cooperation among multiple landowners during project planning phases.
- Consider **institutional agreements** like Memorandums of Understanding to define a common charge and delineate the roles of different entities.
- Consider **creating new institutions** to lead the governance of NbS projects in a particular location, including Joint Powers Authorities or hazard abatement districts.
- **Iterate and build upon** existing structures and planning tools, including the Adaptation Atlas, the Estuary Blueprint, SF Bay Joint Venture Implementation Plan and Bay Adapt, for establishing planning boundaries and setting policy objectives.
- **Empower individuals as change-makers** to facilitate and build sub-regional collaborations, including public-private partnerships and cost-sharing mechanisms for multi-benefit projects. Key agencies may consider ensuring that individuals are tasked with championing shoreline resilience efforts and have the time and resources needed to engage the parties necessary to make these projects happen. Similarly, sub-regional partnerships could employ one or more individuals to facilitate project coordination across multiple sectors.
- **Incentivize the participation of public agencies and community-based organizations** in collaboration efforts and governance structures, by funding involvement and providing capacity-building resources.

Additional areas of research or technical analysis needed

NbS are in their infancy in the Bay Area and in many other parts of the world. Research is needed to reduce uncertainty about NbS performance and their integration into the broader set of ecological challenges for San Francisco Bay. Roundtable participants identified several additional areas of research that are necessary for advancing NbS regionally.

Research to facilitate optimization of NbS for specific ecological outcomes:

- Assess the effect of seepage slope design and levee material composition on pollutant removal efficiency in subsurface NbS, such as horizontal levees.
- Identify strategies for minimizing the need for fill in the construction of NbS projects (i.e., low-sediment NbS designs).
- Characterize the habitat benefits over time for different NbS designs.
- Develop metrics to quantify benefits (including wave attenuation, carbon sequestration, habitat, recreation values). Determine methods for quantifying the benefits of using NbS against the risk of not doing so, in order to incentivize federal investment.
- Investigate ways to ensure accessibility of resources to diverse partners, including assessing the opportunities and resources needed to implement suggestions in documents like Bay Adapt, which has provided guidance on development of an NbS "help desk."

Research to inform policies for sediment allocation:

- Develop technical guidance on NbS soil/fill quality and intended uses.
- Develop strategic regional priorities and regulatory guidance for dredged material and sediment allocation.
- Quantify the strengths, weaknesses, opportunities, and threats to using upland sources and/or biosolids for NbS for shoreline resilience.

Photo: Ken James

Key Milestones in the Near Term

Build and cultivate partnerships

- Forge connections among and across agencies, organizations and communities.
- Invest in a regional NbS community of practice, similar to the Transforming Shorelines Collaborative, with stakeholders including Caltrans, railroads, cities, airports and ports, and individual entities that wish to maintain existing operations at the shoreline.
- Cultivate a skilled and diverse set of decision-makers through paid internship programs and training opportunities focused on NbS.
- Establish or empower an entity to facilitate collaboration, fundraising, and capacity-building. Such an entity would advance priorities identified in this Roundtable and elsewhere and help secure funding.
- Invest regionally in processes to build capacity for collaboration and establish professional networks among potential partners.
- Train and support individuals and organizations to be facilitators of collaboration and partnerships in the service of building shoreline resilience through NbS. These individuals should have subject matter expertise of NbS, regulatory processes, community and tribal engagement, or funding opportunities, and be able to help connect the relevant people and organizations at the right times.

Develop metrics that reflect the full range of stakeholder goals

- Metrics should include performance, monitoring, and adaptive management triggers, as well as the potential for adaptive actions.
- Metrics should also address social goals, for example shoreline access for recreation or traditional uses.

Develop a strategic plan to scale shoreline resilience projects to align with Operational Landscape Units (OLUs) developed in the Adaptation Atlas

- Prioritize projects that are important to a larger strategic plan.
- Leverage permitting similarities across OLUs to streamline processes.
- Identify and collaborate with stakeholders and potential community engagement partners in each OLU.
- Identify champions and champion organizations, structures for collaborative management, and pooled funding mechanisms for each OLU.
- Identify funding resources for coordination and collaboration within OLUs.
- Research governance strategies that help solidify the OLU approach (what governance strategy would work, and help diverse stakeholders find common ground and work cross jurisdictionally).

Critically evaluate permitting pathways

- Identify and make transparent the degree of regulatory discretion possible at the staff level to support NbS for shoreline resilience versus what permitting changes require official policy guidance or statutory changes.
- Establish a regulatory forum for resolving regulatory challenges for NbS and strategically planning ways to overcome them to develop a more cohesive regulatory framework. This framework could serve to create cross-cutting guidance related to performance standards, habitat mitigation, and monitoring expectations.

Invest regionally in community and tribal engagement

- Create engagement processes that are separate from individual NbS project planning and thus not subject to the same constraints faced by projects.
- Develop a sustainable funding mechanism to support partnerships among community-based organizations, tribal groups, environmental planners, regulators and project designers.
- Develop strategies and supporting materials that are accessible to non-specialists and that are available in languages relevant to project partners.
- Hire bilingual and bicultural urban planner(s) to build the capacity of community leaders on planning processes and create opportunities for engagement.
- Commit technical expertise to support community visions of NbS for shoreline resilience.
- Expand existing programs that cultivate community-led visioning and ecoliteracy about the shoreline.

Build on successes

- Create and disseminate NbS design manuals to help translate local successes into regional guidelines.
- Expand the SF Bay Restoration Authority to wastewater and stormwater projects.
- Identify models of collaborative governance and management for climate adaptation to develop best practices.
- Expand the BRRIT in scope and scale to include all NbS measures and approaches.

Lessons Learned

NbS for shoreline resilience will not occur without concerted, sustained effort. This report lays out the goals, challenges, and potential solutions for NbS for shoreline resilience in the San Francisco Bay Area. Notably, many of the next steps identified are regional in scale. Regional opportunities for building partnerships, defining performance criteria, engaging in a master-planning process that builds upon previous work, evaluating permitting processes, and investing in community and tribal engagement are critical for advancing NbS for shoreline resilience. This regional approach has the potential to maximize ecological and social benefits while maintaining project benefit, cost-effectiveness and supporting efficient development of individual NbS projects for shoreline resilience.

Ongoing engagement efforts are needed to advance priorities at all scales. One lesson from this meeting was the importance of broader and more equitable inclusion in convenings on this topic. While the planning team made efforts to broaden participation to include a range of stakeholder groups, the roundtable discussion and the recommendations listed here would have benefited from greater representation of community-based and Indigenous groups.

As always, advancing NbS is an adaptive process. Likewise, fostering collaboration among diverse sets of stakeholders is an iterative process. Although the process can be slow in comparison to approaches used to create infrastructure in the past, it has the potential to create greater benefits by ensuring more resilient and equitable outcomes.

Photo: San Francisco Estuary Partnership Archive

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Appendix A: Participants

Phoenix Armenta, West Oakland Environmental Indicators Project

Chris Barr, San Francisco Bay National Wildlife Refuge Complex

Julie Beagle, San Francisco District of the U.S. Army Corps of Engineers

Valary Bloom, U.S. Fish and Wildlife Service

John Bourgeois, Valley Water

Josh Bradt, San Francisco Estuary Partnership

Arthur Feinstein, Sierra Club

Lorien Fono, Bay Area Clean Water Agencies

Nahal Ghoghaie, San Francisco Bay Conservation and Development Commission

Dave Halsing, South Bay Salt Pond Restoration Project

Maya Hayden, Point Blue Conservation Science

Tom Kendall, U.S. Army Corps of Engineers

Roger Leventhal, Marin County Flood Control District

Keith Lichten, San Francisco Bay Regional Water Quality Control Board

Jeremy Lowe, San Francisco Estuary Institute

Mark Lubell, University of California at Davis

Richard Luthy, Stanford University

Anniken Lydon, San Francisco Bay Conservation and Development Commission

Colin Martorana, San Mateo County Flood and Sea Level Rise Resiliency District

Len Materman, San Mateo County Flood and Sea Level Rise Resiliency District

Brian Meux, NOAA National Marine Fisheries Service

James Muller, San Francisco Estuary Partnership

Tom Mumley, San Francisco Bay Regional Water Quality Control Board

Douglas Mundo, Multicultural Center of Marin and Shore Up Marin

Ashley Muse, Google

Heidi Nutters, San Francisco Estuary Partnership

John Rozum, NOAA Office for Coastal Management

Kanyon Sayers-Roods, Kanyon Konsulting LLC

David Sedlak, University of California at Berkeley

Zoe Siegel, Greenbelt Alliance

David Smith, U.S. Environmental Protection Agency, Region 9

Luisa Valiela, U.S. Environmental Protection Agency, Region 9

Jason Warner, Oro Loma Sanitary District

Sadie Wilson, Greenbelt Alliance

Ian Wren, San Francisco Baykeeper and independent consultant

Makena Wong, San Mateo Flood & Sea Level Rise Resiliency District

Jackie Zipkin, East Bay Dischargers Authority

Note-Takers and Facilitators

Kyra Gmoser-Daskalakis, UC Davis

Sasha Harris-Lovett, UC Berkeley

Liz Juvera, San Francisco Estuary Partnership

Molly Mayo, Meridian Institute

Aaryaman "Sunny" Singhal, UC Berkeley

BayAdapt
An initiative led by the San Francisco Bay Conservation and Development Commission (BCDC) to establish regional agreement on the actions necessary to protect people and the natural and built environment from rising sea levels, which concluded in October 2021.

Ecotone Levee
Gentle slopes or ramps (with a length to height ratio of 20:1 or gentler) bayward of flood risk management levees and landward of a tidal marsh. They stretch from the levee crest to the marsh surface and can provide wetland-upland transition zone habitat when properly vegetated with native clonal grasses, rushes, and sedges. They can attenuate waves, provide high-tide refuge for marsh wildlife, and allow room for marshes to migrate upslope with sea level rise. Ecotone levees are sometimes listed in other documents as ecotone slopes or upland transition zones (San Francisco Estuary Institute and SPUR 2019).

Habitat Enhancement
Making existing habitat (i.e., salt ponds) more amenable to wildlife.

Habitat Restoration
Re-creating and/or rebuilding a habitat that was once found in a specific place and was previously removed.

Horizontal Levee
An engineered sloped subsurface treatment wetland built between coastal levees and tidal marshes - essentially an ecotone levee that incorporates nature-based treatment of wastewater effluent. It is designed to meet multiple objectives, including removing contaminants from wastewater effluent, providing transitional wetland habitat, protecting existing levees from erosion, and reducing the threat of coastal flooding by attenuating storm waves (Cecchetti et al. 2020). A pilot horizontal levee has been built at Oro Loma Sanitary District in San Lorenzo.

Nature-based Solutions
Nature-based solutions are actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits (Cohen-Shacham et al. 2016).

Operational landscape unit (OLU)
A delineated area that effectively provides specific ecosystem functions and services within the natural and built environment. Each OLU consists of a number of landscape features: one or more watersheds that connect to the Bay by a tidal creek, with associated fluvial floodplains, alluvial fans and tidal wetlands. These landscape features function in a coherent manner, they are connected by the movement of sediment and water, and they evolve together (SFEI and SPUR 2018).

Reverse Osmosis (RO) Concentrate
The briny effluent from reverse osmosis water treatment, which contains relatively high concentrations of salts, nutrients, and pollutants. RO concentrate typically comprises 20 - 40% the volume of the water treated by a reverse osmosis system, though many technologies to efficiently reduce the volume of RO concentrate are in development (Pérez-González et al. 2012).

San Francisco Bay Restoration Regulatory Integration Team (BRRIT)
Consists of staff from the six state and federal regulatory agencies with jurisdiction over habitat restoration projects in San Francisco Bay. It was formed to improve the permitting process for multi-benefit habitat restoration projects and associated flood management and public access infrastructure in the San Francisco Bay and along the shoreline of the nine Bay Area counties (excluding the Delta Primary Zone).

Sea Level Rise
Increase in still sea water level due to climate change, caused by the added water from melting ice sheets and glaciers and the expansion of seawater as it warms (NASA n.d.).

Still Water Level
Sea water level inclusive of tides and atmospheric storm surges (Idier et al. 2019).

Storm Surge
The abnormal rise of water generated by a storm, over and above the normal tides (NOAA, n.d.)

Glossary References

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BACWA BAY AREA CLEAN WATER AGENCIES

BACWA Roundtable Discussion

Adapting to Sea Level Rise, Extreme Precipitation, and Flooding

August 23, 2022, 10 AM – 12 PM

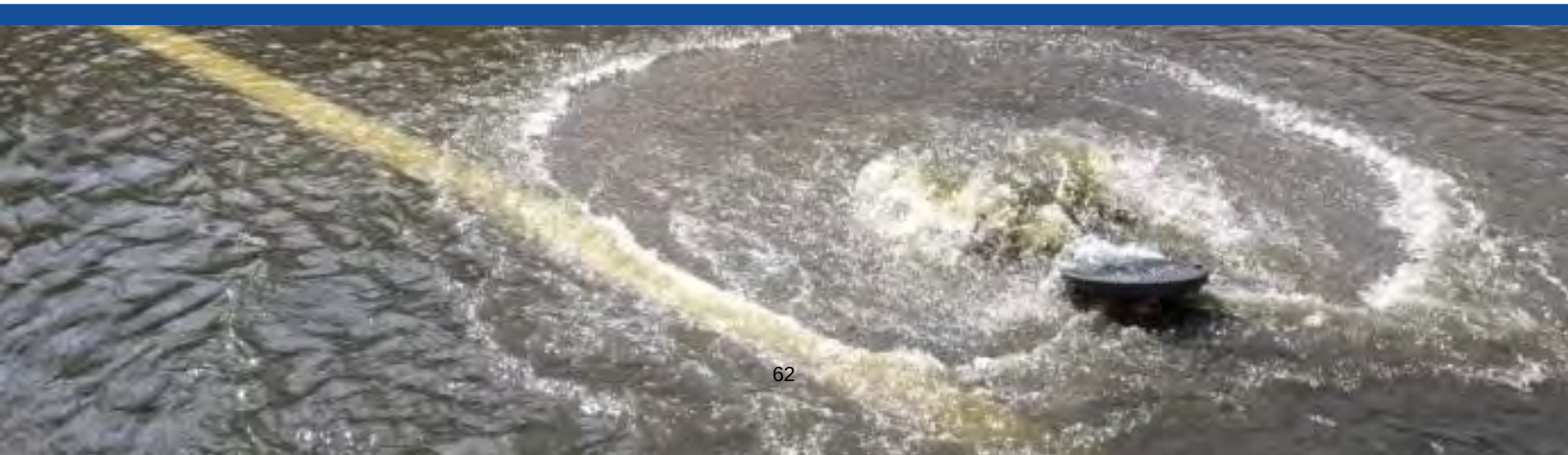
Join your fellow BACWA agencies for this **virtual members-only roundtable discussion**. Please plan to share:

- **Partners -** Who are you collaborating with?
- **Process -** What does the adaptation planning process look like at your agency? Where are you finding useful guidance? What are you struggling with?
- **Scenarios -** What sea level rise and extreme precipitation scenarios is your agency assuming for capital planning?
- **Support** - For effective planning, what support do you need from regulators, state & local government, and organizations like BACWA and BayCAN?

Registration Link:
https://us06web.zoom.us/meeting/register/tZAude-vpjMqEtSMpKL7nR8PlDkfawiJ4khx

Participation by Mentimeter is also encouraged!
https://www.mentimeter.com/integrations/zoom

Mentimeter



BACWA BOARD POLICIES

POLICY NUMBER: BAP – 1.01

NAME OF POLICY: BACWA Representation

DATE APPROVED: 12-21-2018

LAST REVISED:

PURPOSE: A policy outlining the selection, approval, and responsibilities of BACWA Members representing BACWA to other external Committees, Boards, Workgroups and Projects.

POLICY

BACWA members often serve as volunteers on external committees, boards, workgroups and projects. When opportunities arise to represent BACWA, interest on the part of the membership will be solicited. In some cases, the Board will formally select the representative (e.g. Nutrient Management Strategy Steering Committee, Aquatic Science Center) while in other cases a BACWA Committee will chose a representative. The Board will be notified of a change in representatives by the Executive Director and through the periodic review of the BACWA Succession Plan, will confirm all representatives.

BACWA representatives have the following responsibilities:

1. Keep abreast of key activities, events, and information on their particular issues
2. Attend important meetings, hearings, seminars, etc. on the issue whenever held
3. Keep the BACWA Board informed on needed input being sought on an issue
4. Get direction from the Board on the BACWA input on an issue in advance of providing the input
5. Report back to the Board after providing the input and/or participating in the activity on the issue

Each representative role will be reviewed every two years to ensure that different members of the BACWA community have the opportunity to serve in that role if interested.

BAY AREA CLEAN WATER AGENCIES
SUCCESSION PLANNING
Fiscal Year 2023

A. BACWA Principal Representatives

Agency	Representatives	Title & Roles	Succession Planning
CCCSD	Lori Schectel	CASA State Legislative Committee, Nutrient Governance Steering Committee Alternate	
	Roger Bailey (Alternate)		
	Mary Lou Esparza ~~Jean-Marc Petit~~ (Alternate)		
EBDA	Jacqueline Zipkin	BACWA Executive Board Vice-Chair, ~~ReNUWIt Industrial Advisory Committee Member~~	
	David Donovan (Hayward) ~~Jason Warner, Oro Loma~~ (Alternate)		
EBMUD	~~Eileen White~~	~~BACWA Executive Board Vice Chair, Nutrient Management Strategy Governance Steering Committee, Bay Area Regional Reliability Project, SF Estuary Partnership, Joint SFEI/ASC Board~~	
	Alicia Chakrabarti (Alternate)		
	Yun Shang (Alternate)		
SFPUC	Amy Chastain	BACWA Executive Board Rep,	
	Greg Norby (Alternate)		
	Jennie Pang (Alternate)		
San Jose	Amit Mutsuddy	BACWA Executive Board Chair, Summit Partners	
	Eric Dunlavey (Alternate)	RMP Steering Comm; Nutrient Management Strategy Comm;	

Changes to Principal Representation require submission of a Designation Letter and a Statement of Economic Interest Form within 30 days

B. Other BACWA Representations

Group/Organization	Current Representative	Succession Planning
RMP Technical Committee	Mary Lou Esparza, CCCSD	
	Yuyun Shang, EBMUD	
	Samantha Engelage, Palo Alto (Alternate)	
RMP Steering Committee	Karin North, Palo Alto;	
	Amanda Roa, Delta Diablo	
	Eric Dunlavey, San Jose	
Summit Partners	Lorien Fono, BACWA	
	Amit Mutsuddy, San Jose	
Joint SFEI/ASC Board	~~Eileen White, EBMUD~~	Karin North, Palo Alto, First Board Alternate; Amit Mutsuddy, San Jose, Second Board Alternate
	Lorie Fono, BACWA	Amy Chastain, SFPUC, Alternate
Nutrient Management Strategy Governance Steering Committee	Eric Dunlavey, San Jose	
	~~Eileen White, EBMUD~~	
	Jackie Zipkin, EBDA	
	Lori Schectel, Alternate	
NMS Planning Subgroup	Eric Dunlavey, San Jose	
~~NMS Technical Workgroup~~	~~Eric Dunlavey, San Jose~~	
SWRCB Nutrient SAG	Lorien Fono, BACWA	
~~NACWA Taskforce on Dental Amalgam~~	~~Tim Potter, CCCSD~~	
BAIRWMP	Cheryl Munoz, City of Hayward;	
	Florence Wedington, EBMUD	
	Lorien Fono, BACWA	
NACWA Emerging Contaminants	Karin North, Palo Alto;	
	Melody LaBella, CCCSD	

CASA State Legislative Committee	Lori Schectel, CCCSD	
CASA Regulatory Workgroup	Mary Cousins, BACWA; Lorien Fono, BACWA	
~~ReNUWIt~~	~~Jackie Zipkin, EBDA; Karin North, Palo Alto~~	
RMP Microplastics Liaison	Artem Dyachenko, EBMUD	
Bay Area Regional Reliability Project	~~Eileen White, EBMUD~~	
WateReuse Working Group	Cheryl Munoz, City of Hayward;	
SF Estuary Partnership	~~Eileen White, EBMUD~~	
	Lorien Fono, BACWA	
CPSC Policy Education Advisory Committee	Colleen Henry, CCCSD	
California Ocean Protection Council	Lorien Fono, BACWA	
Countywide Water Reuse Master Plan	Karin North, Palo Alto	
	Pedro Hernandez, San Jose	
CHARG - Coastal Hazards Adaptation Resiliancy Group	Jackie Zipkin, EBDA	
BayCAN	Mary Cousins, BACWA; Lorien Fono, BACWA	
California Water Quality Monitoring Council	Lorien Fono, BACWA	

Changes to BACWA Representation requires Executive Board Approval.

C. BACWA Committees

Committee	Chair / Co-Chairs	Vice Chair	Comments	Succession Plan for FY23
AIR	Nohemy Revilla, SFPUC, and Jason Nettleton, San Jose, Co-Chairs			No change
BAPPG	Autumn Cleave, SFPUC, and Robert Wilson, Santa Rosa, Co-chairs	Joe Neugebauer, WCWD		No change
Biosolids			Committee Dormant due to biosolids activities being carried out by BABC.	Committee Dormant until further notice
Collection Systems	Andrew Damron, Napa San, Chair	Tyree Jackson, City of Oakland		New vice chair added in January 2022
Info Share Ops/Maint	Joaquin Gonzales, Delta Diablo, Co-Chair	Kevin Dickison, EBMUD, Co-Chair		Committee is currently dormant due to COVID restrictions, and may re-structure in FY23. New format TBD.
InfoShare/Asset Mgmt	Rebecca Overacre, EBMUD, and Khae Bohan, CCCSD, Co-Chairs			Committee re-started in February 2022.
Laboratory	Nicole Van Aken, FSSD	Samantha Bialorucki, City of Palo Alo		Samantha Bialorucki (Palo Alto), Chair and Blake Brown (CCCSD), Vice-Chair
Permit	Chris Dembiczak, EBMUD	Jennie Pang, SFPUC		Jennie Pang (SFPUC), Chair and Amanda Roa (Delta Diablo), Vice-Chair
Pretreatment	Michael Dunning, Union San, and Casey Fitzgerald, San Jose			Casey Fitzgerald volunteered to assist in Fall 2021
Recycled Water	Stefanie Olson, DSRSD, and Reena Thomas, EBMUD	Reena Thomas, EBMUD, Co-Chair		No change

Changes to Committee Leadership will be reported annually and intra-year by Executive Director to Executive Board

JOINT POWERS AGREEMENT CREATING THE AQUATIC SCIENCE CENTER

This Joint Powers Agreement (JPA) is made and entered into by and between the State Water Resources Control Board (State Water Board) and the Bay Area Clean Water Agencies (BACWA), hereinafter "the Signatories," for the purpose of creating an agency known as the "Aquatic Science Center."

WHEREAS, each of the Signatories to the JPA is a public entity organized and operating under the laws of the State of California, and a public agency as defined in California Government Code section 6500; and

WHEREAS, it is the desire of the Signatories to confirm the creation of the Aquatic Science Center on behalf of its member agencies and use the San Francisco Estuary Institute (SFEI) as its administrator, effective July 1, 2007;

NOW, THEREFORE, the Signatories hereto do agree as follows:

1. Purpose

a. The purpose of this JPA is to establish a separate public agency to promote and deliver scientific support services to governmental and non-governmental organizations in central and northern California that foster scientific understanding needed to protect and enhance the San Francisco Estuary.

b. The JPA will serve as a fiduciary agent, with the San Francisco Estuary Institute as the administrator, to assist with the efficient delivery of financial, scientific, monitoring, and information management support functions including:

(1) Integrating, evaluating, managing, and reporting of data and information about the condition of waters and aquatic ecosystems, stressors acting on conditions, and the potential implications of alternative management responses and scenarios;

(2) Connecting science to decision-making processes involving a broad array of stakeholders, and providing a forum and mechanism to refine and use adaptive management principles in beneficial use protection and restoration;

(3) Strengthening the integration of regional monitoring information generated through a variety of efforts, and communicating relevant conclusions to a wide variety of decision-makers;

(4) Promoting and administering the Bay Area regional data center in the California Environmental Information Exchange Network and providing information technology support to the Signatories to the agreement and others; and

(5) Providing an effective mechanism for science support to other public agencies involved in environmental planning and decision-making, as well as a forum for developing and adjusting the environmental management, policy, and assessment questions that form the basis of applied research and monitoring programs in aquatic ecosystems in central and northern California.

2. Creation of the Authority

The Authority will be a separate public entity that shall be known as "The Aquatic Science Center." The Aquatic Science Center is formed pursuant to the provisions of the Government Code of the State of California relating to the joint exercise of powers common to public agencies. (Gov't Code sections 6500, *et seq.*)

3. Powers of the Authority

The Aquatic Science Center **shall exercise its powers** common to the parties to this agreement to do the following, solely in furtherance of its responsibilities as fiscal agent to facilitate delivery of scientific and information management support services:

(a) To make and enter into contracts

(b) To prepare reports and applications for the purpose of applying for and accepting grants, advances, and contributions

(c) To employ or contract for the services in order to facilitate funding of collaborative endeavors

(d) To receive contributions and donations of property, funds, services, and other forms of assistance from any source, including Signatory agencies

(e) To sue and be sued in its own name

(f) To incur debts, liabilities, or obligations, subject to limitations herein set forth

Provided, however, that the Aquatic Science Center's exercise of the joint powers of the Signatories is restricted to the extent required under California Government Code section 6509 and, pursuant to section 6509, the JPA will jointly exercise such powers subject to the restrictions placed on the separate exercise of such powers by BACWA.

4. Governance

(a) Together, the representatives from each Signatory agency shall establish a Governing Board of Directors (Board) for the Aquatic Science Center, which at a minimum is composed of the following:

(1) Deputy Director, Division of Water Quality, State Water Resources Control Board;

(2) Executive Officer, San Francisco Bay Regional Water Quality Control Board;

(3) Executive Officer, Central Valley Regional Water Quality Control Board;

(4) Division Director, Water Division, U.S. Environmental Protection Agency, Region IX; and

(5) Three directors appointed by BACWA.

(b) Upon the concurrence of a majority of the Board, other public agencies may be added as parties to this JPA, and each such party shall acknowledge its agreement to the terms hereof by executing this JPA upon authorization of its governing Board.

(c) The Board shall, at its first meeting and thereafter at its first meeting following July 1 of each succeeding year, elect a Chair and Vice-Chair from among its members. The Vice-Chair shall assume the responsibilities of the Chair in the absence of the Chair and the Chair's alternate.

(d) An alternate may be designated by a director to act in place of that director during his or her absence. Such designation shall be in writing and shall be delivered to the Executive Director.

(e) Three directors shall constitute a quorum and a simple majority vote of that quorum shall be required for action to be taken.

5. Meetings

The Board shall fix the hour, date, and place for its regular meetings. All meetings of the Board shall be called, held, and conducted in accordance with the provisions of the Ralph M. Brown Act (Government Code section 54950, *et seq.*) and with such further rules of the Board as are non inconsistent therewith.

6. Advisory Committees

The Board may from time to time appoint one or more advisory committees or establish advisory entities to assist in carrying out the objectives of the Authority. The Board shall determine the purpose and need for such committees or entity(ies) and the necessary qualifications for individuals appointed to them. Any advisory committees formed shall include, as one of its members, a representative of SFEI and a representative from the Regional Water Quality Control Board.

7. Administration

(a) The Board shall appoint an Executive Director under whose general supervision and control the activities of the Authority shall be conducted.

(b) Consistent with Government Code Section 6506, the Authority shall be administered by SFEI, a nonprofit corporation.

(c) The Authority shall use the procurement and other procedural rules and regulations of BACWA, with amendments as necessary.

8. Accounting

(a) The Board shall establish and maintain such funds and accounts as may be required by good accounting practice.

(b) The fiscal year of the Authority shall begin on the first day of July of each year and shall end on the thirtieth day of June of the following year.

(c) The Board, or its designated representative, shall contract either with an independent certified public accountant or the Treasurer or Chief Financial Officer of any Signatory, to serve as Treasurer of the JPA and to be the depository of and have custody of funds, subject to the requirements of California Government Code sections 6505--6505.6. The BACWA auditor shall

serve as the auditor of the JPA to make an annual audit of the accounts and records of the Authority. A report thereof shall be filed as a public record with each Signatory and also with the County Auditor of Alameda. Such report shall also be filed with the California Secretary of State within twelve (12) months of the end of the fiscal year under such examination. The BACWA auditor, or other such chief financial officer designated by the Board, shall manage and control the Aquatic Science Center's property and post appropriate bond, as required by California Government Code section 6505.1.

(d) Exclusive of grants and contracts that the State Water Board may award to the Aquatic Science Center from time to time, the contribution of the State Water Board to the Aquatic Science Center shall not exceed $50,000 in any fiscal year. Contribution is hereby defined to include monetary contributions, if any, and the reasonable value of the services of any employees of the State Water Board or the Regional Water Board loaned by it to the Aquatic Science Center.

(e) A majority of the Board shall ratify actions for:

(1) Contracts over $50,000

(2) Annual program plans and budgets

(3) Hiring of the Executive Director

(4) Resolutions describing powers and duties of the Executive Director (or other administrator)

9. Term and Termination

(a) This Agreement shall remain in full force an effect until terminated **pursuant to the Bylaws adopted by the Board.**

(b) In the event that any Signatory chooses to withdraw from the Authority, then such Signatory shall notify in writing each of the other Signatories and the Aquatic Science Center of its decision. Upon withdrawal, the withdrawing Signatory shall no longer be a member of the Aquatic Science Center. In the event of the withdrawal of all member agencies except one, or upon consent of all member agencies, the Agreement may be terminated. The Aquatic Science Center shall continue to exist for one year after the Agreement has been terminated or for such time as is necessary to dispose of all claims, **in accordance with Government Code section 6511, distribute assets upon such termination as set forth in the Bylaws, in accordance with Government Code section 6512, distribute any surplus monies to the Signatories in proportion to the amounts contributed,** and perform other functions necessary to conclude the obligation and affairs of the Authority, whichever comes sooner.

10. Liabilities

(a) The debts, liabilities, and obligations of the Aquatic Science Center shall be the debts, liabilities, and obligations of the Aquatic Science Center alone, and not the Signatory agencies.

(b) Funds of the Aquatic Science Center may be used to defend, indemnify, and hold harmless the Aquatic Science Center, each Signatory, and any officers, agents, and employees

for their actions taken within the scope of their duties while acting on behalf of the Aquatic Science Center. Other than for gross negligence or intentional acts, the Aquatic Science Center shall indemnify and hold harmless each Signatory, its officers, agents, and employees from and against all claims, demands, or liability, including legal costs, arising out of or encountered in connection with this JPA and the activities conducted hereunder and shall defend them and each of them against any claim, cause of action, liability, or damage resulting therefrom.

IN WITNESS THEREOF, the parties have executed this Agreement on the dates hereafter set forth.

BAY AREA CLEAN WATER AGENCIES

By: David R Williams Dated: 7/6/07

Attest: _____

STATE WATER RESOURCES CONTROL BOARD

By: _____ Dated: 6.22.07

Attest: _____

FY23 BACWA EXECUTIVE BOARD
PROPOSED REGULAR MONTHLY MEETING SCHEDULE

DATE	TIME	LOCATION
July 15, 2022	9:00 – 12:30	Online or in-person meeting, TBD
August 19, 2022	9:00 – 12:30	Online or in-person meeting, TBD
September 8 & 9, 2022 Pardee Technical Seminar	9:00-4:00 9:00-3:30	In person meeting
October 21, 2022	9:00 – 12:30	Online or in-person meeting, TBD
November 18, 2022	9:00 – 12:30	Online or in-person meeting, TBD
December 16, 2022	9:00 – 12:30	Online or in-person meeting, TBD
January 20, 2023	9:00 – 12:30	Online or in-person meeting, TBD
February 17, 2023	9:00 – 12:30	Online or in-person meeting, TBD
March 17, 2023	9:00 – 12:30	Online or in-person meeting, TBD
April 21, 2023	9:00 – 12:30	Online or in-person meeting, TBD
May 5 or 12, 2023	9:00 – 3:00	Annual Meeting
June 16, 2023	9:00 – 12:30	Online or in-person meeting, TBD

BAPPG Committee
Report to BACWA Board

Meeting Date: June 1, 2022
Executive Board Meeting Date: July 15, 2022
BAPPG Chairs: Robert Wilson, Autumn Cleave

Committee Request for Board Action: None

Detailed Committee Notes are available online.

Regional Water Board Announcements

The Regional Water Board is now accepting nominations for the 2022 Dr. Teng-Chung Wu Award, which recognizes exemplary work in pollution prevention and source control. **Please nominate an agency, organization, or individual by email (Alessandra.Moyer@waterboards.ca.gov) or phone (510.622.2116).** This is a very informal nomination process; you can write as much or as little as you like, but please discuss how the nominee has displayed leadership, innovation, and commitment to pollution prevention, and how their work has provided measurable results and benefited the environment and community. If possible, please include the names and contact details of one to two other people who can speak to the nominee's work on pollution prevention. You're welcome to nominate your own agency or coworker. Please submit nominations by **July 15th at 6:00 pm**. The award will tentatively be presented at the September 14th meeting of the Regional Water Board.

Updates on Committee Activity and Announcements

- Steering Committee: Members were asked to look at the Baywise website to prepare for edits and updates.
- BACWA: The Annual Members' Meeting was held May 6th. Program presentations are available on the BACWA website. Updates on the PFAS Phase 2 study and CASA microplastics study were also provided.

Presentation: PFAS Regulatory State of the Union & Wastewater Characterization

Taryn McKnight, PFAS Practice Leader for Eurofins, provide a presentation on PFAS state and federal actions, research, and emerging technologies. The slides are available on the BACWA website. Her presentation covered:

- EPA's PFAS Strategic Roadmap
- The 2022 National Defense Authorization Act, which includes funding for addressing PFAS
- Designation of PFAS constituents as hazardous substances (CERCLA) and hazardous constituents (RCRA)
- Development of federal drinking water Health Advisories for PFAS
- Development of state and federal drinking water limits
- Effluent guidelines for categorical industrial users and in EPA-issued NPDES permits
- Proposed reporting requirements for PFAS manufacturers under the Toxic Substances Control Act (TSCA)
- Research efforts underway at CDC and EPA, including development of new analytical methods
- Methods for characterization PFAS I wastewater, including targeted analysis, Total Oxidizable Precursors (TOP), Adsorbable Organic Fluorine (AOF), and Non-Targeted Analysis.

Next BAPPG General Meeting: August 3rd, 10 AM by Zoom or In-Person. The meeting topic will be the annual pollutant prioritization.

Mary Cousins

From: bappg-bacwa@googlegroups.com on behalf of Moyer, Alessandra@Waterboards <Alessandra.Moyer@Waterboards.ca.gov>
Sent: Wednesday, July 6, 2022 3:06 PM
To: BAPPG
Subject: Submit Your P2 Award Nominations by July 15

Hi BAPPG members,

Don't forget to submit your nominations for the **2022 Dr. Teng-Chung Wu Pollution Prevention Award** by July 15th, 6pm!

Do you know of an agency that is going above and beyond in their P2 efforts? **Nominate them!** Do you know someone who has worked tirelessly and collaboratively to tackle pollution at the source? **Nominate them!** Does your own agency have an innovative approach to pollution prevention outreach? **Go ahead, nominate your own agency!**

Email me (Alessandra.Moyer@waterboards.ca.gov) or give me a call (510.622.2116) and let me know who you think should be this year's recipient of the Dr. Teng-Chung Wu P2 Award.

Can't wait to hear about all the pollution prevention excellence in our midst!

Alessandra J. Moyer
Environmental Scientist
NPDES Wastewater and Enforcement Division
SF Bay Regional Water Quality Control Board
Pronouns: she/her/hers
LinkedIn Twitter Instagram

Laboratory Committee – Report to BACWA Board

Laboratory committee meeting on: June 14, 2022
Executive Board Meeting Date: July 15, 2022
Committee Chair: Nicole Van Aken, Fairfield-Suisun Sewer District

Committee Request for Board Action: None

Regular meeting: 40 attendees via Zoom representing 23 agencies

ELAP Enforcement Considerations for Wastewater Laboratories

Alexandria Turner, ELAP Enforcement Unit Supervisor, provided an overview of the ELAP enforcement unit, enforcement trends within wastewater labs, and case study examples. The enforcement unit was founded in 2015 and operates independently from CA ELAP. Alexandria noted some enforcement trends within wastewater labs, such as:

- Outdated or missing documentations (e.g., missing Proficiency Testing records; SOPs that are out of date; missing training records; quality assurance manuals out of date)
- Repeat findings (e.g., corrective actions that weren't implemented)
- Undue influence (e.g., intimidating work environment, fear or pressure from management to falsify data).
- Unqualified or untrained staff (e.g., staff that are not interested in performing their duties as required; technical managers that don't meet the qualifications as required by California code or TNI). In a worst-case scenario, this can even result in death, as in E. coli outbreak in Canada where water operators falsified data and did not understand drinking water standards.
- Data not reported on time
- Lack of ethics and data integrity training - uncontrolled practices can quickly spiral into unethical practices. TNI and CA ELAP standards both require data integrity training.

The enforcement unit does not only conduct enforcement; they also are providing compliance assistance letters in anticipation of the TNI standards coming into effect in 2024; compliance assistance will continue after the TNI standard is effective, as well. The unit will not require laboratories to re-organize to meet the TNI standard prohibition on undue influence, but they may require a policy that prevents undue influence. Questions or whistleblower complaints to the ELAP enforcement unit can be sent to elapca_technical@waterboards.ca.gov. The CA ELAP conference occurred in June, and videos of the presentations are now available.

Member Updates

- Several agencies noted they are having difficulty sourcing chemical reagents due to supply chain disruptions. Agencies are ordering chemicals earlier than usual, and identifying alternate sources (e.g., USA Bluebook and Hardy are alternative sources for Hach methods). Another chemical sourcing challenge is maintaining compliance with security requirements from CA Department of Justice / US Drug Enforcement Administration (DEA) regarding controlled substances and precursor chemicals. Members discussed how to obtain annual clearance to purchase these chemicals.
- Members noted that they dispose of GC and ICP gas cartridges as hazardous waste.

BACWA Updates

- There is still no anticipated effective date for the Chlorine blanket permit amendment, which is being held up by EPA review. Effluent limits and monitoring requirements for oil & grease are being removed permit-by-permit.
- The Mercury/PCB watershed permit will be reissued in 2022 (October or November). Compilation of PCB congener data will be the first phase, and BACWA will distribute a draft version soon.
- Implementation of the Statewide Toxicity Provisions is still a few months away. The provisions are currently being reviewed by EPA.

Report-Out from May Meeting with ELAP

- In May, committee leaders met with ELAP to discuss implementation of the 2021 EPA Methods Update Rule (MUR). ELAP plans to implement a new process for rolling out the 2021 MUR and future MURs. Tentatively, the steps to apply for MUR methods will be:
    - *ELAP publishes the new FOAs*
    - *From ELAP's change log, identify if you will need an on-site assessment for any updated methods; if so, schedule it as soon as possible.*

- *Order Proficiency Testing standards- you will need successful Proficiency Tests matching the MUR methods before applying.*
- *Re-write your SOP to match the MUR method and reference. You will need an updated SOP before applying.*
- *Submit an amendment application and pay the fee.*

As noted above, an amendment application would be required to update methods. The on-site assessment will be waived for some methods if the change is not substantive. This is expected to be a significant effort for laboratory staff, so plan accordingly. ELAP is looking into a reduced application cost and/or an "open enrollment" period to streamline the effort. ELAP plans to prepare draft written guidance on this issue, which BACWA will review.

- ELAP has instructed assessors to use the most recent QC chapters. For Standard Method QC chapter references, use the following:
  - For wastewater methods, follow the methods in 40 CFR Part 136, Footnote 84.
    - Part 2000 Methods, Physical and Aggregate Properties 2020 (2017);
    - Part 3000 Methods, Metals, 3020 (2017);
    - Part 4000 Methods, Inorganic Nonmetallic Constituents, 4020 (2014);
    - Part 5000 Methods, and Aggregate Organic Constituents, 5020 (2017).

    If it is not listed, use the most recent EPA-approved method year (for 9020, this is 2015).
  - For drinking water methods, always use the most recent EPA-approved method year.

- ELAP staff reported that their work is hindered by outdated data management software, and requested that BACWA support their request for increased software funding.

TNI Training and Implementation

- The 12th TNI training session with Diane Lawver is scheduled for Tuesday, June 21st. Recordings of previous sessions are available through the BACWA website (password required).
- Keep your receipt from paying for TNI standards. One agency reported that the receipt was requested as part of an assessment process.

Next Regular Meeting : August 9, 2022, 10 AM – 12 PM via Zoom

Planned Guest Speakers at Upcoming Meetings:
August 9, 2022 – Xin Xu, EBMUD, Ion Chromatography for Volatile Fatty Acids
October 11, 222 – Diane Lawver, IR Guns

Permits Committee –
Report to BACWA Board

Permits Committee Meeting on: June 14, 2022
Executive Board Meeting Date: July 17, 2022
Committee Chair: Chris Dembiczak, EBMUD

Committee Request for Board Action: None

Regular meeting: 37 attendees via Zoom representing 21 member agencies and the Regional Water Board

Regional Water Board Report

Three staff members from the NPDES division attended the meeting to discuss implementation of the Statewide Toxicity Provisions within Region 2 discharge permits (see below). Staff also noted that Eileen White has been selected as Executive Officer of the Regional Water Board (see press release).

Chlorine Blanket Permit Amendment

The chlorine Basin Plan Amendment continues to be delayed by the EPA review process. In June, EPA will meet with US Fish & Wildlife Service to determine if a formal consultation is needed; previously, EPA did not complete a consultation for the chlorine water quality objectives that support the Basin Plan Amendment. If a formal consultation is needed, this process will take another 135 days. **We expect another schedule in July.** Meanwhile, the blanket permit amendment modifying chlorine effluent limits and removing oil & grease monitoring requirements is **not yet effective**. However, limits and monitoring requirements for oil & grease are being removed permit-by-permit.

Implementation of Statewide Toxicity Provisions

The Statewide Toxicity Provisions are currently being reviewed by EPA, which may need to complete an informal consultation with resource agencies. The review is expected to be completed by July or August.

In June, Regional Water Board staff distributed an updated version of the NPDES permit implementation language for Region 2 discharge permits; the draft was circulated to the committee prior to the meeting. The updated version addresses some minor comments that BACWA submitted in February to clarify monitoring requirements, and also includes a new monitoring flowchart. The committee discussed the following aspects of the draft monitoring requirements:

- For deep water dischargers with surveillance monitoring (i.e., those with > 20:1 dilution), the TRE end point will typically be a “pass” at 10% effluent, not just a “pass” at the Instream Waste Concentration. This approach conforms to anti-backsliding policy and is similar to the current TRE requirement to show < 10 TUc. The TRE end point should be established as part of the TRE work plan at the beginning of the TRE.
- Dischargers should plan to present TST results with their Reports of Waste Discharge if they would like to qualify for reduced monitoring. The thresholds established in Section 4.3.3.4 provide flexibility to use the next-highest or highest effluent concentration for qualify for reduced monitoring.

BACWA will request additional edits to clarify some of the following points discussed by members:

- A footnote could be added to Table E-1 to note that samples at SUR-001 can be the same physical location as EFF-001, so that the same effluent can be used for both surveillance tests and compliance tests. An explanatory note could also be added to the Fact Sheet.
- Section 4.3.3.4 of the Fact Sheet calls out the threshold for reasonable potential analysis, but the Fact Sheet should also note that the same thresholds apply for qualifying for reduced monitoring.
- (Optional) Develop a flow chart for surveillance monitoring requirements.

Nutrients Update

- BACWA will be holding a workshop with Regional Water Board staff on July 28th to continue discussions about implementation of load caps in the 3rd watershed permit. To prepare for this workshop, the Nutrient Strategy Team will meet on June 30th and July 20th. Also, agencies are encouraged to review the statistical analysis of individual agency loading data ahead of these meetings.
- SCWWRP has released progress updates on their "Investigations of Effects of Anthropogenic Nutrients on Acidification and Deoxygenation in the Southern California Bight". Materials can be found here. This work will eventually be extended to the coastal ocean near San Francisco Bay, with results expected in Fall 2024, so it worthwhile for BACWA members to understand the scenarios being modeled in Southern California.

Other Items

- Sample collection for Phase 2 of the PFAS Regional Study is wrapping up.
- The Mercury and PCBs Watershed Permit is likely to be reissued at the December 2022 Regional Water Board meeting. BACWA is assisting with PCB data compilation and will circulate a draft soon. Regional Water Board staff noted that they have confirmed EPA has no immediate plans to promulgate Method 1668C, which means the permit will keep the same approach of using PCB aroclors for compliance monitoring and PCB congeners for load estimates.
- BACWA is planning to organize a roundtable discussion on sea level rise planning. EBDA volunteered to assist. Members also noted that the Ocean Protection Council (OPC) has recently announced a major grant for sea level rise adaptation planning in San Francisco Bay, to be conducted by BCDC (see project description from OPC).
- NPDES permits for EBDA, DSRSD, and Livermore are on the July agenda for the Regional Water Board. EBDA representatives reported no major comments, and also explained that the new permit will facilitate a planned brine discharge project.
- Mary Cousins will present "Understanding your NPDES permit" on July 20th, 10 am – 12 pm on Zoom. The presentation will be recorded.

Next BACWA Permits Committee Meeting: August 9, 2022, 12:30 PM via Zoom

Pretreatment Committee – Report to BACWA Board

Pretreatment Committee Meeting: 6/02/2022
Executive Board Meeting: 07/15/22
Committee Chairs: Casey Fitzgerald, Michael Dunning

Committee Request for Board Action: None

Introductions

Casey Fitzgerald was announced as the new pretreatment committee cochair, taking over from Tim Potter

PFAS

BACWA's Executive Director provided an update on the Bay Area Regional PFAS Study, as well as recent development on PFAS by EPA that may impact PFAS regulation.

EPA has a strategic roadmap for PFAS and has been taking a very active role regarding PFAS response. One of the major elements of that roadmap is to use the federal pretreatment program to reduce industrial loading of PFAS. In April, EPA announced a few actions related to this roadmap. First, they have issued a draft method for adsorbable organic fluorine, which is part of building the toolbox for assessing PFAS concentrations in wastewater. Second, they released draft water quality criteria for PFAS in fish. These draft aquatic life criteria are just one example of the water quality criteria that are going to be rolling out. These particular limits are to protect the fish themselves, not the people that eat the fish, and they are fairly high limits. EPA is also planning to developing drinking water MCLs for PFOA and PFOS, and the California Division of Drinking water has also issued drinking water response and notification levels for PFOS, PFOA, and PFBS. Drinking water MCLs are not applicable to Bay discharges, but these limits will affect inland dischargers. Eventually there may also be criteria that apply to human consumption of fish, and those would be appliable to Bay discharges.

Also in April, EPA issued a memo about how they will roll out new PFAS related requirements into NPDES permits where they are the pretreatment program control authority, which is not true for California. The memo was shared with the committee because it may indicate the direction we are headed.

Recent PCI/PCA experiences

Committee members gave updates on their recent audit and inspection experiences with Water Board staff. The Committee would like to hear from regulators about their priorities.

Industrial User Categorization

Several agencies have experienced pushback from industries upon being categorized as a new industrial user. There are R&D exemptions from categorization, and members discussed what kinds of operations could qualify for those exemptions. The group would like to follow up with the Water Board on how the handing businesses doing business as other businesses.

Pretreatment Committee – Report to BACWA Board

Pretreatment Committee Meeting: 6/02/2022
Executive Board Meeting: 07/15/22
Committee Chairs: Casey Fitzgerald, Michael Dunning

CROMERR Update (EPA Electronic Reporting)
Some agencies reported their experiences transitioning to EPA's CROMERR system. There was a discussion about whether it was worth the effort and resources to get approval. Some agencies like to have the electronic backup for file storage and extra security. This item will be agenized for future meetings.

COVID Impacts
Most agencies reported that they have resumed inspections, although some work elements have not yet resumed due to the pandemic. Several agencies announced that they had significant turnover, with up to 50% new staff.

General Discussion
The committee felt that its role should be the following:

- Updates from BACWA
- Host training sessions (there was a discussion that there are video archives of Greg Arthur's Pretreatment Training on the committee webpage)
- Training by committee members
- Permit writing

It was noted that we need to update the committee list, due to high turnover by agency staff.

Next meeting: TBD – attendees expressed interest in scheduling an in-person meeting. Region 2 and EPA will be invited to a winter meeting.

Executive Director's Report to the Board

June 2022

EXECUTIVE BOARD MEETING AND SUPPORT

- Worked with BACWA staff to plan and manage 6/17 Executive Board meeting
- Conducted the Executive Board meeting agenda review with the BACWA Chair
- Posted material from the Annual Meeting
- Reviewed and shared survey data from the Annual meeting
- Continued to track all action items to completion

COMMITTEES:

- Attended 6/1 BAPPG meeting
- Attended Preatreatment Committee meeting, 6/2
- Planned and hosted Managers Roundtable meeting, 6/24
- Discussed future of O&M Infoshare with group members

REGULATORY:

- Worked with CASA and member agencies to develop comments on Alameda County approval of Jess Ranch composting facility
- Gave oral comments at Alameda County BOS meeting on Jess Ranch, 6/2
- Met with Summit Partners to strategize State Water Board engagement on conservation impacts to wastewater, 6/24
- Worked with BAAQMD to plan and schedule Reg 2 workgroup meeting
- Planned engagement with BAAQMD Reg 2 working group and committee meeting

NUTRIENTS:

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

- Discussed NMS issues with Science Manager
- Planned and hosted NST meeting 6/30
- Engaged NMS Reviewer to provide comments on VPA approach document for assessment framework
- Gathered information from members on projects that will impact nutrient loads
- Discussed WQIF proposal concepts with members and SFEI
- Discussed statistical alternatives for baseline and compliance with consultant

FINANCE:

- Reviewed the monthly BACWA financial reports
- Worked with AED to develop BARs for contract amendments for consultant support contract
- Reviewed and approved invoices

COLLABORATIONS:

- Attended COVID-WEB wrap-up meeting, 6/3
- Prepared for conservation workshop and developed presentation on unintended consequences of conservation. Gave presentation remotely on 6/28. Attended in-person workshop on 6/29
- Participated in CASA Education Foundation selection committee, reviewed and scored applications for general scholarships and for Bruce Wolfe scholarship
- Communicated with R2 Board members about how to contribute to Bruce Wolfe scholarship fund

ASC (AQUATIC SCIENCE CENTER)

- Reviewed materials sent via email by ASC ED
- Attended SFEI/ASC Board meeting 6/24

BABC (BAY AREA BIOSOLIDS COALITION)

- Discussed invoicing issues with AED

BACC (BAY AREA CHEMICAL CONSORTIUM)

- Discussed chemical costs with members
- Discussed policy issues with administrator
- Reviewed communications with BACC members
- Developed BAR and new contract for BACC administrator

BACWWE (BAY AREA COALITION FOR WATER/WASTEWATER EDUCATION)

- Reviewed BACCWE email discussions
- Reached out to CWEA about potential collaboration

ADMINISTRATION:

- Planned for and conducted the monthly BACWA staff meeting to prepare for the Board Meeting and to coordinate and prioritize activities.
- Met with RPM to discuss progress on regulatory issues
- 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 the 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.

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

August 2022 – October 2022 Meetings

DATE	AGENDA ITEMS
August 19, 2022	**Approvals & Authorizations:** • **Policy / Strategic Discussion:** • RMP Update – Melissa Foley **Operational:** •Pardee Planning •Conflict of Interest Form •5 year plan update •NMS Payment
September 8 & 9, 2022	**Pardee Technical Seminar** •Watershed Permit Negotiations •Update Ocean Impacts Work
October 21, 2022	**Approvals & Authorizations:** • **Policy / Strategic Discussion:** • SFEI PFAS Update **Operational:** •

BACWA ACTION ITEMS

Number	Subject	Task	Responsibiity	Deadline	Status
	Action Items from June 2022 BACWA Executive Board Meeting		**resp.**	**deadline**	**status**
2022.6.47	R2 Announces new EO	BACWA ED to review rules and roles for representation to external committees	ED	7/8/2022	complete
2022.6.48	Agenda for 7/18 BAAQMD workgroup meeting	BACWA ED to share draft meeting minutes from March 30 meeting with BAAQMD to get consensus on action items.	ED	6/23/2022	complete
2022.6.49	Agenda for 7/18 BAAQMD workgroup meeting	BACWA ED to share revised draft agenda with group.	ED	6/23/2022	complete
2022.6.50	Sea Level Rise round table proposal	BACWA RPM to organize a sea level rise planning roundtable to occur this summer via Zoom.	RPM	9/21/2022	WIP
2022.6.51	FY23 Meeting Schedule and location	BACWA Staff to explore hybrid meeting options at Pardee.	AED	6/17/2022	complete
2022.6.52	FY23 Meeting Schedule and location	BACWA staff to work with David Brower Center on booking Annual Members Meeting for May 5, 2023.	AED	7/14/2022	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		on going

FY22: 50 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

June 2022

BAY AREA BIOSOLIDS COALITION: Attended June coalition meeting and prepared draft notes.

CLIMATE: Began preparing for sea level rise roundtable discussion among BACWA members to be held later in 2022.

MERCURY AND PCBS WATERSHED PERMIT: Began review and compilation of PCB congener for 2022 permit reissuance.

NUTRIENTS: Attended Nutrient Strategy Team meeting and prepared draft notes.

PFAS: Reviewed EPA's health advisories for PFAS; provided updates to committees on Phase 2 of PFAS Regional Study.

COMMITTEE SUPPORT:

BAPPG – Finalized and submitted comment letter to EPA on Folpet pesticide registration; participated in pesticide committee meeting; recruited new members for steering committee; finalized and circulated notes from June BAPPG meeting.
Laboratory – Provided regulatory updates at June committee meeting; assisted with June TNI training session logistics; issued attendance certificates to committee members; assisted committee leaders with ELAP communication.
Permits – Prepared toxicity and other regulatory updates for June meeting; attended meeting; prepared draft notes; reviewed progress of *Ceriodaphnia* study being completed through State Water Board.
Recycled Water – Participated in planning meetings for site supervisor training video; assisted with review of draft video editing contract.
Executive Board – Provided regulatory and committee updates at June meeting; reviewed minutes and action items.

ADMINISTRATION/STAFF MEETING – Prepared RPM draft performance plan for FY23.

BACWA MEETINGS ATTENDED:
BAPPG Pesticides Committee (6/14)
Permits Committee (6/14)
Laboratory Committee (6/14)
Executive Board (6/17)
Lab Committee TNI Training (6/21)
Nutrient Strategy Team (6/30)

EXTERNAL EVENTS ATTENDED:
Bay Area Biosolids Coalition (6/13)
CASA ACE Workgroup (6/29)