BACWA
BAY AREA
CLEAN WATER
AGENCIES

Executive Board Meeting
AGENDA
Friday, January 14, 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		
CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER			
CONSENT CALENDAR		**9:10 AM**	
1 Resolution to continue teleconferencing Executive Board meetings (AB361)			**3-4**
2 December 13, 2021 Special BACWA Executive Board meeting minutes			**5**
3 December 17, 2021 BACWA Executive Board meeting minutes			**6-12**
4 January 6, 2022 Special Executive Board meeting minutes			**7-15**
5 November 2021 Treasurer's Report			**16-26**
APPROVALS AND AUTHORIZATIONS		**9:15 AM**	
6 Approval: FY22 NMS Payment #2 $1.2M			**27-29**
7 Approval: 2022 Strategic Plan update			**30-37**
8 Approval: FY22 One Water Invoice $5k			**38-41**
POLICY/STRATEGIC		**9:20 AM**	
9 Discussion: Nutrients			
a. Technical Work			
i. Jan 11 Assessment Framework workshop debrief			**42-43**
b. Regulatory			
i. 2022 GAR Presentation			
ii. NST meeting debrief			
c. Governance Structure			
i. January 5, 2022 Planning Subcommittee meeting notes			**44-47**
ii. 2022 NMS meeting schedule			
10 Discussion: Biosolids Report			**48-82**
BREAK		**10:30 AM**	
11 Discussion: Letter to respond to Dec 15 BAAQMD adoption of Reg 2			**83-84**
12 Discussion: Funding for CASA engagement on air/biosolids/energy/climate change			**85**
13 Discussion: One Water update presentation			
14 Informational: NPDES Compliance Letter			**86-94**
15 Informational: BACWA endorsement for Bay Adapt			**95-96**
16 Informational: Coalition letter on Wastewater Arrearages Program			**97**
17 Informational: PFAS in Sportfish workshop registration			**98-100**
18 Discussion: SSS WDR update and response			
OPERATIONAL		**11:45 AM**	
19 Discussion: BACWA Executive Director Performance Review Discussion			
20 Informational: BACC Update			
REPORTS		**12:20 PM**	
21 Committee Reports			**101-102**
22 Member highlights			
23 Executive Director Report			**103-104**
24 Board Calendar and Action Items			**105-106**
25 Regulatory Program Manager Report			**107**
26 Other BACWA Representative Reports			**108-114**
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		

27 **SUGGESTIONS FOR FUTURE AGENDA ITEMS**	**12:29 PM**	
NEXT MEETING		
The next meeting of the Board is scheduled for February 18, 2022		
ADJOURNMENT	**12:30 PM**	

BAY AREA CLEAN WATER AGENCIES
RESOLUTION NO. R-22-04

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, since issuing Executive Order N-08-21, the highly contagious Delta variant of COVID-19 has emerged, causing an increase in COVID-19 cases throughout the State and local Counties; 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, because of the rise in cases due to the Delta variant 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 increase of cases due to the Delta 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-22-04

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 COVID-19 and the increase of cases due to the Delta variant, 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 14TH DAY OF JANUARY, 2022.

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

ATTEST:

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

Special Executive Board Meeting
December 13, 2021 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).

Other Attendees:

Name	**Agency/Company**
Lorien Fono	BACWA
Jason Nettleton	San José
Rita Cheng	Central Contra Costa Sanitary District
Courtney Mizutani	consultant

Amit Mutsuddy called the meeting to order at 4:00 pm.

ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE

PUBLIC COMMENT None

1. **Discussion of BACWA oral comments on proposed Regulation 2 at December 15, 2021 BAAQMD meeting –** The attendees discussed BACWA's messaging pertaining to the "Essential Public Service" definition included in BAAQMD's Regulation 2. The group agreed on logistics for commenting at the December 15 BAAQMD adoption hearing.

ADJOURNMENT 4:34 PM

Executive Board Meeting Minutes

December 17, 2021

ROLL CALL AND INTRODUCTIONS

Executive Board Representatives: Amy Chastain (San Francisco Public Utilities Commission); Yun Shang (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
Amanda Roa	Delta Diablo
Christopher Bolt	Petaluma PW&U Director
Colleen Henry	Central Contra Costa Sanitary District
David Rothbart	Los Angeles County Sanitation Districts
Doug Kobold	California Product Stewardship Council
Don Gray	EBMUD
Dave Richardson	Woodard & Curran
Eric Dunlavey	City of San Jose
Jared Voskuhl	CASA
Jennifer Acton	SFO
Jennifer Dyment	BACWA
Jimmy Mach	City of Oakland
Kevin Cesar	City of Millbrae
Lorien Fono	BACWA
Mary Cousins	BACWA
Meg Herston	FSSD
Rebecca Sutton	SFEI
Sarah Deslauriers	Carollo Engineers
Steve Jepsen	Southern California Alliance of POTWS
Sharon Green	Los Angeles County Sanitation Districts
Talyon Sortor	FSSD
Tom Hall	EOA

Amit started meeting at 9:03

ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE

PUBLIC COMMENT None

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER

CONSENT CALENDAR

1 Resolution to continue teleconferencing Executive Board meetings (AB361)

2 November 19, 2021 BACWA Executive Board meeting minutes - Lori Schectel noted an error on page 6 of packet. Item should be corrected to show that the BACWA representative to Summit Partners is now Amit Mutsuddy. Tom Hall noticed on page 4 of packet that East Bay Dischargers Authority is mentioned. It should say Bay Area Clean Water Agencies. BACWA Executive Director confirmed that the two errors would be corrected.

Consent Calendar Items 1 and 2: *A motion to approve was made by Jackie Zipkin (East Bay Dischargers Authority) and seconded by Amit Mutsuddy (City of San Jose). The motion was approved unanimously.*

APPROVALS AND AUTHORIZATIONS

3 Resolution: Bruce Wolfe Scholarship

Approval Item 3: *A motion to approve was made by Amy Chastain (SF Public Utilities Commission) and seconded by Lori Schectel (Central Contra Costa Sanitary District). The motion was approved unanimously.*

POLICY/STRATEGIC

4 Informational: CPSC Update –Doug Kobold provided a summary of work by the California Product Stewardship Council (CPSC), a collaborative that is supported by BAPPG. CPSC actively tracks legislation managing waste and how products enter the marketplace. Doug encouraged members to reach out to CPSC regarding any legislation of interest. Doug summarized all the signed bills in 2021 and the bills that they are currently watching. Doug also gave an overview of the products and chemicals that the CPSC targets, their 4 active campaigns, their medical bin map and their Marine Debris Project as well as a textile recovery program. Doug answered questions from the group.

5 Informational: Contract with SFEI for PFAS Phase 2 Study - BACWA Executive Director summarized that the contract with SFEI for management of the PFAS Special Study Phase 2 is in the packet. The contract amount is for $192,000 for tasks listed, with an additional $11,000 for as needed tasks that may be authorized by the Executive Director, for a total of $203,000..

6 Discussion: PFAS In Sportfish Workshop - Dr. Sutton from SFEI summarized meeting agenda for a diverse group of stakeholders. The proposed agenda is in the packet. Representatives of community groups that fish in the bay are invited. Dr. Sutton answered questions from the group and addressed concerns about public messaging prior to scientific

certainty. Group agreed that a seat at the table was important and that BACWA should participate in the workshop.

7 Discussion: Nutrients

a. Technical Work

i. State of the Science Outline - BACWA Executive Director summarized plans for a document expected to be about 3 pages long for general audiences. It would provide background information, identify key questions, and list planned next steps. Group discussion followed.

a. Regulatory

i. NST Agenda - BACWA Executive Director summarized agenda for Monday January 10, 2022 Nutrient Management Strategy meeting. Group discussion followed.

ii. GAR due Feb 1, 2022 - The HDR team will provide a presentation on the 2021 data at the January 14 meeting.

b. Governance Structure

i. December 1, 2021 Planning Subcommittee meeting notes

ii. December 10, 2021 Steering Committee meeting notes

BREAK 10:30 AM

8 Discussion: CASA Climate Change Regulatory initiative - David Rothbart from LACSD presented a summary of the many new regulations under development impacting air emissions, climate change, energy, and biosolids. David summarized a proposal to enhance CASA's advocacy for beneficial policies that span several different proposed state agency regulations, policies & programs. They are requesting that BACWA or its members provide funding to support this initiative. General discussion followed.

Action item *– BACWA Executive Director was given direction by board members to look at various funding scenarios for FY22 and FY23. A decision on funding will included in the January 2022 BACWA Executive Board meeting agenda.*

9 Discussion: Debrief from Dec 15 BAAQMD adoption of Reg 2 - Jackie Zipkin from EBDA gave an overview of a meeting with one of EBDA's commissioners, who is also on the BAAQMD Board, and BAAQMD staff. They discussed the "essential public service" designation that was adopted in Regulation 2 that excludes POTWs, but came to an agreement that the

regulation's adoption would include a resolution to implement a workgroup to address POTW implementation of this and other air quality regulations. BACWA Executive Director also shared information of adoption hearing of Regulation 2. Group discussion about the BAAQMD meeting.

Action item – *BACWA Executive Director will develop a letter to address erroneous verbal comments made at the December 15th BAAQMD meeting. BACWA Executive Director will present letter for discussion at next BACWA Executive Board meeting.*

10 Informational: Update on Chlorine Residual Blanket Permit Amendment - BACWA Regulatory Program Manager shared that the new anticipated effective date of the permit amendment is March 1, 2022.

11 Informational: Update on MRP Permit Amendment Revised Tentative Order - BACWA Regulatory Program Manager shared that Regulatory Water Board adopted permit amendment on December 15, 2022 and it is effective January 1, 2022.

12 Discussion: Agency EJI initiatives - report to EPA - BACWA Executive Director met with Ellen Blake who is the new EPA POTW liaison. Ellen reported that EPA is focused on climate change and EJI issues. She requested presentations from BACWA agencies on their EJI initiatives. SFEP is already moving ahead with a workshop to address best practices in community engagement when planning clean water projects that could address EPA's request. Group discussed EJI efforts.

Action item – *BACWA Executive Director will work with BACWA agencies to put together a meeting & presentation on EJI efforts.*

13 Discussion: Endorsement of Bay Adapt Joint Platform – BACWA Executive Director shared slide to summarize Bay Adapt Joint platform action and organization. BACWA Executive director recommended that we send in a letter of endorsement.

Action item *– BACWA Executive Director will prepare letter and submit letter of endorsement.*

14 Informational: Draft Estuary Blueprint Draft Estuary Blueprint Update - BACWA Executive Director briefly described the three Estuary Blueprint actions that directly involve BACWA, which were recycled water, nutrients, and CECs. The recycled water action specifically calls out BACWA's involvement. The comment period is currently open and the board, or members, can make comments if necessary.

15 Informational: Solano County Generators Report - BACWA Regulatory Program Manager shared that the report is in the packet. BACWA submitted this report to Solano County on behalf of members.

16 Discussion: Draft agenda for January 6, 2022 Joint meeting with RWB – BACWA Regulatory Program Manager shared draft agenda and asked for feedback from members. General discussion followed.

Action item - *BACWA staff to revise the agenda and share with RWB staff.*

OPERATIONAL

17 Discussion: Strategic Plan Proposed Update - BACWA Executive Director summarized proposed changes to the BACWA Strategic Plan. Group discussion followed. The updated Strategic Plan will be brought to the Board for approval in January 2022.

18 Discussion: Guiding principles on funding for collaboratives - BACWA Executive Director shared rubric for funding collaboratives. The criteria will be used as a "test drive" when developing FY22 collaborative funding priorities.

19 Informational: BACC Update - BACWA Assistant Executive Director shared that BACC's agencies are currently reviewing the draft versions of the BACC FY2022-23 bid documents. Bids will go live at the end of January and be opened February 24, 2022.

20 Informational: Extension of Arleen Navarret award nomination deadline- BACWA Executive Director shared that the award nomination deadline was extended to February 25, 2022. BACWA Executive Director encouraged agencies to nominate their employees and colleagues.

REPORTS

21 Committee Reports - BACWA Regulatory Program Manger shared that Recycled Water Committee is planning to create a video to train recycled water site supervisors.

22 Member highlights - Central Contra Costa Sanitary District asked if anyone else is attending CASA conference in person. EBDA is working on a regional biosolids project and is looking for agencies to collaborate with.

23 Executive Director Report - In the packet.

24 Board Calendar and Action Items - In the packet.

25 Regulatory Program Manager Report – In the packet.

26 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 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

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

27 **SUGGESTIONS FOR FUTURE AGENDA ITEMS**

NEXT MEETING The next meeting of the Board is scheduled for January 14, 2022

ADJOURNMENT 12:48 PM

Special Executive Board Meeting Minutes
Joint Meeting with Regional Water Board Staff

January 6, 2022

ROLL CALL AND INTRODUCTIONS

Executive Board Representatives: Lori Schectel (Central Contra Costa Sanitary District); Amit Mutsuddy (San Jose); Eileen White (East Bay Municipal Utility District); Jacqueline Zipkin (East Bay Dischargers Authority); Amy Chastain (SFPUC).

Other Attendees:

Name	Agency/Company
Lorien Fono	BACWA
Mary Cousins	BACWA
Michael Montgomery	Regional Water Board
Tom Mumley	Regional Water Board
Bill Johnson	Regional Water Board
Robert Schlipf	Regional Water Board
James Parrish	Regional Water Board
Jean-Marc Petit	Central Contra Costa Sanitary District
Don Gray	East Bay Municipal Utility District
Tom Hall	EOA

PUBLIC COMMENT – None.

AGENDA ITEMS

Agenda **Item 1 – Agency Updates**

Representatives from the Regional Water Board (RB2) and BACWA agencies briefly shared how their agencies are handling the current surge in COVID cases. Several agencies reported challenging staffing situations. EBMUD reported that emergency repairs to a sewer interceptor near the Coliseum is their highest concern. Mike Montgomery announced that he will be leaving RB2 to take a management position in the Superfund division at USEPA Region 9.

Agenda **Item 2 – CECs and PFAS Regional Study**

Lorien Fono shared the planned schedule and focus for Phase 2 of the PFAS Regional Study. Sampling is planned for March through May 2022, and the final report will be available in 2023. The schedule will be shared with State Water Board staff. The group also discussed the upcoming PFAS in Sportfish workshop and possible legislation regarding disclosure of PFAS use.

Agenda **Item 3 – Biosolids**

RB2 staff are collaborating with Sonoma Land Trust, Ducks Unlimited, and the Bay Area Biosolids Coalition to finalize the Biosolids in the Baylands white paper. Once the white paper is

completed, RB2 intends to issue 13383 letters requiring technical reports and monitoring from the three POTWs land-applying biosolids in the Baylands. The effort is being led by Maggie Monahan, who was unable to attend and will be invited to a future meeting.

Agenda **Item 4 – Air Permitting**
BAAQMD has adopted a resolution to establish an air toxics working group with POTWs. Tom Mumley agreed that RB2 management should participate in the working group, as well. Mike Montgomery suggested that working at the Board level through the Bay Area Regional Collaborative could be a useful approach. Lori Schectel shared CCCSD's experience with BAAQMD permitting and BACT determination; permitting delays led to inadequate backup power during the October 2021 atmospheric river event.

Agenda **Item 5 – Nutrients**
RB2 confirmed that their plan is to develop load caps in the 3rd watershed permit using a "One Bay" approach. Load caps would not be developed for individual subembayments, but subembayments could still be useful for applying the assessment framework during implementation of the 3rd watershed permit. The group agreed that a workshop to discuss the technical basis for load caps and baseline loading conditions would be useful. BACWA will keep RB2 staff updated on the schedule for the workshop (tentatively April 2022 but subject to change). The group discussed that the 3rd watershed permit will also need to establish a mechanism for recognizing early actors and loading from organics diversion projects.

Agenda **Item 6 – SSS-WDR**
RB2 staff participated in review of the draft SSS-WDR through a subcommittee working with State Water Board staff. BACWA will reach out to RB2 staff with a set of prioritized comments when the public draft is released, which is expected to occur by the end of January.

Agenda **Item 7 – Miscellaneous Coordination**

- RB2 staff currently anticipate that the Chlorine Basin Plan Amendment effective date will be March 1; however, if this is delayed they will provide BACWA with an update.
- BACWA is reviewing draft toxicity implementation language provided by RB2 staff and will provide feedback by late January.
- A workshop on Diversity, Equity, and Inclusion in wastewater will be convened using funds from the Transforming Shorelines Collaborative at the San Francisco Estuary Partnership. Jackie Zipkin will keep Bill Johnson informed about communication with EPA on this issue.
- RB2 is moving forward with the Climate Change/Wetlands Basin Plan Amendment. A draft will be available no earlier than February. The amendment is intended to be explanatory rather than regulatory.
- The February E/O report will include a summary of results from the Climate Change questionnaire.
- RB2 NPDES division are willing to coordinate with BACWA regarding preparation of guidance materials related to RO concentrate management. Deep and shallow water dischargers are handled differently.

Agenda **Item 8 – Wastewater Arrearages**
The group discussed the importance of reaching out to all agencies to encourage applying for state funding for wastewater arrearages. For some collection system agencies, fees are collected by the County. RB2 staff will reach out to State Water Board staff to encourage coordination with and participation by Counties. The application period will open on February 1 and run for 60 days.

Agenda **Item 9 – Annual Events**
The BACWA Annual Meeting will occur on May 6th at the David Brower Center in Berkeley. The Pardee Technical Seminar is scheduled for September 9th and will occur at Pardee or an alternate site.

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

January 7, 2022

MEMO TO**:** Bay Area Clean Water Agencies Executive Board

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

SUBJECT: Fifth 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 November 30, 2021** (Five 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-Crough, Samuel
Sent: Friday, January 7, 2022 2:44 PM
To: Houck, Matt
Subject: RE: BACWA - November 2021 Treasurer's Report

No problem at all, I was probably reading too quickly – sorry it took me a bit to get this today!

Approved without any changes.

Thank you!

Sam Feldman-Crough (he/him/his)
Debt Administrator
office: (510) 287-0441
mobile: (510) 882-6860

From: Houck, Matt <matt.houck@ebmud.com>
Sent: Friday, January 7, 2022 9:05 AM
To: Feldman-Crough, Samuel <samuel.feldman@ebmud.com>
Subject: BACWA - November 2021 Treasurer's Report

Hi Samuel,

Sorry. I had the wrong Subject in my email and I attempted to recall it. Here is the correct report with correct email subject.

Please approve BACWA – November 2021 Treasurer's Report for distribution.

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 November 30, 2021, was $831,333 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. $463,368 of the ending fund balance is shown on the BACWA Fund & Investments Balance Report November 30, 2021, 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 $166,351 (i.e., actual fund balance of $367,963 less target reserves) as November 30, 2021.

CBC Fund: This fund provides the resources for completing special investigations as well as meeting regulatory requirements. The ending fund balance on November 30, 2021, was $3,482,423 which is higher than the target reserve of $1,000,000. $44,382 of the ending fund balance is encumbered to meet line-item expenses for completion of the Group Annual Report contract, completion of the NBS Study, Recycled Water Evaluation, and the PFAS Regional Study. This leaves an actual unencumbered reserve balance of $2,438,041 (i.e., actual fund balance of $3,348,041 less target reserves) as of November 30, 2021. 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 November 30, 2021 (40% of the FY) are at 98%

Expenses as of November 30, 2021 (40% of the FY) are at 32%.

FY 2022
BACWA BUDGET to ACTUAL

BACWA BAY AREA CLEAN WATER AGENCIES

BACWA FY22 BUDGET	Line Item Description	FY 2022 Budget	Actual Nov 2021	Actual % of Budget Nov 2021	Variance	NOTES
REVENUES & FUNDING						
Dues	Principals' Contributions	$516,909	$516,910	100%	$1	FY22: no increase. 5 @ $103,382
	Associate & Affiliate Contributions	$187,793	$181,466	97%	-$6,327	FY22: no increase. 13 Assoc: $8,364; 45 Affiliate: $1,675.
Fees	Clean Bay Collaborative	$675,000	$674,250	100%	-$750	Prin: $450,000; Assoc/Affil: $225,000
	Nutrient Surcharge	$1,700,000	$1,699,999	100%	-$1	See Nutrient Surcharge Spreadsheet
	Voluntary Nutrient Contributions	$0	$0	0%	$0	
Other Receipts	AIR Non-Member	$7,075	$7,074	100%	-$1	no increase (Santa Rosa)
	BAPPG Non-Members	$3,954	$3,954	100%	$0	no increase (Sta Rosa, Sac Reg'l, Vacaville) $1,292/each
	Other	$0	$2,601		$2,601	
Fund Transfer	Special Program Admin Fees (WOT)	$5,202	$0	0%	-$5,202	FY22: no increase
	Special Program Admin Fees (BACC)	$27,200	$0	0%	-$27,200	400 hours of AED support $68 / hr
	Special Program Admin Fees (BABC)	$6,000	$0	0%	-$6,000	ED, AED and RPM support
Interest Income	LAIF	$20,000	$3,226	16%	-$16,774	BACWA, Legal, & CBC Funds invested in LAIF
	Higher Yield Investments					
	Total Revenue	**$3,149,133**	**$3,089,480**	**98.11%**	**-$59,653**	

BACWA FY22 BUDGET	Line Item Description	FY 2022 Budget	Actual Nov 2021	Actual % of Budget Nov 2021	Variance	NOTES
EXPENSES						
Labor						
	Executive Director	$190,000	$63,333	33%	-$126,667	No change from FY20/FY21 budget
	Assistant Executive Director	$108,800	$30,736	28%	-$78,064	2.0% CPI (SF Bay Metro Area Dec 2020); $68/hour; Reflects 1600 hours (incl. 400 hours for BACC)
	Regulatory Program Manager	$127,400	$28,256	22%	-$99,144	$98/hour, Reflects 1300 hours
	Total	**$426,200**	**$122,325**	**29%**	**-$303,875**	
Administration						
	EBMUD Financial Services	$42,448	$10,097	24%	-$32,351	No change from FY20/21 budget
	Auditing Services	$5,345	$0	0%	-$5,345	Finanical Auditors through EBMUD; per auditor rate schedule
	Administrative Expenses	$7,959	$0	0%	-$7,959	No change from FY20/21 budget
	Insurance	$5,071	$7,072	139%	$2,001	2% increase over FY21 actual
	Total	**$60,823**	**$17,169**	**28%**	**-$43,654**	
Meetings						
	EB Meetings	$2,653	$0	0%	-$2,653	No change from FY20/21 budget
	Annual Meeting	$14,369	$0	0%	-$14,369	No change from FY20/21 budget
	Pardee	$6,537	$648	10%	-$5,889	No change from FY20/21 budget
	Misc. Meetings	$5,306	$225	4%	-$5,081	No change from FY20/21 budget
	Total	**$28,865**	**$873**	**3%**	**-$27,992**	
Communication						
	Website Hosting	$700	$0	0%	-$700	Website hosting $600, Go Daddy domain registration $100
	File Storage	$765	$0	0%	-$765	No change from FY20/21 budget, box.net
	Website Development/Maintenance	$1,530	$770	50%	-$760	No change from FY20/21 budget
	IT Support	$2,652	$0	0%	-$2,652	No change from FY20/21 budget
	Other Commun	$1,785	$224	13%	-$1,561	No change from FY20/21 budget; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile
	Total	**$7,432**	**$994**	**13%**	**-$6,438**	

FY 2022
BACWA BUDGET to ACTUAL

EXPENSES						
Legal						
	Regulatory Support	$2,815	$0	0%	-$2,815	2% increase, Downey Brand LLP
	Executive Board Support	$2,264	$0	0%	-$2,264	2% increase, Day Carter & Murphy LLP
	Total	**$5,079**	**$0**	**0%**	**-$5,079**	
Committees						
	AIR	$76,000	$27,876	37%	-$48,124	$75k consulting support, $1k misc expenses. Carollo Engineers
	BAPPG	$130,000	$31,542	24%	-$98,458	Includes CPSC @ $10,000, OWOW @ $10,000, and Pest. Reg Spt. @ $60,000
	Biosolids Committee	$0	$0		$0	
	Collections System	$1,000	$0	0%	-$1,000	
	InfoShare Groups	$1,750	$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	100%	$0	
	Permits Committee	$1,300	$0	0%	-$1,300	All meetings moved to include lunch hour for commuting purposes
	Pretreatment	$1,000	$0	0%	-$1,000	
	Recycled Water Committee	$1,000	$0	0%	-$1,000	
	Misc Committee Support	$45,000	$544	1%	-$44,456	
	Manager's Roundtable	$1,000	$0	0%	-$1,000	
	Total	**$259,050**	**$60,962**	**24%**	**-$198,088**	
Collaboratives						
	Collaboratives					
	State of the Estuary (SFEP-biennial)	$0	$0	0%	$0	Biennial in Odd Fiscal Years. (Paid bienniely in odd years for even year conference)
	Arleen Navarret Award	$2,500	$0	0%	-$2,500	Biennial in Even Fiscal Years. Award amount increased in FY20
	BayCAN	$5,000	$0	0%	-$5,000	New in FY22
	Stanford ERC (ReNUWIt)	$10,000	$0	0%	-$10,000	
	Misc	$1,500	$0	0%	-$1,500	NBWA
	Total	**$19,000**	**$0**	**0%**	**-$19,000**	
Other						
	Unbudgeted Items					
	Other	$0	$0	0%	$0	
		$0	**$0**	**0%**	**$0**	
Tech Support						
	Technical Support					
	Nutrients					
	Watershed	$2,600,000	$1,000,000	38%	-$1,600,000	Advance funding for 2nd Watershed Permit Science Studies. SFEI
	NMS Voluntary Contributions	$0	$0	0%	$0	
	Additional work under permit	$100,000	$0	0%	-$100,000	Includes HDR PO for $225k spread out over FY20-24.
	Regional Study on Nature based systems	$248,811	$13,707	6%	-$235,104	SFEI PO for $500K, expires 6/30/2022
	Regional Recycling Evaluation	$63,525	$0	0%	-$63,525	HDR PO for $154K FY20-24
	Nutrient Workshop(s)	$0	$0	0%	$0	Pilot Studies/Plant Review/Innovative Technologies
	NMS Reviewer	$50,000	$9,000	18%	-$41,000	
	General Tech Support	$100,000	$0	0%	-$100,000	AB617 emission factors, nutrient technical review, other nutrient support
	CEC Investigations	$140,000	$43,330	31%	-$96,670	PFAS Study Phase II
	Risk Reduction	$7,500	$0	0%	-$7,500	APA FSS completed $12,500 contract in FY20, CIEA will complete $12,500 contract in FY22
	Total	**$3,309,836**	**$1,066,037**	**32%**	**-$2,243,799**	
	TOTAL EXPENSES	**$4,116,285**	**$1,268,360**	**30.81%**	**-$2,847,925**	
	NET INCOME BEFORE TRANSFERS	**-$967,152**				
	TRANSFERS FROM RESERVES	**$967,152**				aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS	**$0**				
	TOTAL OPERATING BUDGET	**$806,449**				

FY 2022
BACWA BUDGET to ACTUAL

EXPENSES						
	OPERATING RESERVE	**$201,612**				

BACWA Fund Report as of November 30, 2021

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	713,177	1,202,388	831,331	463,368	367,963
604	LEGAL RSRV	300,000	-	-	300,000	-	300,000
605	CBC	1,172,157	3,376,304	1,066,038	3,482,423	44,382	3,438,041
	SUBTOTAL 1	*2,792,699*	*4,089,481*	*2,268,426*	*4,613,754*	*507,750*	*4,106,004*
602	BABC	*112,737*	85,800	58,741	139,796	*61,259*	78,537
606	BACC	*29,091*	-	*36,205*	(7,114)	*27,795*	(34,909)
607	BACC LEGAL RSRV	-	*30,000*	-	30,000	-	30,000
610	WOT	275,143	-	-	275,143	-	275,143
	SUBTOTAL 2	*416,971*	*115,800*	*94,946*	*437,825*	*89,054*	*348,771*
	GRAND TOTAL	**3,209,670**	**4,205,281**	**2,363,372**	**5,051,579**	**596,804**	**4,454,775**

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

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

BACWA INVESTMENTS BALANCES - DATA PROVIDED BY TREASURY DEPT.

DEPTID	DESCRIPTION	FISCAL YEAR BEGINNING FUND BALANCE	TOTAL BILLED REVENUE TO-DATE	TOTAL DISBURSEMENTS TO-DATE	MONTH-ENDING FUND BALANCE	RECONCILIATION TO FINANCIAL STATEMENTS A/R	RECONCILIATION TO FINANCIAL STATEMENTS A/P	MONTH-END RECONCILED FUND BALANCE	UNINVESTED CASH BALANCES	LAIF INVESTMENTS AMOUNTS	LAIF INVESTMENTS PERCENTAGE	ALTERNATIVE INVESTMENTS AMOUNTS	ALTERNATIVE INVESTMENTS IDENTIFIERS	ALTERNATIVE INVESTMENT INSTRUCTIONS AND NOTES
800	BACWA	1,320,542	713,177	1,202,388	831,331	(150,894)	61,128	741,565	741,565	-	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	3,376,304	1,066,038	3,482,423	(382,008)	-	3,100,415	1,137,815	1,962,600	87%	-		priority # 2 for allocation
	SUBTOTAL 1	2,792,699	4,089,481	2,268,426	4,613,754	(532,902)	61,128	4,141,980	1,879,380	2,262,600	100%	-		
802	BABC	112,737	85,800	58,741	139,796	(28,550)	-	111,246	111,246	-	0%	-		pass-through funds, no allocation
806	BACC	29,091	-	36,205	(7,114)	-	-	(7,114)	(7,114)	-	0%	-		
807	BACC LEGAL RSRV	-	30,000	-	30,000	-	-	30,000	30,000	-	0%	-		
810	WOT	275,143	-	-	275,143	-	-	275,143	275,143	-	0%	-		pass-through funds, no allocation
	SUBTOTAL 2	416,971	115,800	94,946	437,825	(28,550)	-	409,275	409,275	-	0%	-		
	GRAND TOTAL	**3,209,670**	**4,205,281**	**2,363,372**	**5,051,579**	**(561,452)**	**61,128**	**4,551,255**	**2,288,655**	**2,262,600**	**-**			
		-	-					-	-					

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

Reconciliation to Trial Balance

Per Report above:					
General	4,089,481	STB	14930	2,262,600	
WOT, BABC, & BACC	115,800	STB	15050	2,288,655	
PROP	-			**4,551,255**	-
subtotal	**4,205,281**	STB	16300	561,452	
		STB	21350	(61,128)	
				5,051,579	-

Trial Balance Revenue Accounts

40100	Interest	(3,226)
40101	Mem Contrib	(1,276,960)
40102	Transfer	(1,030,000)
40103	Assoc Contrib	(181,467)
40104	Other	(1,713,628)
47310	State Grant	-
47320	Grant Retention	-
subtotal		**(4,205,281)**
Difference		**-**

BACWA Revenue Report as of November 30, 2021

Accounting Period Name: Nov-21

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)	-	-	6,000.00
		BACC - AED Support	6199	(27,200.00)	-	-	27,200.00
		BDO Affil/CS/Assoc Dues	6104	-	-	(36,378.50)	(36,378.50)
		BDO Affiliate/Associate Dues	6103	-	1,708.50	(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)	-	-	5,202.00
		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 (Misc)	6140	-	-	(2,601.00)	(2,601.00)
		BDO- Interest Income from LAIF	6142	(20,000.00)	-	(1,171.49)	18,828.51
		BDO-Alternative Investment Inc	6143	-	-	-	-
600 Total				**(774,133.00)**	**1,708.50**	**(713,177.09)**	**60,955.91**
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)	750.00	(674,250.00)	750.00
		BDO Other Receipts	6105	(1,700,000.00)	-	(1,699,999.00)	1.00
		BDO- Interest Income from LAIF	6142	-	-	(2,054.51)	(2,054.51)
605 Total				**(2,375,000.00)**	**750.00**	**(3,376,303.51)**	**(1,001,303.51)**
606	Bay Area Chemical Consortium	BDO Member Contributions	6101	-	-	-	-
606 Total				**-**	**-**	**-**	**-**
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)**	**2,458.50**	**(4,205,280.60)**	**(1,056,147.60)**

BACWA Expense Detail Report for November 30, 2021

Accounting Period End Date 11/30/21

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	2,587.50	27,876.25
			Encumbrance	(2,587.50)	47,123.75
			Obligated	-	75,000.00
	AS-Assistant Executive Directo	6175	Actual	6,800.00	30,736.00
			Encumbrance	(6,800.00)	78,064.00
			Obligated	-	108,800.00
	AS-Audit Services	6180	Actual	-	-
			Encumbrance	-	5,345.00
			Obligated	-	5,345.00
	AS-BACWA Admin Expense	6173	Actual	-	-
			Obligated	-	-
	AS-EBMUD Financial Services	6176	Actual	-	10,097.44
			Encumbrance	-	32,350.56
			Obligated	-	42,448.00
	AS-Executive Director	6174	Actual	31,666.66	63,333.32
			Encumbrance	(31,666.66)	126,666.68
			Obligated	-	190,000.00
	AS-Insurance	6177	Actual	-	7,072.34
			Obligated	-	7,072.34
	AS-Regulatory Program Manager	6179	Actual	11,172.00	28,256.00
			Encumbrance	(11,172.00)	86,607.50
			Obligated	-	114,863.50
	Administrative Support	6178	Actual	-	1,000,000.00
			Obligated	-	1,000,000.00
	BC-BAPPG	6152	Actual	8,885.30	31,542.47
			Encumbrance	(8,720.87)	76,343.13
			Obligated	164.43	107,885.60
	BC-InfoShare Groups	6148	Actual	-	-
			Obligated	-	-
	BC-Laboratory Committee	6149	Actual	106.25	1,000.00
			Encumbrance	(106.25)	-
			Obligated	-	1,000.00
	BC-Manager's Roundtable	6154	Actual	-	-
			Obligated	-	-
	BC-Miscellaneous Committee Sup	6150	Actual	543.75	543.75
			Encumbrance	(543.75)	3,136.25
			Obligated	-	3,680.00
	BC-Permit Committee	6145	Actual	-	-
			Obligated	-	-
	BC-Pretreatment Committee	6151	Actual	-	-
			Obligated	-	-
	BC-Water Recycling Committee	6146	Actual	-	-
			Obligated	-	-
	CAR-BACWA File Storage	6165	Actual	-	-
			Obligated	-	-
	CAR-BACWA IT Software	6167	Actual	64.00	287.79
			Obligated	64.00	287.79
	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	-	-
			Obligated	-	-
	CAS-Arleen Navaret Award	6160	Actual	-	-
			Obligated	-	-
	CAS-Misc Collaborative Sup	6162	Actual	-	-

Accounting Period End Date 11/30/21

Cost Center Code	Program Segment Description	Program Segment Value	Balance Type	Current Period Activity	FY22 - Year to Date
			Obligated	-	-
	CAS-Stanford ERC	6159	Actual	-	-
			Obligated	-	-
	GBS-Meeting Support-Annual	6170	Actual	-	-
			Obligated	-	-
	GBS-Meeting Support-Exec Bd	6169	Actual	-	-
			Obligated	-	-
	GBS-Meeting Support-Misc	6172	Actual	225.00	225.00
			Obligated	225.00	225.00
	GBS-Meeting Support-Pardee	6171	Actual	648.12	648.12
			Obligated	648.12	648.12
	LS-Executive Board Support	6156	Actual	-	-
			Encumbrance	-	2,264.00
			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**	**62,698.58**	**1,202,388.48**
600 Total			**Encumbrance**	**(61,597.03)**	**463,367.87**
600 Total			**Obligated**	**1,101.55**	**1,665,756.35**
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	9,234.50	58,741.00
			Encumbrance	(9,234.50)	61,259.00
			Obligated	-	120,000.00
	Technology Research & Development	6206	Actual	-	-
			Obligated	-	-
602 Total			**Actual**	**9,234.50**	**58,741.00**
602 Total			**Encumbrance**	**(9,234.50)**	**61,259.00**
602 Total			**Obligated**	**-**	**120,000.00**
605	Recycled Water Evaluation	6198	Actual	-	-
			Encumbrance	-	-
			Obligated	-	-
	WQA - CEC Investigations	6201	Actual	34,359.62	43,330.95
			Encumbrance	(34,359.62)	17,088.80
			Obligated	-	60,419.75
	WQA-CE Addl Work Under Permit	6191	Actual	-	-
			Encumbrance	-	-
			Obligated	-	-
	WQA-CE Risk Reduction	6190	Actual	-	-
			Obligated	-	-
	WQA-CE Voluntary Nutr Contrib	6193	Actual	-	-
			Obligated	-	-
	WQA-CE-Nature Based Solutions	6196	Actual	13,707.00	13,707.00
			Encumbrance	(13,707.00)	(13,707.00)
			Obligated	-	-

Accounting Period End Date 11/30/21

Cost Center Code	Program Segment Description	Program Segment Value	Balance Type	Current Period Activity	FY22 - Year to Date
	WQA-CE-Nutrient WS Permit Comm	6188	Actual	-	1,000,000.00
			Obligated	-	1,000,000.00
	WQA-CE-Technical Support	6181	Actual	-	-
			Obligated	-	-
	WQA-NMSReviewer	6205	Actual	8,550.00	9,000.00
			Encumbrance	(8,550.00)	41,000.00
			Obligated	-	50,000.00
605 Total			**Actual**	**56,616.62**	**1,066,037.95**
605 Total			**Encumbrance**	**(56,616.62)**	**44,381.80**
605 Total			**Obligated**	**-**	**1,110,419.75**
606	Administrative Support	6178	Actual	2,805.00	6,205.00
			Encumbrance	(2,805.00)	27,795.00
			Obligated	-	34,000.00
	BDO Fund Transfers	6141	Actual	-	30,000.00
			Obligated	-	30,000.00
606 Total			**Actual**	**2,805.00**	**36,205.00**
606 Total			**Encumbrance**	**(2,805.00)**	**27,795.00**
606 Total			**Obligated**	**-**	**64,000.00**
Grand Total Actual				**131,354.70**	**2,363,372.43**
Grand Total Encumbrance				**(130,253.15)**	**596,803.67**
Grand Total Obligated				**1,101.55**	**2,960,176.10**

BACWA EXECUTIVE BOARD AUTHORIZATION REQUEST

AGENDA NO.: 6

MEETING DATE: January 14, 2022

TITLE: Request for BACWA 2nd Watershed Permit funding commitment - second installment of $1,200,000

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

RECOMMENDED ACTION

Authorize second installment of payment in the amount of $1,200,000 to San Francisco Estuary Institute (SFEI) in order to comply with the provisions of the 2nd Watershed Permit for FY20.

SUMMARY

The Watershed Permit for Nutrients from Municipal Wastewater Dischargers to San Francisco Bay, NPDES Permit No. CA 0038873 adopted May 8, 2019, requires the commitment of $2,200,000 per year from POTW Dischargers as a collective effort to fund needed scientific studies as part of the implementation of the Regional Water Quality Control Board's Nutrient Management Strategy. The commitment is on a fiscal year basis and began July 1, 2019. BACWA's role in meeting this commitment is to collect the needed funds from its membership and provide those funds for the undertaking of the scientific studies. The identification of the studies to be undertaken is through a stakeholder governance Steering Committee on which BACWA holds two seats. Several studies are ongoing as a result of approvals of programs and projects by the Steering Committee.

Due to the importance of accelerating the pace of the scientific studies to obtain results that will inform management actions in the 3rd Watershed Permit, BACWA reallocated how the funds have been delivered to SFEI over the five-year permit term. The $2,200,000 per year over five years totals $11,000,000. The following chart reflects BACWA's planned schedule to deliver the $11,000,000 to make the bulk of the funds available sooner:

FY19 (advance)	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**Total**
$200,000	$2,400,000	$2,600,000	$2,200,000	$1,800,000	$1,800,000	**$11,000,000**

At the August 20, 2021 BACWA Executive Board meeting, the Board approved a first payment of $1,000,000 to the NMS. The current requested authorization of payment in the amount of $1,200,000 to SFEI will meet the obligation for the second year of the Discharger's annual obligation under the five-year Watershed Permit per the above schedule. The purpose of delivering the payment in two installments was to ensure continuity in the Science Program in FY21. The first installment drew on BACWA's reserves. The second installment of $1,200,000 is being brought to the Executive Board for approval now that the bulk of the FY22 nutrient surcharge revenues have been received from member agencies.

FISCAL IMPACT

Annual payments to fund the scientific studies are collected from the BACWA membership through a Nutrient Surcharge that is included on the annual dues invoices to the BACWA members, as well as a drawdown of BACWA reserves, as authorized by BACWA's Executive Board. Funds are currently available in the BACWA CBC Fund to pay the $1,200,000 invoice.

ALTERNATIVES

1. No alternatives are considered for this item, as the payment is a permit requirement.

Attachments: SFEI Invoice

Approved: Date:

Amit Mutsuddy, Chair
BACWA Executive Board

Invoice

San Francisco Estuary Institute
4911 Central Ave.
Richmond, CA 94804
EIN 94-2951373

January 7, 2022
Project No: 1092.22
Invoice No: 1092222

Bay Area Clean Water Agency
PO Box 24055, MS702
Oakland, CA 94623

Project 1092.22 SF Bay Nutrient Strategy Support FY2022
Attn:Lorien Fono

Professional Services from July 01, 2021 to June 30, 2022

Fee	**$1,200,000.00**
Total this Invoice	**$1,200,000.00**

Contact Meredith Lofthouse at 510-746-7357 or contracts@sfei.org for questions.

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 7

MEETING DATE: January 14, 2022

TITLE: Approval of BACWA 2021 Strategic Plan Update.

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

RECOMMENDED ACTION

Approve BACWA 2021 Strategic Plan Update.

SUMMARY

On December 18, 2020, the BACWA Executive Board approved a Strategic Plan to guide our organization in prioritizing resources and responding to future challenges. The Strategic Plan was approved with the understanding that it would be revisited on an annual basis and updated as needed.

Proposed updates to the Strategic Plan were discussed at the December 17, 2021 BACWA Executive Board meeting. The proposed 2021 Strategic Plan will update delete Goal 1/ Strategy 5/ Objective 2, as it has been completed:

- ~~Work with Regional Water Board to adopt a blanket permit amendment to incorporate the Chlorine Residual Basin Plan Amendment into NPDES Permits.~~

The update will also add a new Goal 4/ Strategy 2/ Objective 3:

- Support justice/equity/diversity/inclusion in both wastewater workforce development and community engagement efforts.

FISCAL IMPACT

This item has no direct fiscal impact.

ALTERNATIVES

This action does not require consideration of alternatives.

Attachments: 2021 Strategic Plan Update

Approved: _____ Date: ___ _____

Amit Mutsuddy
BACWA Executive Board

2020 STRATEGIC PLAN

Bay Area Clean Water Agencies

Updated January, 2022

BACWA's Mission

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

BACWA's Vision

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

BACWA's Values

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

BACWA's Goals

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

GOAL 1: ADVOCATE FOR REGULATION BASED ON SCIENCE

Strategy 1 – Advocate for nutrient permitting based on science.

- **Objective 1 –** ~~Establish a~~Convene the Nutrient Technical Team made up of BACWA and member agency staff to engage with the San Francisco Bay Nutrient Management Strategy (NMS) by reviewing their work products and participating in the Assessment Framework process.
- **Objective 2 –** ~~Solicit and~~ Continue to contract consultant support for review and interpretation of NMS Work Products and review of the Assessment Framework process.
- **Objective 3 –** Convene BACWA's Nutrient Strategy Team to plan BACWA position on 3rd Nutrient Watershed Permit.
- **Objective 4 –** ~~Ensure~~ Plan financial contributions to the NMS ~~will~~to optimize scientific study workflow.

Strategy 2 – Advocate for air regulations based on science.

- **Objective 1 –** Meet ~~frequently~~ regularly with Bay Area Air Quality Management District (BAAQMD) policy and permitting staff to communicate clean water agencies' perspectives and capabilities. Support BAAQMD staff by providing technical information during development of regulations for ~~short-lived~~ climate pollutants and air toxics.
- **Objective 2 –** Collaborate with CASA and other clean water agencies statewide on projects to inform California Air Resources Board regulations, such as vehicle electrification and the AB 2588 compound list update and emission factor development.

Strategy 3 – Advocate for biosolids management regulations based on science.

- **Objective 1 –** Work with local, regional, and state regulators to maintain and support expansion of sustainable biosolids ~~re~~use alternatives.
- **Objective 2 –** Collaborate with Bay Area Biosolids Coalition to support initiatives aimed at establishing the safety and benefits of biosolids ~~re~~use.

Strategy 4 – Advocate for emerging water quality regulations based on science.

- **Objective 1 –** Provide support for Constituents of Emerging Concern (CEC) pollution prevention and pesticides control by state and federal agencies.

- **Objective 2 –** Engage in State Water Board and Ocean Protection Council initiatives, such as the reconvening of the Science Advisory Panel on CECs in Aquatic Ecosystems and the Microplastic Strategy.
- **Objective 3 –** Continue to participate actively in Regional Monitoring Program (RMP) technical and steering committees.
- **Objective 4 –** Demonstrate that BACWA can effectively implement solutions through regional projects, such as conducting the PFAS Regional Study in lieu of being compelled via a 13267 Order.

Strategy 5 – Advocate for the update of existing water quality regulations based on science.

- **Objective 1 –** Support Basin Plan amendments and triennial reviews by working with the Regional Water Board.
- ~~**Objective 2 –** Work with Regional Water Board to adopt a blanket permit amendment to incorporate the Chlorine Residual Basin Plan Amendment into NPDES Permits.~~
- **Objective 2~~3~~ –** Work with regulators to reduce low value required monitoring to enhance funding for RMP CEC studies.

GOAL 2: FOSTER COLLABORATION AND RELATIONSHIP BUILDING WITH REGULATORS AND OTHER STAKEHOLDERS

Strategy 1 - Maintain and broaden collaboration with regulators by engaging on existing regulatory initiatives and emerging issues.

- **Objective 1 -** Continue engagement with regulators to communicate clean water agencies' challenges and opportunities related to projects of environmental benefit.
- **Objective 2 –** Collaborate with regulators on emerging initiatives such as sea level rise adaptation planning, development of incentives for climate change mitigation, identification of feasible biosolids ~~re~~use strategies, and exploration of other resource recovery opportunities.
- **Objective 3 –** Work with Summit Partners to provide educational opportunities for State Water Board/Ocean Protection Council members and staff regarding clean water agencies' opportunities. Identify and develop a common understanding of mutual priorities.
- **Objective 4 –** Work with BAAQMD policy and permitting staff to update standard permit conditions, with the goal of reducing permitting hurdles that impede the implementation of projects of environmental benefit.

Strategy 2 - Monitor legislative efforts that impact BACWA members.

- **Objective 1 –** Work with industry associations and individual members to inform their efforts on legislative advocacy.
- **Objective 2 –** Consider a BACWA policy or position on how to engage in targeted legislative advocacy.

Strategy 3 - Maintain industry leadership by collaborating with other clean water associations.

- **Objective 1 –** Work with Clean Water Summit Partners to define and advocate on issues of statewide importance.
- **Objective 2 –** Inform, learn from, and jointly advocate with clean water associations such as the other Clean Water Summit Partner organizations, NACWA, and WateReuse.

GOAL 3: PURSUE REGIONAL, MULTI-BENEFIT SOLUTIONS TO ENVIRONMENTAL CHALLENGES

Strategy 1 - Promote integrated approach to a healthy Bay.

- **Objective 1 –** Identify and establish effective collaborations with drinking water and stormwater communities to further the One Water concept and/or other multi-benefit project types.
- **Objective 2 –** Identify and establish collaborations to implement integrated approaches to sea level rise adaptation.
- **Objective 3 –** Identify and implement effective pollution prevention strategies in partnership with regulators and partners.
- **Objective 4 –** Work with members and other regional entities to maximize grant funding for projects benefiting the region.

Strategy 2 - Support innovation to better address water quality and other ecological challenges.

- **Objective 1 –** Provide membership with information on technology pilot opportunities.
- **Objective 2 –** Establish and continue partnerships with universities and other research institutions and initiatives to develop collaborative approaches to issues of importance to the clean water community.
- **Objective 3** – Support existing coalitions and agencies that are pursuing regional solutions to challenges impacting the San Francisco Bay clean water community.

Strategy 3 - Provide value to members through facilitating regional solutions.

- **Objective 1 –** Continue to provide joint compliance activities on behalf of members, such as reporting via the Annual NPDES compliance letter to the Regional Water Board.
- **Objective 2 –** Continue to support and report compliance with the Mercury/PCB and Nutrient Watershed Permits.
- **Objective 3 –** Engage with regulators on behalf of individual member agencies when issues of regional importance arise.
- **Objective 4 –** Coordinate regional solutions to comply with new Environmental Laboratory Accreditation Program (ELAP) regulations.
- **Objective 5 –** Support members' biosolids programs via data-gathering, reporting, and information exchange related to biosolids management.

GOAL 4: EXEMPLIFY SERVICE AND RESPONSIVENESS TO MEMBERS AND PUBLIC

Strategy 1 - Ensure members are knowledgeable about critical issues and activities.

- **Objective 1 –** Communicate timely regulatory and technical information and events via BACWA committees, the BACWA Bulletin newsletter, and emails to members.
- **Objective 2 –** Ensure that BACWA contact lists are up to date.

Strategy 2 - Provide education and outreach to members and the public.

- **Objective 1 –** Provide support for pollution prevention messaging to the public via BAPPG.
- **Objective 2 –** Explore ways to support members' public communication on nutrients and other issues.
- **Objective 3 –** Support justice/equity/diversity/inclusion in both wastewater workforce development and community engagement efforts.

Strategy 3 - Provide forum to hear all member voices.

- **Objective 1** – Conduct outreach to all members to inform them about opportunities for participation via committees and other events.
- **Objective 2** – Ensure that each member agency is knowledgeable about and engaged in negotiations on the 3rd Nutrient Watershed Permit so that BACWA's position reflects the interests of our members.
- **Objective 3 –** Provide forums and opportunities for information-sharing among members on issues of importance.
- **Objective 4 –** Use technology to maximize member participation in committee meetings.

Strategy 4 - Provide support for Projects of Special Benefit to assist membership.

- **Objective 1 –** Continue to support the Bay Area Biosolids Coalition (BABC).
- **Objective 2 –** ~~Complete transition of~~Continue administration of the Bay Area Chemical Consortium (BACC)~~ from DSRSD~~.

- **Objective 3 –** Support Bay Area Consortium for Water/Wastewater Education (BACWWE) as they transition to a scholarship-based system and continue collaboration with BAYWORK.
- **Objective 4 –** Consider any new requests for BACWA support based on members' benefits and potential costs to BACWA.

GOAL 5: PRACTICE GOOD GOVERNANCE

Strategy 1 - Ensure BACWA Policies and Procedures conform to applicable laws and best practices.

- **Objective 1 –**Regularly review and update BACWA Policies and Procedures.

Strategy 2 - Enhance fiscal transparency.

- **Objective 1 –** Work with EBMUD to improve readability and transparency of treasurer's reports in Executive Board Packet.
- **Objective 2** – Continue to update budget 5-Year Plan to ensure BACWA can develop its financial goals and has capacity for future initiatives to meet the objectives of the Strategic Plan**.**
- **Objective 3 –** Continue to ~~improve~~ practice internal controls on chain of custody to enhance transparency and security of authorizations and invoice approval process.

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 8

MEETING DATE: January 14, 2022

TITLE: FY22 Bay Area One Water Network $5k contribution

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

RECOMMENDED ACTION

Approve Fiscal Year 2022 Bay Area One Water Network contribution of $5k.

SUMMARY

The Bay Area One Water Network (BAOWN) began as a collaborative effort of the Engineering Research Center for Re-Inventing the Nation's Urban Water Infrastructure (ReNUWIt), the Berkeley Water Center, the Environmental Protection Agency, and numerous Bay Area water utilities, cities, and counties. As the ReNUWIt sunsets this year, BAOWN is proposing to continue its function as a regional resource to facilitate conversations among stakeholders about emerging water issues.

In FY22, BAOWN collaborated with the San Francisco Estuary Partnership to host a roundtable discussion and associated report on nature-based solutions for shoreline resilience, water quality improvement, and habitat enhancement in the Bay Area. Several BACWA members participated in this workshop. Pending support from Bay Area One Water Network partners, they also hope to host additional workshops and publish reports on two new topics: 1) the opportunities and limits of water conservation in our region, and 2) the possible role of desalination in the Bay Area's future water supply portfolio.

BAOWN is soliciting support for its efforts during this Fiscal Year and beyond. At the September 17, 2021 BACWA Executive Board, $5K was identified as an appropriate level of support for FY22. The BACWA Executive Board will revisit its future support of BAOWN as part of the FY23 budgeting process.

FISCAL IMPACT

The funding for this collaborative will be provided from the Miscellaneous Collaborative line item in the approved FY22 annual budget.

ALTERNATIVES

1. Do not contribute to the BAOWN. This is not recommended, since we would like to foster this regional collaborative resource, and have a seat at the table in conversations pertaining to water conservation.

Attachments: FY22 Invoice from BAOWN
BAOWN Project Summary 2021-2022

January 14, 2022

Approved: _____ Date: _____

Amit Mutsuddy, Chair,
BACWA Executive Board

Invoice

Stanford University
473 Via Ortega, Room 119
Stanford, California 94305-4211,
U.S.A
Contact: Kara Baker
Phone: 650-725-2172

Invoice Date 24 Sep 2021
Invoice# BAOW202110

Bill To:

Lorien Fono
Bay Area Clean Water Agencies
PO Box 24055
MS702
Oakland, CA 94623-1055

P.O.#
Terms Net 60

Invoice Date 24 Sep 2021
Due Date 23 Nov 2021

Description	Item Name	Amount
2021/2022 Bay Area One Water Network annual contribution.	Bay Area One Water Network ($5000)	5,000.00
	Sub Total:	5,000.00
	Balance Due:	$5,000.00

Terms & Conditions
Please make check payable to Stanford University.
Thank you for supporting the Bay Area One Water Network.

BAY AREA
ONE WATER
NETWORK

Project Summary 2021 - 2022

Previous Year Successes

In 2019, the Bay Area One Water Network held two in-person workshops: one focused on stormwater capture and use, and the other on water recycling. The participants were thought-leaders, decision-makers and knowledgeable experts from diverse stakeholder groups. The workshops were designed to identify regional challenges and opportunities, to synergize existing efforts, and to strengthen working relationships among the participants. We published two reports that documented the discussions and conclusions from each of the workshops: "Stormwater Capture to Augment Water Supplies in the San Francisco Bay Area: Challenges, Opportunities, and Next Steps" and "Advancing Water Reuse in the San Francisco Bay Area : Integrating Water Reuse into A Regional Approach to Water Management". In 2020 during the COVID-19 pandemic, we pivoted to an online format and held free, publicly accessible webinars reporting out on the 2019 workshops and reports to broaden their reach among practitioners. We also held an online webinar about next steps for the Bay Area One Water Network, which provided foundational information on potential workshop opportunities that would be particularly relevant in the Bay Area going forward.

Future Opportunities

We are currently collaborating with the San Francisco Estuary Partnership to plan a roundtable discussion and associated report on nature-based solutions for shoreline resilience, water quality improvement, and habitat enhancement in the Bay Area.

Pending support from Bay Area One Water Network partners, we also hope to host additional workshops and publish reports on two new topics: 1.) the opportunities and limits of water conservation in our region, and 2.) the possible role of desalination in the Bay Area's future water supply portfolio.

Opportunities and Limits of Conservation

Conservation is touted by many stakeholders as one of the keys to stretching water supplies in the San Francisco Bay Area. Great strides in conservation have been made over the past few decades, and there are more opportunities for enhancing water use efficiency and reducing waste indoors, outdoors, and in the distribution system. Drawing together participants from water and wastewater agencies, environmental advocacy groups, urban planners, landscape architects, and regulatory agencies, this workshop would examine questions including, "How low can we go?" "What are the most attractive remaining approaches for conserving more water?" "At what point do the tradeoffs associated with conservation outweigh the benefits of using less water?" "How will conservation affect existing and planned water reuse or other infrastructure projects?" "How can demand-side water management be financed to produce the most equitable outcomes?" "How can public support for conservation be leveraged to produce meaningful water savings?"

Possible Role of Desalination

Over the past several decades discussion of investments in desalination have met with resistance in the Bay Area. Some of these concerns stemmed from a time when desalination was substantially more

energy intensive and expensive than it is today. Now that costs have fallen and California's electricity grid is decarbonizing it may be time to revisit the potential role of desalination in the region's future water supply portfolio. Building on the Bay Area One Water Network's academic connections with the National Alliance for Water Innovation (NAWI), a multi-year research effort headquartered at Lawrence Berkeley National Laboratory, this workshop would initiate a discussion of the latest developments in desalination technologies and their potential costs and benefits in relation to the Bay Area's water system. This workshop would bring together water supply agencies, regulators, environmental scientists, technologists and environmental advocacy groups to hash out the ways in which desalination may be part of the Bay Area's water supply portfolio. It would delineate the opportunities, drivers, and challenges associated with desalination in the Bay Area, and outline key research questions and next steps.

About the Bay Area One Water Network

The Bay Area One Water Network supports efforts to ensure safe and resilient water systems in the San Francisco Bay Area. We share information, build collaborative capacity, and highlight opportunities for increasing the sustainability of water supplies in the region.

Climate change poses major challenges to the Bay Area's water supplies. Less snowpack, more erratic precipitation, and rising seas expose the vulnerabilities of our current water infrastructure systems. The Bay Area One Water Network helps innovate solutions to these challenges by bringing together diverse regional stakeholders from water supply and wastewater agencies, stormwater groups, regulatory agencies, city and regional planning groups, businesses, universities, research organizations and environmental advocacy groups. Through focused workshop discussions and synthesis reports, we aim to provide decision-makers with the contextual information, tools, and research roadmaps that can support the development of 21st century water infrastructure.

Partners

The Bay Area One Water Network has been supported by a broad coalition of water and wastewater agencies, municipalities, the Berkeley Water Center at UC Berkeley, the Environmental Protection Agency, and the Engineering Research Center for Re-inventing the Nation's Urban Water Infrastructure (ReNUWIt).

SFEI AQUATIC SCIENCE CENTER
SAN FRANCISCO ESTUARY INSTITUTE & THE AQUATIC SCIENCE CENTER
4911 Central Ave, Richmond, CA 94804, p: 510-746-7334 f: 510-746-7300

Nutrient Management Strategy for San Francisco Bay

http://sfbaynutrients.sfei.org/

Assessment Framework Subcommittee Meeting

January 11, 2022
9:00 – 11:30 AM

REMOTE ACCESS
Join Zoom Meeting: https://zoom.us/my/sfeiconfcw1
One tap mobile: +16699006833,,7699356044#
To dial in by phone: 1-669-900-6833; Meeting ID: 769-935-6044

1.	**Overall Assessment Framework update** 1. Roles of SFEI team members 2. Progress since last AF subcommittee meeting	9:00 Lisa Hunt
2.	**AF workplan overview** 1. AF timeline and components 2. Process for developing AF a. Role of Water Board b. Role of AF subcommittee c. Expert workgroups	9:15 Lisa Hunt
3.	**Update on overall development of LSB AF for DO** 1. Virginia Province Approach 2. Metabolic Index 3. Fish community data analysis and fieldwork 4. Timeline 5. Plan for expert input/review Meeting materials: Fish community workgroup recommendations	9:45 Ariella Chelsky
4.	**Update on Virginia Province Approach workplan** 1. Update on VPA workplan, process, and input from stakeholders 2. Tetra Tech progress on VPA analysis (Tetra Tech) 3. Discussion Meeting materials: Tetra Tech workplan	10:15 Ariella Chelsky, Sujoy Roy

5.	**Wrap up and next steps**	11:15 Ariella Chelsky and Lisa Hunt
5.	**Adjourn**	11:30

Planning Subcommittee Meeting No. 64
January 5, 2022
9:30 am – 12:00 pm
Teleconference
Chair: Ian Wren
Meeting Notes

Attendees: Dave Senn, Lisa Hunt, Ian Wren, Robert Schlipf, Kevin Lunde, Lorien Fono, Richard Looker, Ariella Chelsky.

1. *Agenda Modifications*
   Review of action items from the December steering committee meeting was added to the agenda.

2. *Review Outstanding Action items*

   - During the Dec 10, 2021 Steering Committee presentation on reallocating funds to account for project deficits and surpluses, and to use reserves for unplanned items, lead with information about the magnitude of the change compared to the FY22 approved budget. – complete – covered in today's meeting
   - SFEI team will develop memo on Steering Committee meeting schedule and approval timing versus project planning. - complete
   - (Ongoing) Members to collaborate on developing an NMS status document/fact sheet that pulls together planning, permitting, and science by early 2022. - complete

3. Program update

Staffing – A new staff scientist is starting on January 31. A second offer was made to a terrestrial biogeochemist. The science team is looking for other options for contracting out synthesis work. Rusty Holleman is now with RMA, and may be available for taking on some modeling work. Lisa reported that they are getting respondents at all levels of accreditation, but not with much direct experience. They will be losing staff in the new year who will be going to grad school. It is becoming increasingly difficult to attract and retain staff at the salary levels offered by SFEI. Dave also raised the issue of the importance of planning the future of the NMS to be able to give certainty to staff. Tom responded that we need the framework a plan within months in order to provide a scientific foundation for the third watershed permit. There was a discussion about the importance of fundraising, including competing for funding from EPA's Water Quality Improvement Fund this spring.

4. Priority Updates

Report-outs – none

Current issues - none

NMS Calendar Review – Next PSC meeting is scheduled for February 2. The NTW meeting will be held on March 11 which was previously scheduled for the Steering Committee meeting per the previous schedule. The Steering Committee meeting in late April or early May will then lay out the program plan for FY23. The group provided possible dates, and Ian will set up a doodle poll to send to the larger Steering Committee.

5. *Other Updates*

Discuss NTW and SC meetings:

The NTW meeting will provide a summary of this year's results and plans for the next year to set the stage for the science plan approval for FY23 at the Steering Committee meeting. There was discussion about holding the NTW over multiple days, but the group agreed to keep it to a single day, possibly with a long lunch. The Steering Committee meeting should only take a couple of hours, but we'll block out a longer time for now.

Assessment Framework (AF): The AF 2.0 report will be complete by November 2023, and will provide a menu from which the Water Board will select metrics to be included in the watershed permit. There is a January AF subcommittee meeting scheduled for January, and a follow up scheduled for February to review recent documents. There will be two expert workgroup meetings in Spring to discuss 1) the open Bay, and 2) creeks and sloughs. Dave noted that the level of confidence in an indicator must relate to the level of decision to be made using that indicator.

There are several additional expert workgroups that are being convened that are related to the assessment framework, such as the modeling and HAB workgroups. Terry Fleming's input should be solicited prior to his retirement. Eric Dubinsky will be filling Terry's role.

Ari gave an update on the three parallel approaches for determine protective DO levels in the LSB sloughs and creeks. Tetra Tech began moving forward on the Virginia Province Approach in November and will give an update at next week's meeting. A metabolic index update will be coming in the next few weeks. Levi Lewis' group conducted intensive field work in the summer and developed a detailed scope for statistical modeling analysis – work is now kicking off on this effort. All of these elements will be discussed in detail at next week's Assessment Framework Subgroup meeting.

Kevin commented that it's not clear how the metabolic or fish data can be used for condition assessment. It may be helpful for secondary lines of evidence, but they will wait to see what the work outputs are.

Defining NMS Water Body Category Terms: We want to make sure we're using consistent terminology for different zones of the Bay. Different zones could be differentiated based on major water quality influences or nutrient dynamics, or to delineate where water body segments in which specific indicators/metrics will apply. The terms could be used to define different data collection strategies for different zones, or to evaluate dynamics and transport

between different zones. Tom noted that the definitions should be coordinated with the RMP. Lisa confirmed that Melissa Foley was consulted in the proposed definitions.

Proposed category terms for the Open Bay include 1) Deep channels, 2) shoals, and 3) perimeter. The term "perimeter" is used instead of "margins" to avoid confusion with the RMP's "margins" term. "Perimeter" could be defined by distance from shoreline.

Creeks and slough segments are within tidal influence zone. Other habitats include salt ponds and tidal marshes in various states of restoration, diked Baylands, or other intertidal zones.

Dave showed a map, and shared that based on previous work, water quality conditions along the shoal is different from the adjacent channel, and conditions in the perimeter may differ from both. Observed chlorophyll a is often higher and nitrate is lower in the shoals than in the channel. These differences are captured in the model as well. Monitoring would need to be conducted in these different areas to adequately characterize water quality throughout the Bay. This zone-specific data is needed for condition assessment, and subsequently to understand a mechanistic/quantitative interpretation related to production and nutrient cycling which is useful to the Assessment Framework. Specifically, the Assessment framework may need to understand the relationship between chlorophyll, DO, and HAB different compartments of the Bay. DO standards may also be different in different zones. There was consensus that these definitions are important and that the monitoring program should be recognize the differences between the proposed zones. More work will be needed to quantitatively define and delineate the zones.

Source apportionment next steps: The Water Board has explored different possible directions with respect to the permit, and source allocation has been deemphasized. Phase II results are not expected to shape the direction on Watershed permit 3.0. Dave is proposing to pause the work and continue in FY23, when the model will be improved. Instead, the modeling effort will be redirected to priority model applications, including a technical synthesis that will be peer reviewed and published. The Water Board confirmed that a One-Bay approach will likely be used in the third watershed permit, and BACWA concurred with this understanding. We will not necessarily pick it up in FY23, but will wait until we have a question that the model is needed to answer. This reallocation of modeling resources within FY22 will not need Steering Committee approval since it falls within the existing scope.

Public Facing Program Summary: Ian distributed a 3-page summary of the NMS status on the state of the science. PSC members will work to edit it, keeping in mind the intended audience of non-scientist stakeholders.

6. *Action items:*

- Queue up steps required for more aggressive fundraising, and what it would take to compete for EPA's Water Quality Improvement Fund grant.

- Ian will send out a doodle poll for the next steering committee meeting.
- (Ongoing) Members to collaborate on developing an NMS status document/fact sheet that pulls together planning, permitting, and science by early 2022.

Parking Lot of Identified PS Future Agenda Items

a. Modeling
b. Outreach to resource agencies re: DO objectives
c. Brainstorming on future priorities for the PS (ALL)
d. EPA nutrient criteria discussion
e. Discuss the concept of holding an annual forum on nutrients
f. Finish

Bay Area Clean Water Agencies
2021 Biosolids Trends Survey Report

Photo: Upgraded Digesters for Temperature Phased Anaerobic Digestion at San José-Santa Clara Treatment Plant. Source: City of San José.

December 28, 2021

Contents

1. Introduction

Biosolids management programs at Publicly Owned Treatment Works (POTWs) in the San Francisco Bay Region continue to be challenged by rapidly rising costs and a complex regulatory environment. Biosolids programs are affected by changes to solid waste disposal, air quality, and water quality regulations. From the solid waste disposal side, legislation and regulation aimed at diverting organic material from landfills will phase out landfill burial and Alternative Daily Cover (ADC) beginning January 1, 2022. The California Association of Sanitation Agencies' (CASA's) *Summary of SB 1383 and its Implementation*[1] outlines the regulatory challenges facing biosolids reuse and management alternatives for California agencies. Diverting food waste and biosolids from landfills will require greater on-site production and use of biogas, increased land application of treated biosolids, and deployment of new technologies.

Bay Area Clean Water Agencies (BACWA) is a joint powers agency whose members own and operate POTWs and sanitary sewer systems that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay Area (Bay Area). In summer 2021, BACWA distributed a survey[2] to its member agencies to better understand the state of the biosolids treatment, disposal, and reuse in the Bay Area. The survey is a repeat of previous surveys conducted in 2016[3] and 2018[4]. The intent of this survey was to quantify specific biosolids information and track industry trends for the following issues:

- *Biosolids production volumes*
- *Treatment and dewatering technologies*
- *End use and disposal options*
- *Biosolids management technologies and destination*
- *Hauling and tipping costs*
- *Agency challenges*
- *Strategies for SB 1383 compliance*
- *Marketing and public outreach*

The Survey includes responses from the following 31 agencies, representing more than 95 percent of the total flow of BACWA member agencies, plus the City of Santa Rosa (which is not a BACWA member):

- Central Contra Costa Sanitary District
- Central Marin Sanitation Agency
- City of American Canyon
- City of Benicia
- City of Hayward
- City of Livermore
- City of Millbrae

[1] https://bacwa.org/wp-content/uploads/2020/11/SB-1383-and-its-Implementation-CASA-2020.pdf
[2] https://bacwa.org/wp-content/uploads/2021/07/Biosolids-Survey-2021-Nonfillable-PDF-Version.pdf
[3] https://bacwa.org/wp-content/uploads/2017/08/BACWA-2016-Biosolids-survey-report-1.pdf
[4] https://bacwa.org/wp-content/uploads/2020/12/9-BACWA-2018-Biosolids-Survey-Report-Final-2020-12-10.pdf

- City of Palo Alto
- City of Petaluma
- City of San Jose
- City of San Leandro
- City of San Mateo
- City of Santa Rosa
- City of South San Francisco - San Bruno Water Quality Control Plant
- City of Sunnyvale
- Delta Diablo
- Dublin San Ramon Services District
- East Bay Municipal Utility District
- Fairfield-Suisun Sewer District
- Las Gallinas Valley Sanitary District
- Mt. View Sanitary District
- Napa Sanitation District
- Novato Sanitary District
- Oro Loma Sanitary District
- San Francisco Public Utilities Commission
- Sewer Authority Mid-Coastside
- Sewerage Agency of Southern Marin
- Silicon Valley Clean Water
- Union Sanitary District
- Vallejo Flood & Wastewater District
- West County Wastewater District

The list of respondents above is the same as a prior version of this survey conducted in 2016 and 2018.The body of the report summarizes the data provided by agencies, while data on reuse and disposal destinations is presented in full in **Appendix A**. It is BACWA's intention to conduct this survey every 2-3 years. Agency responses will be used as part of a regional conversation about the future of biosolids management in Northern California, to identify regional needs, and to support efforts to identify and develop additional sustainable biosolids reuse alternatives. The survey was coordinated with the Southern California Alliance of Publicly Owned Treatment Works (SCAP) Biosolids Trends Survey[5] and allows data comparisons between northern and southern California agencies.

BACWA wishes to thank all agencies that took the time and effort to assist with the production of this survey and report.

2. Treatment Technology

Survey respondents reported the technology used to produce and treat biosolids at each facility. Most facilities (26 out of 31 respondents) use mesophilic anaerobic digestion, as shown below in **Figure 1**. Many facilities reported using more than one method of treatment, including both on-site treatment and treatment that occurs after hauling to another facility, as noted below:

- City of San Jose uses mesophilic anaerobic digestion, lagoon stabilization, and air drying.
- East Bay Municipal Utility District and San Francisco Public Utilities Commission operate both thermophilic and mesophilic digestion.

[5] SCAP Biosolids Trends Survey https://bacwa.org/wp-content/uploads/2020/11/2018_SCAP_BIOSOLIDS_BIENNIAL-2020_01_14-FINALv3.pdf

- West County Wastewater District, Sunnyvale, and Dublin San Ramon Services District use mesophilic anaerobic digestion followed by pond or lagoon stabilization.
- Oro Loma Sanitary District, City of Hayward, City of San Leandro, and Silicon Valley Clean Water reported use of air drying following anaerobic digestion.
- 9 facilities reported hauling to another facility for further treatment by Thermal Hydrolysis (i.e., Lystek). This is an increase over the 6 facilities that reported hauling to Lystek in the 2018 survey.
- 6 facilities reported hauling to another facility for further treatment via composting.

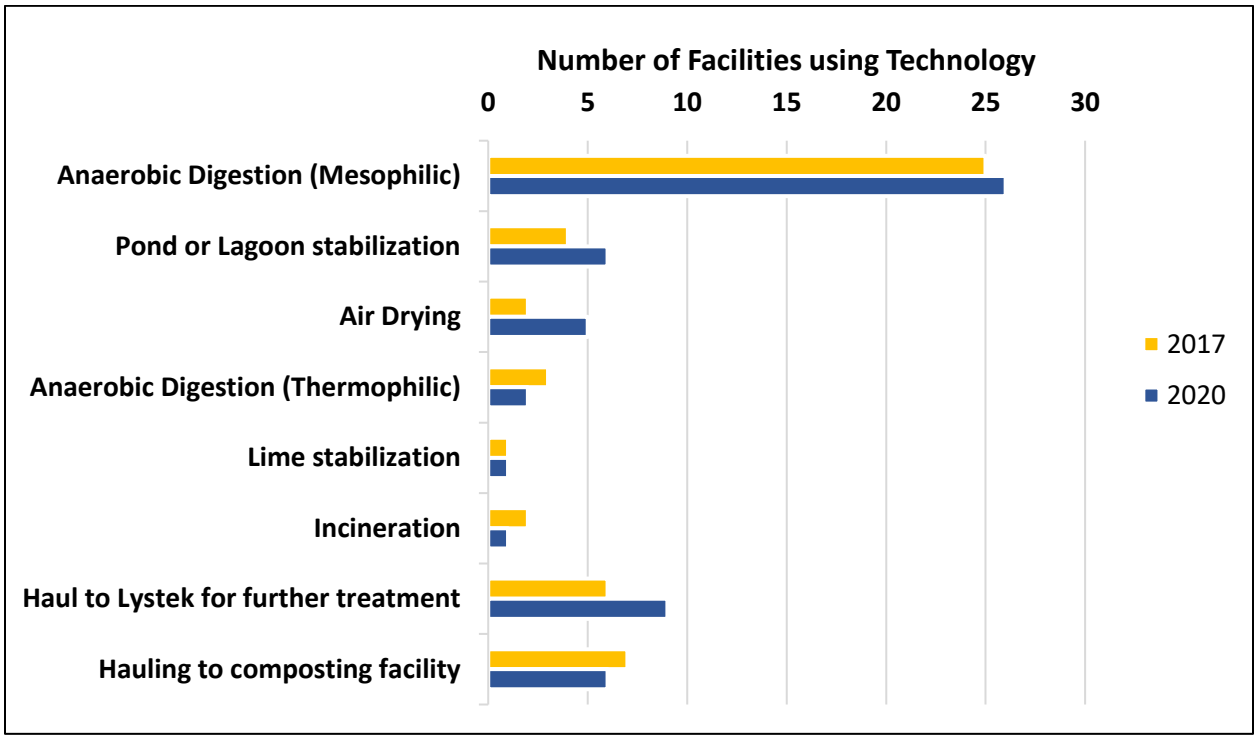


Figure 1. Technology used for biosolids production and management by survey respondents.

Compared to 2017, the 2020 survey showed slight changes in the number of agencies using mesophilic and thermophilic anaerobic digestion, pond and lagoon stabilization, and air drying. These adjustments appear to be related to changes in the survey responses, rather than being tied to actual facility changes.

3. Annual Biosolids Production

Survey respondents reported their biosolids production for the 2018, 2019, and 2020 calendar years. **Table 1** lists the type of biosolids produced by each agency, based on the classifications defined by EPA Rule 503[6]. Solids designated as EQ are "Exceptional Quality" biosolids, and "Other Quality" solids do not need to meet the 503 Rules, due to their final disposition. **Figure 2** and **Figure 3** compare the total tonnage of wet and dry tons, respectively. The dry tonnage reported in Figure 3 for 2018 and 2019 assumes that percent solids were approximately the same as 2020.

About half of the biosolids produced in the San Francisco Bay Region are Class B, while Class A accounts for about 40% of production. Production of Class A biosolids dropped dramatically in 2016 and 2017, but has since rebounded. There are two principal reasons for this trend. First, Dublin San Ramon Services District reported that their treated biosolids are Class A in this survey, but they were tracked as "other" in the survey covering 2016 and 2017. Second, the City of San Jose temporarily ceased testing its biosolids to demonstrate that they meet Class A quality. Testing was ceased because their biosolids were not going to Class A re-use and the cost of the additional testing was providing no tangible benefits. San Jose resumed testing in 2018. For both Dublin San Ramon Services District and San Jose, the solids were the same quality throughout this period, despite changes in classification.

Table 1. Classes of biosolids produced by respondents

Agency	Biosolids Class
American Canyon, City of	B
Benicia, City of	B
Central Contra Costa Sanitary District	Other (Incineration)
Central Marin Sanitation Agency	B
Delta Diablo	B
Dublin San Ramon Services District	A
East Bay Municipal Utility District	B
Fairfield-Suisun Sewer District	A
Hayward, City of	A
Las Gallinas Valley Sanitary District	B
Livermore, City of	B
Millbrae, City of	B
Mt. View Sanitary District	B
Napa Sanitation District	B
Novato Sanitary District	B
Oro Loma Sanitary District	A (in 2020) and B (in 2018, 2019)

[6]See the "Plain English Guide to the EPA Part 503 Biosolids Rule" at https://www.epa.gov/sites/production/files/2015-05/documents/a_plain_english_guide_to_the_epa_part_503_biosolids_rule.pdf

Agency	Biosolids Class
Palo Alto, City of	Other (Incineration in 2018 and 2019, then off-site treatment to Class A in 2020)
Petaluma, City of	B
San Francisco Public Utilities Commission	B
San Jose, City of	A[a]
San Leandro, City of	A and B
San Mateo, City of	B
Santa Rosa, City of	B
Sewer Authority Mid-Coastside	B
Sewerage Agency of Southern Marin	B
Silicon Valley Clean Water	B
South San Francisco - San Bruno WQCP, City of	B
Sunnyvale, City of	B
Union Sanitary District	B
Vallejo Flood & Wastewater District	B
West County Wastewater District	B

[a] In 2018, City of San Jose biosolids were reported as Class B because pathogen testing was not performed. Testing to demonstrate Class A quality resumed in 2019.

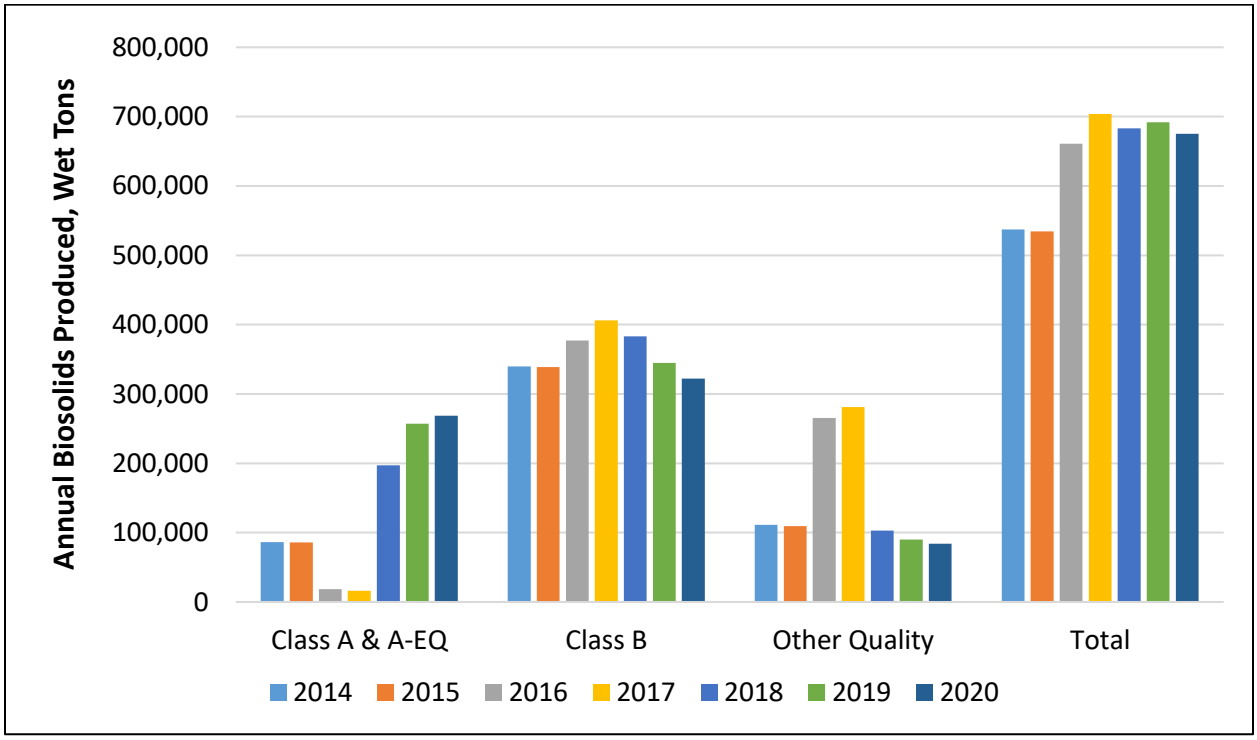


Figure 2. Aggregate wet tons of biosolids of different classes produced by survey respondents.

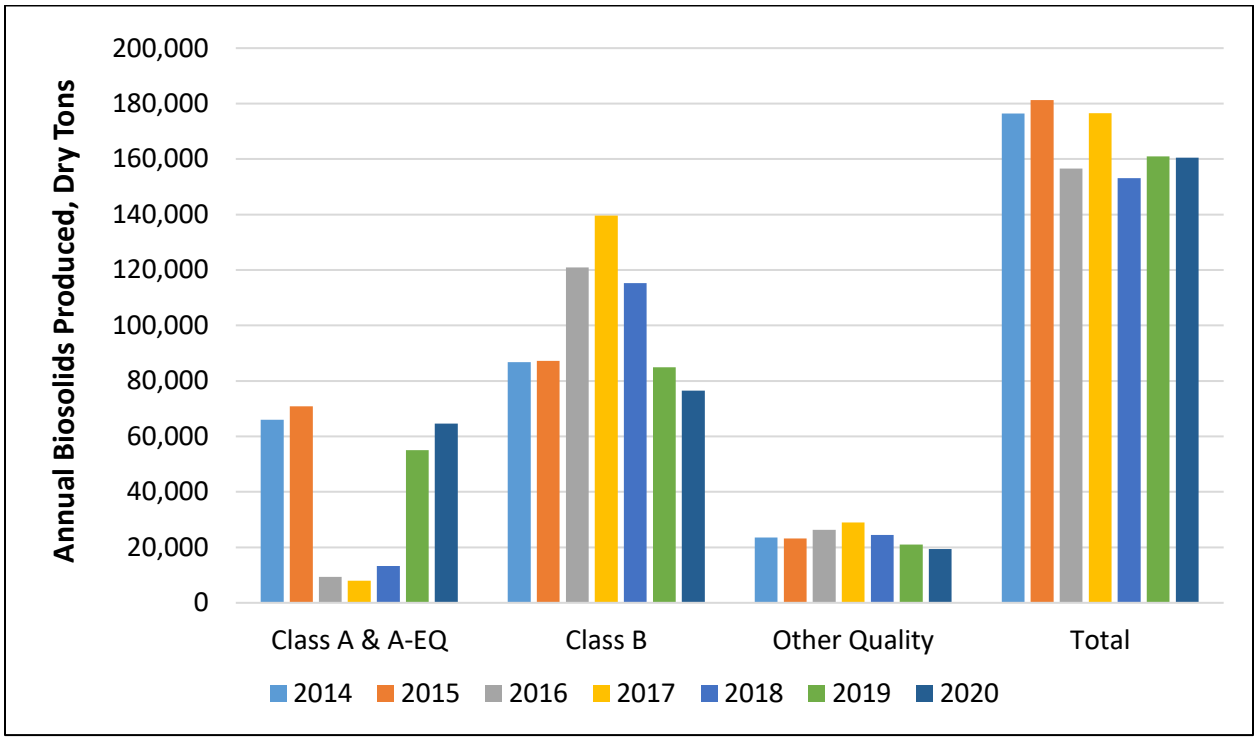


Figure 3. Aggregate dry tons of biosolids of different classes produced by survey respondents.

4. Management Options, Management Costs and Dewatering Statistics

Biosolids Reuse and Disposals Options

The amount of biosolids sent to each type of reuse and disposal destination by each responding agency is reported in **Table 2.** The accompanying **Figure 4** and **Figure 5** illustrate the relative importance of each reuse and disposal method for wet and dry tons, respectively. Reuse via landfill ADC receives the largest amount of dry tonnage of biosolids in the region, followed by land application. Onsite disposal accounts for a large amount of wet tonnage, but a small amount of dry tonnage because of the low solids content.

The change in reuse and disposal methods over time is illustrated in **Figure** 6 (wet tons) and **Figure 7** (dry tons) (see page 11). From 2017 to 2020, there was a significant drop in the wet and dry tonnage of biosolids sent to landfill ADC. By tonnage, the largest reductions were due to changes in biosolids management practices at San Francisco Public Utilities Commission, East Bay Municipal Utility District, and the City of Petaluma. In addition, four agencies (Benicia, Delta Diablo, Livermore, and Union Sanitary District) sent biosolids to landfill disposal or ADC in 2017, but not in 2020.

Table 2. Wet tons of biosolids delivered by usage, 2020.

Agency	ADC	Landfill Disposal	Land Application	Compost	Lystek	Biochar	Incineration	Onsite Disposal	Storage	Sum
American Canyon, City of	0	131	0	0	0	0	0	0	0	131
Benicia, City of	0	0	0	0	2,488	0	0	0	0	2,488
Central Contra Costa Sanitary District	0	0	0	0	206	0	66,310[a]	0	0	66,516
Central Marin Sanitation Agency	2,415	0	1,540	0	1,775	0	0	0	0	5,730
Delta Diablo	0	0	13,615	23	0	0	0	0	0	13,638
Dublin San Ramon Services District	0	0	0	0	0	0	0	174,329	0	174,329
East Bay Municipal Utility District	19,463	0	44,411	5,738	0	0	0	0	0	69,612
Fairfield-Suisun Sewer District	0	0	0	0	22,668	0	0	0	0	22,668
Hayward, City of	4,222	0	0	0	0	0	0	0	0	4,222
Las Gallinas Valley Sanitary District	0	0	0	0	0	0	0	6,255	0	6,255
Livermore, City of	0	0	9,164	0	0	0	0	0	0	9,164
Millbrae, City of	0	0	1,464	0	0	0	0	0	0	1,464
Mt. View Sanitary District	937	0	0	0	0	0	0	0	0	937
Napa Sanitation District	0	0	19,721	0	0	0	0	0	0	19,721
Novato Sanitary District	0	0	0	0	0	0	0	12,865	0	12,865
Oro Loma Sanitary District	0	0	5,229	0	0	0	0	0	0	5,229
Palo Alto, City of	0	0	0	11,321	6,218	0	0	0	0	17,539
Petaluma, City of	2,935[b]	0	3,072[b]	0	1,286[b]	0	0	0	0	7,293
San Francisco Public Utilities Commission	7,259	0	21,722	0	11,458	0	0	0	11,168	51,607
San Jose, City of	59,972	0	0	0	0	0	0	0	0	59,972
San Leandro, City of	0	0	3,167	0	0	0	0	0	0	3,167
San Mateo, City of	3,814	0	3,907	0	0	0	0	0	0	7,721
Santa Rosa, City of	1,255	1,255	21,235	2,297	5,214	0	0	0	1,418	32,673
Sewer Authority Mid-Coastside	2,171	0	0	0	0	0	0	0	0	2,171

Agency	ADC	Landfill Disposal	Land Application	Compost	Lystek	Biochar	Incineration	Onsite Disposal	Storage	Sum
Sewerage Agency of Southern Marin	1,479	0	0	0	0	0	0	0	0	1,479
Silicon Valley Clean Water	63	0	12,259	66	0	260	0	0	0	12,648
South San Francisco - San Bruno WQCP, City of	9,730	0	0	0	0	0	0	0	0	9,730
Sunnyvale, City of	207	0	5,574	0	0	0	0	0	0	5,781
Union Sanitary District	0	0	14,452	6,342	0	0	0	0	0	20,793
Vallejo Flood & Wastewater District	0	0	10,910	0	1,099	0	0	0	0	12,009
West County Wastewater District	0	22,000	0	0	0	0	0	0	0	22,000
Total	**115,921**	**23,386**	**191,441**	**25,786**	**52,412**	**260**	**66,310**	**193,449**	**12,586**	**681,551**

[a] Calculated based on survey response for total biosolids generated minus the amount sent to Lystek.

[b] Calculated based on survey response for deliveries of dry biosolids and percent solids.

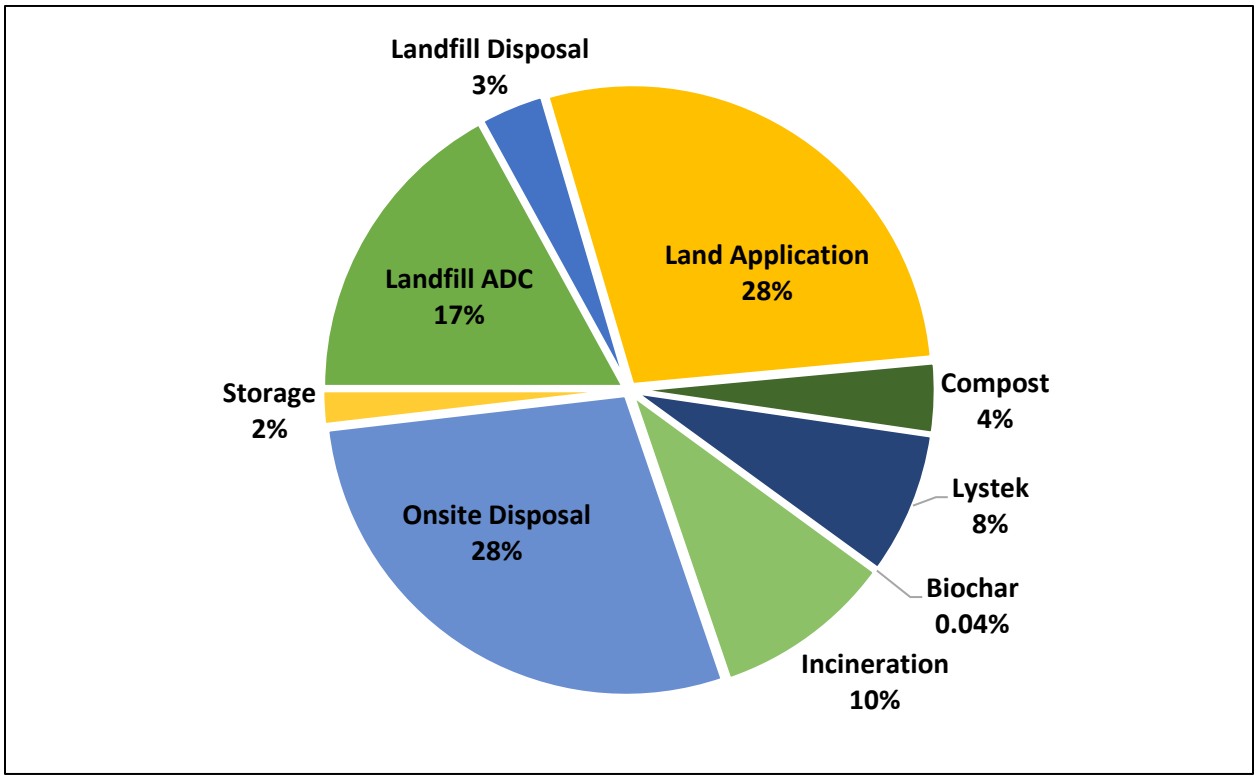


Figure 4. Relative wet tonnage of biosolids per reuse and disposal method in 2020.

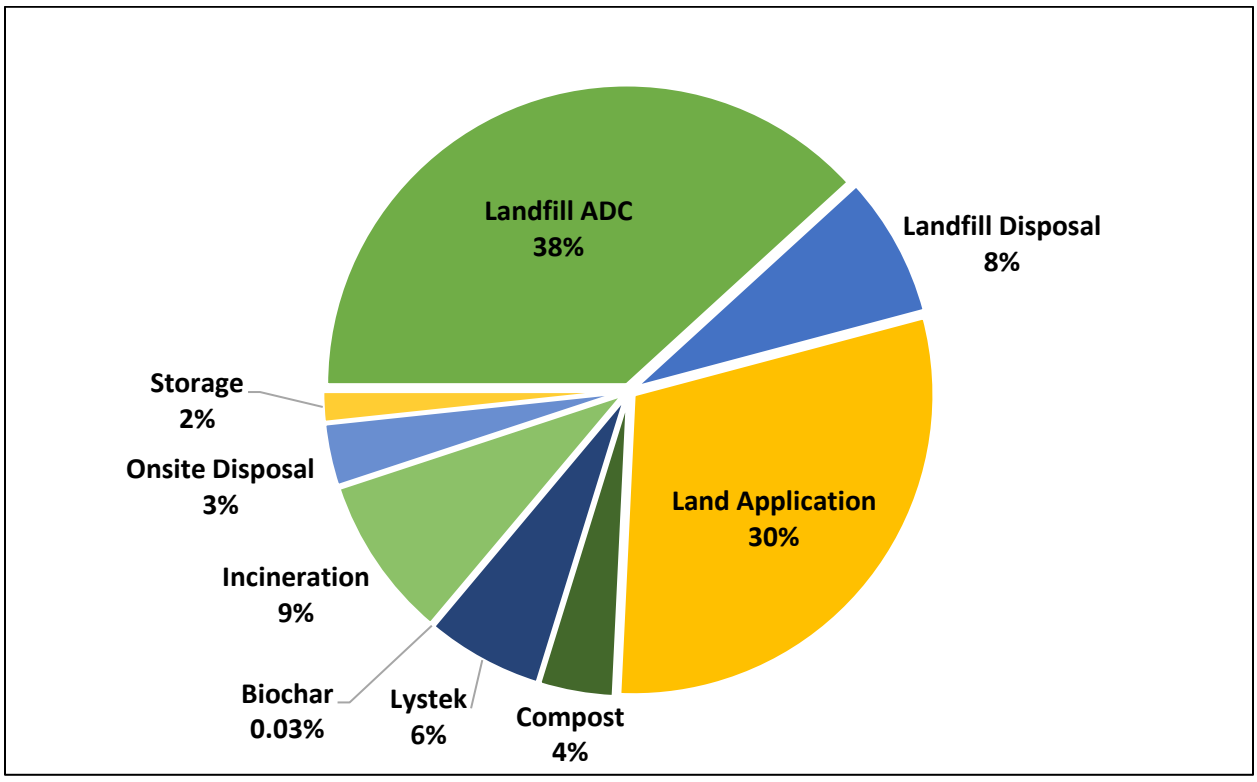


Figure 5. Relative dry tonnage of biosolids per reuse and disposal method in 2020.

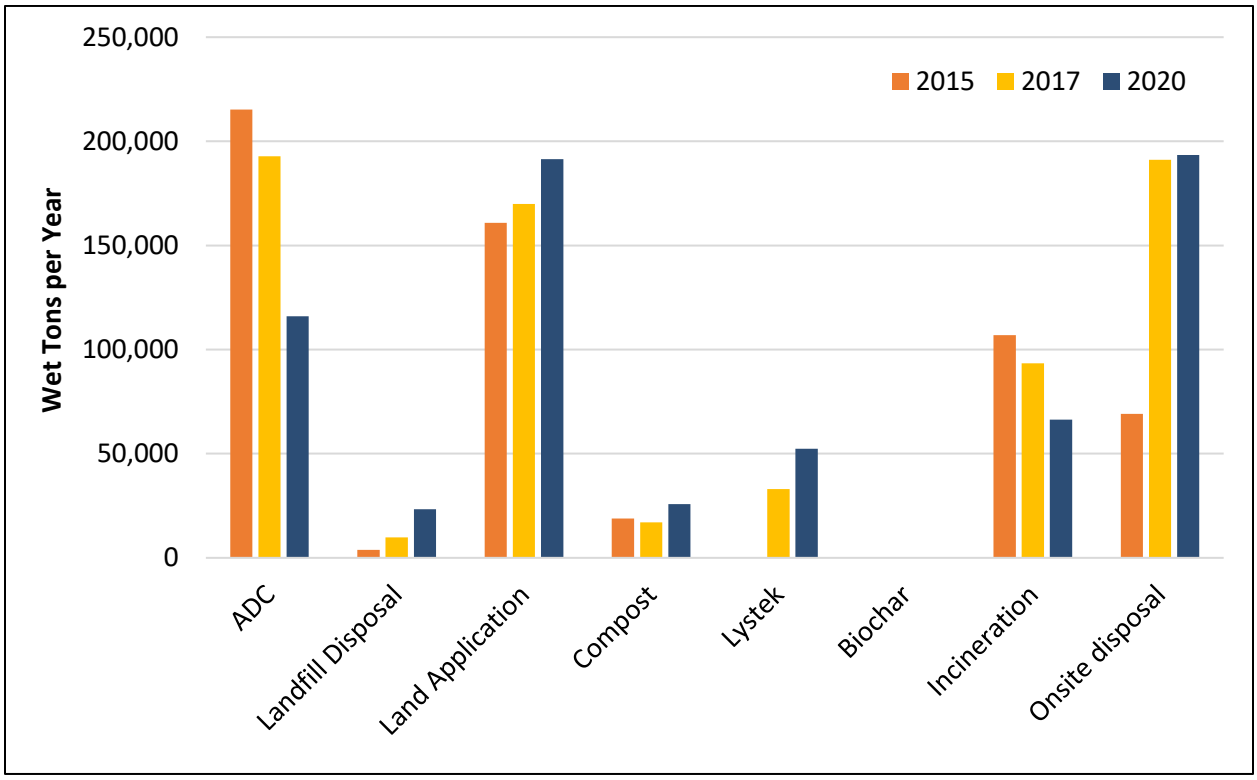


Figure 6. Wet tonnage of biosolids per reuse and disposal method, 2015 to 2020.

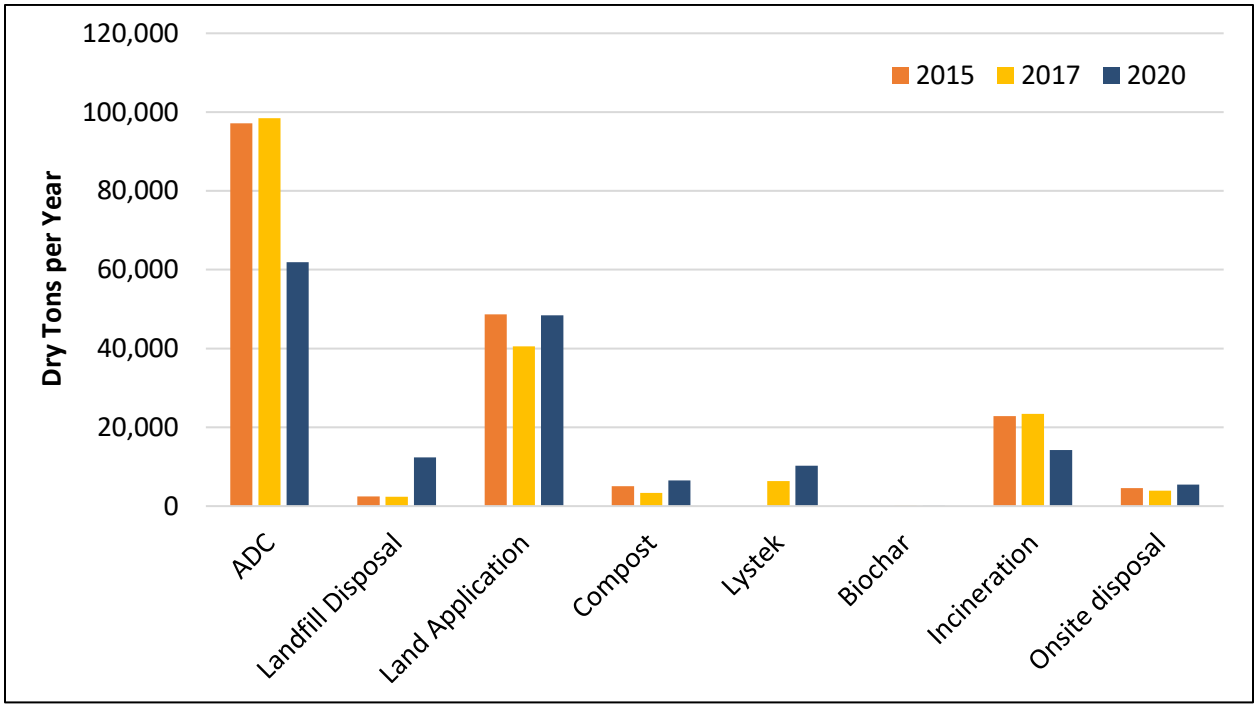


Figure 7. Dry tonnage of biosolids per reuse and disposal method, 2015 to 2020.

Another way to measure the relative importance of reuse and disposal methods is by counting the number of agencies that employ each, as illustrated in **Figure 8**. As can be seen in **Table 2**, many agencies use more than one reuse or disposal management strategies. Out of the thirty-one responding agencies, sixteen used land application, making it the most popular management strategy. Landfill ADC was the most popular management strategy in both previous surveys, but it was the second-most popular in the 2020 survey. Treatment at Lystek was the next most popular, followed by composting. Landfill disposal and onsite disposal were by three agencies each. Incineration and biochar production were used by one agency each.

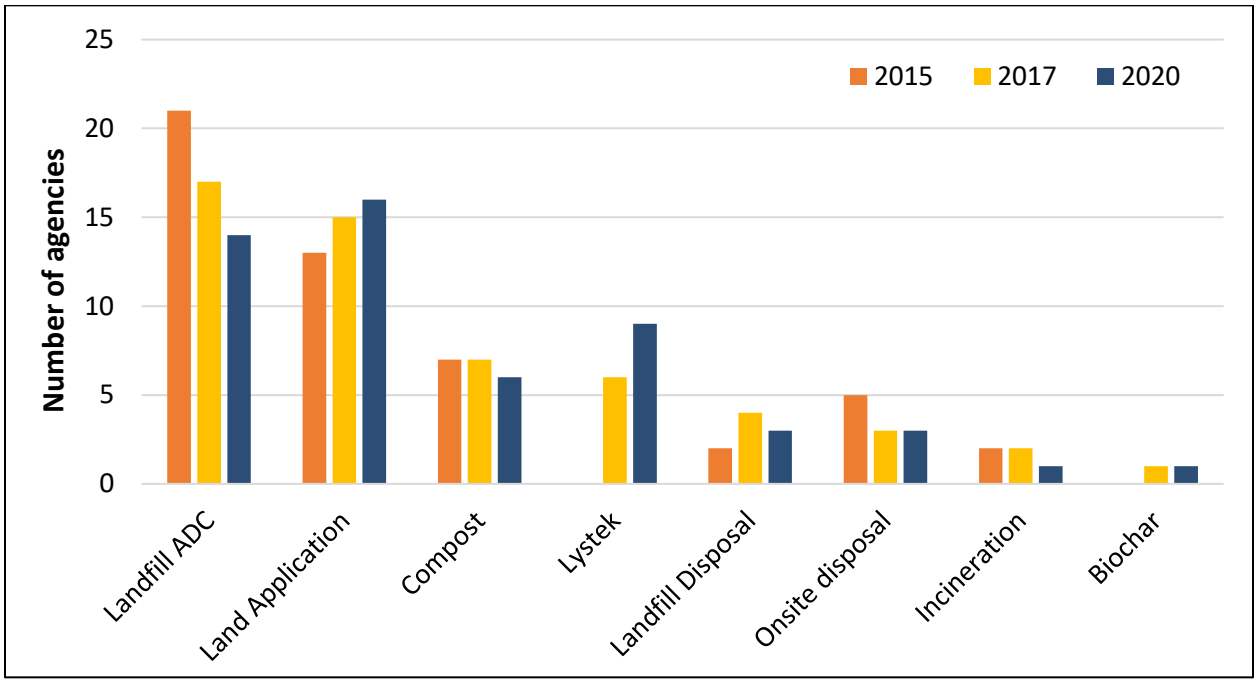


Figure 8. Changes in biosolids management practices for 31 survey respondents, 2015 to 2020.

As of 2020, nine agencies were sending biosolids to the Lystek Organic Materials Recovery Center (OMRC) located in Fairfield. The OMRC began processing biosolids to produce Class A-EQ liquid fertilizer in 2016, and in 2020 it accounted for 8% of total wet tonnage produced by survey respondents (6% of total dry tonnage).

While Lystek grew in popularity as a biosolids reuse option, landfill ADC continued to become less popular: In 2015, 21 agencies sent biosolids to landfill ADC, while in 2020, just 14 agencies sent biosolids to landfill ADC. Benicia, Delta Diablo, Livermore, and Union Sanitary District sent biosolids to landfill disposal or ADC in 2017, but not in 2020. More agencies (most notably San Jose) are expected to move away from landfill ADC and disposal in the future due to SB 1383 (see **Table 6**).

Management Costs

Agencies that send biosolids to multiple destinations report a range of costs per ton. Minimum and maximum reported hauling and tipping costs for each agency are reported in **Table 3**. Where costs were provided by the respondent as a range, the mean of the range was used for that destination. Total costs per agency are calculated by multiplying tons of solids by cost per ton for each destination and summing the destinations. Average costs for each agency are calculated by dividing total cost by tons of biosolids.

Table 3. Hauling and tipping costs for agencies

Agency Name	Minimum Cost ($/Ton)	Maximum Cost ($/Ton)	Average Cost ($/Ton)	Approx. Total Cost ($/Yr)
American Canyon, City of	Not provided. Hauling included in City's waste disposal contract.			
Benicia, City of	$139	$139	$139	$346,000
Central Contra Costa Sanitary District	Not Avail.	$93 (Lystek)	Onsite incineration. Cost information not provided.	
Central Marin Sanitation Agency	$50	$99	$66	$381,000
Delta Diablo	$50	$80	$50	$683,000
Dublin San Ramon Services District	Onsite disposal. Cost information not provided.			
East Bay Municipal Utility District	$35	$68	$54	$3,744,000
Fairfield-Suisun Sewer District	Not provided. Lystek facility is located onsite.			
Hayward, City of	Not provided. Hauling included in City's waste disposal contract.			
Las Gallinas Valley Sanitary District	$14	$14	$14	$88,000
Livermore, City of	$41	$41	$41	$376,000
Millbrae, City of	$76	$76	$76	$111,000
Mt. View Sanitary District	$54	$54	$54	$51,000
Napa Sanitation District	Onsite disposal. Cost information not provided.			
Novato Sanitary District	$17	$17	$17	$220,000
Oro Loma Sanitary District	$40	$40	$40	$209,000
Palo Alto, City of	$67	$98	$78	$1,364,000
Petaluma, City of	$61	$117	$75	$546,000
San Francisco Public Utilities Commission	$65	$101	$84	$4,356,000
San Jose, City of	$26	$26	$26	$1,535,000
San Leandro, City of	$53	$53	$52	$166,000
San Mateo, City of	$30	$47	$39	$64,000
Santa Rosa, City of	$4	$115	$31	$1,007,000
Sewer Authority Mid-Coastside	$68	$68	$68	$147,000
Sewerage Agency of Southern Marin	$324	$324	$323	$478,000
Silicon Valley Clean Water	$49	$80	$54	$685,000

Agency Name	Minimum Cost ($/Ton)	Maximum Cost ($/Ton)	Average Cost ($/Ton)	Approx. Total Cost ($/Yr)
South San Francisco - San Bruno WQCP, City of	$62	$62	$62	$607,000
Sunnyvale, City of	$161[a]	$212[a]	$163[a]	$940,000[a]
Union Sanitary District	$35	$61	$43	$895,000
Vallejo Flood & Wastewater District	$25	$75	$30	$356,000
West County Wastewater District[b]	Not provided	$162[b]	Not provided	Not provided
Subtotal (25 of 31 agencies reporting)				**$20,655,000**

[a] Cost has been converted to equivalent for wet biosolids, although City pays based on dry weight basis. Dewatering is included in cost.

[b] West County Wastewater District reported costs for biosolids dewatered and hauled by a contractor. Additional biosolids disposal services for most of the District's biosolids are covered under a separate franchise agreement.

For the 23 agencies that reported costs in both 2017 and 2020, total costs rose about 12%, from about $17M in 2017 to $19M in 2020. This represents at 12% increase in costs over three years; by comparison, the U.S. inflation rate was about 6% over the 3-year period from 2017 to 2020. Cost increases significantly higher than the rate of inflation were also reported in the 2017 biosolids survey report (12% increase in cost, vs. 3% inflation over 2 years).

The range of hauling and tipping costs associated with each reuse and disposal alternative are plotted in **Figure 9**. For agencies with available land, onsite disposal is by far the lowest-cost option. As in the previous survey, unit costs for landfill ADC and land application showed a very large range, with landfill ADC (median cost: $65/ton) proving to be more expensive than land application (median cost: $54/ton). Costs increased dramatically for both landfill ADC (increase from $48 to $65/ton, or a 36% increase in 3 years) and for land application (increase from $33 to $54/ton, or a 64% increase over 3 years).

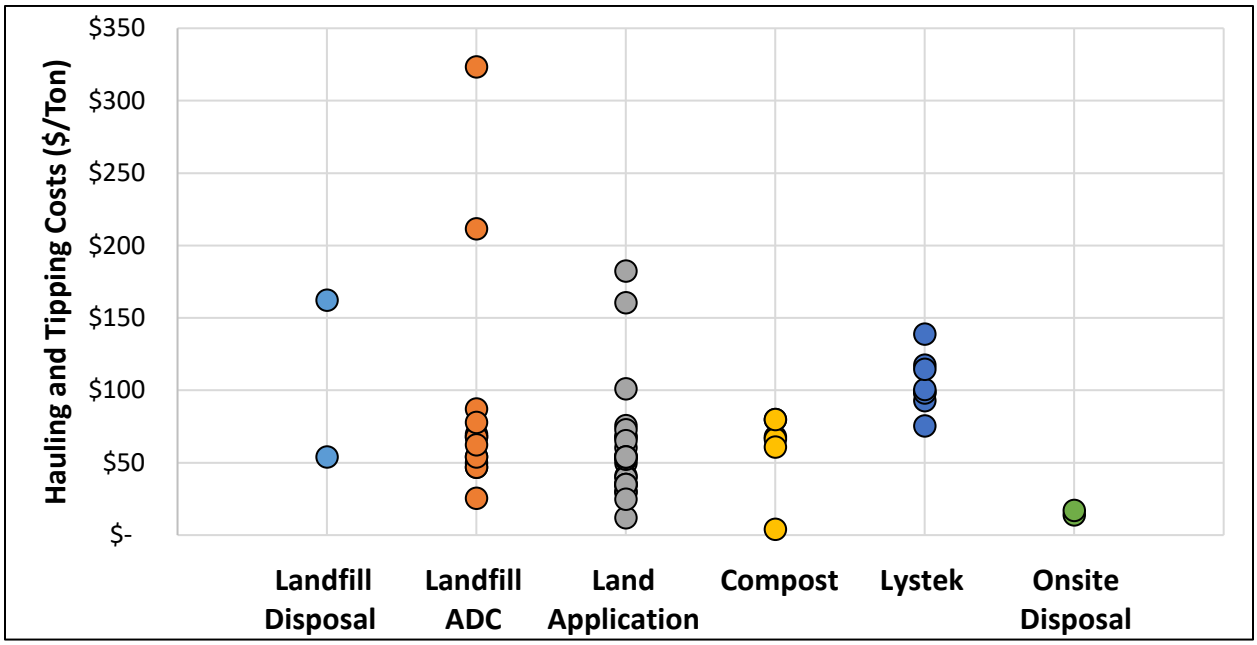


Figure 9. Tipping and Hauling Costs for each reuse/disposal alternative.

Hauling Distance

The range of round-trip hauling distances for each agency, as well as total ton-miles, are listed in **Table 4.** The ton-miles provides a metric for the total hauling burden for each agency. The combined hauling burden for all survey respondents (45.2 million ton-miles) is within 1% of the total 2017 value of 45.0 million ton-miles.

Table 4. Round-trip Distance Hauled

Agency	Minimum Distance Hauled (Round Trip, miles)	Maximum Distance Hauled (Round Trip, miles)	Total Ton-Miles
American Canyon, City of	63	63	8,400
Benicia, City of	40	40	99,600
Central Contra Costa Sanitary District	0 (On-site incineration)	46 (Lystek)	9,400
Central Marin Sanitation Agency	36	110	405,400
Delta Diablo	300	480	4,095,400
Dublin San Ramon Services District	0	0	0
East Bay Municipal Utility District	80	270	13,915,000
Fairfield-Suisun Sewer District	0	0	0
Hayward, City of	64	64	270,200
Las Gallinas Valley Sanitary District	0	0	1,800
Livermore, City of	150	150	1,374,600
Millbrae, City of	240	240	351,400
Mt. View Sanitary District	58	58	54,400

Agency	Minimum Distance Hauled (Round Trip, miles)	Maximum Distance Hauled (Round Trip, miles)	Total Ton-Miles
Napa Sanitation District	0	6	49,200
Novato Sanitary District	0	0	0
Oro Loma Sanitary District	120	120	627,400
Palo Alto, City of	148	228	3,501,400
Petaluma, City of	76	218	701,000
San Francisco Public Utilities Commission	52	242	5,671,200
San Jose, City of	4	4	239,800
San Leandro, City of	170	170	538,400
San Mateo, City of	140	252	1,672,600
Santa Rosa, City of	1	96	1,631,000
Sewer Authority Mid-Coastside	10	10	21,800
Sewerage Agency of Southern Marin	45	45	66,800
Silicon Valley Clean Water	0	282	2,841,200
South San Francisco - San Bruno WQCP	106	106	1,035,400
Sunnyvale, City of	176	240	1,263,200
Union Sanitary District	158	242	4,479,000
Vallejo Flood & Wastewater District	26	34	321,000
West County Wastewater District	Not Avail.	Not Avail.	Not Avail.
Total (30 of 31 agencies reporting)			**45,246,000**

Dewatering Statistics

The on-site methods employed by agencies to dewater biosolids prior to final use included drying beds, centrifuges, presses, and dryers. Dewatering equipment employed by each agency, as well as the resulting percentage of solids, is listed in **Table 5.**

Table 5. Percentage Solids, Dewatering technology type and manufacturer for each agency

Agency	Percent Solids	Dewatering Technology	Equipment Manufacturer
American Canyon, City of	25%	Screw Press	-
Benicia, City of	14-16%	Belt Filter Press	Ashbrook press
Central Contra Costa Sanitary District	22%	Centrifuge	Sharples, being replaced with Andritz within next 5 years
Central Marin Sanitation Agency	27%	Centrifuge	Centrisys CS18-4
Delta Diablo	25%	Centrifuge	Flottweg centrifuges
Dublin San Ramon Services District	2.6%	No dewatering	N/A
East Bay Municipal Utility District	24%	Centrifuge	Humbolt and Flottweg
Fairfield-Suisun Sewer District	16%	Drying Bed, Screw Press	FKC Screw Press
Hayward, City of	>80%	Drying Bed	N/A

Agency	Percent Solids	Dewatering Technology	Equipment Manufacturer
Las Gallinas Valley Sanitary District	3.3%	Thickening in Storage Lagoon	N/A
Livermore, City of	16.2%	Belt Filter Press	Simon Ashbrook
Millbrae, City of	19%	Belt Filter Press	Andritz
Mt. View Sanitary District	25-49%	Centrifuge, Drying Bed	Centritech centrifuge
Napa Sanitation District	17-30%	Belt Filter Press. Contractor used centrifuges to dewater pond solids.	Ashcroft
Novato Sanitary District	5.5%	Sludge Lagoons	N/A
Oro Loma Sanitary District	80%	Belt Filter Press, Drying Bed, Belt Press to approx 13%, air drying to 80%	BDP Belt press
Palo Alto, City of	29%	Belt Filter Press	4 belt filter presses manufactured by Andritz
Petaluma, City of	18-19%	Screw Press	FKC Screw Press and USGI Polyblend liquid polymer feed system
San Francisco Public Utilities Commission	23%	Centrifuge, Screw Press	FKC - Screw Press, Humboldt and Sharpels - Centrifuges
San Jose, City of	79%	Drying Bed	A capital project (Digested Sludge Dewatering Facility) is currently underway to install centrifuges that will replace the current lagoon and drying bed process. Future centrifuges have not yet been purchased.
San Leandro, City of	50-80%	Belt Filter Press	BDP
San Mateo, City of	22%	Centrifuge	GEA Westfalia Centrifuge model CC 458-00-32
Santa Rosa, City of	15-16%	Belt Filter Press	Ashbrook
Sewer Authority Mid-Coastside	17%	Belt Filter Press	Ashbrook
Sewerage Agency of Southern Marin	20%	Belt Filter Press	BDP
Silicon Valley Clean Water	19-44%	Fournier Rotary Fan Press	Fournier Rotary Fan Press, Bioforce Tech Bio-dryers & Pyrolysis
South San Francisco - San Bruno WQCP, City of	14-18%	Belt Filter Press	Komoline-Sanderson
Sunnyvale, City of	22-29%	Centrifuge, Belt Filter Press	Dewatering equipment is owned and operated by the contractor, Synagro

Agency	Percent Solids	Dewatering Technology	Equipment Manufacturer
Union Sanitary District	24%	Centrifuge	Andritz D5LL Decanter Centrifuges
Vallejo Flood & Wastewater District	30%	Belt Filter Press	Ashbrook
West County Wastewater District	17-77%	Belt Filter Press, Drying Bed	Not Avail.

5. Challenges and Future Planning

Challenges

Agencies were asked to rank the challenges facing their biosolids program. The following challenges are ranked from the aggregate responses from most to least important:

1. Securing sustainable use and disposal options
2. Rising costs
3. Hauling distance
4. Public health concerns regarding land application (PFAS, microplastics, pathogens, etc.)
5. Regulatory Restrictions on using Biosolids for Alternative Daily Cover (SB 1383)
6. Local restrictions on land application
7. Public perception/relations
8. Space for drying operations
9. Wet weather impeding drying operations

Reasons listed as "other" included:

- Accommodating local trash haulers that need to divert organic waste from landfills
- Limitations on future land application
- Odor concerns from the public
- Concern that PFAS and microplastics could be challenges in the future
- Air regulations associated with incineration
- The lack of local disposal options, which drives up costs

Overall, securing sustainable use and disposal options was the top concern. This differs from the 2016 and 2018 surveys, when rising costs were cited as the top concern overall. 11 of 31 agencies listed "securing sustainable use and disposal options" as the #1 concern, while 10 of 31 agencies listed "rising costs" as the top concern.

Future Biosolids Management Plans

The survey asked respondents about their plans for biosolids management in 2021. 28 of 31 respondents selected the response "Same plan/strategy as 2020." The remaining 3 agencies had the following responses:

- Delta Diablo: "*We will start sending a portion of our biosolids to Lystek."* Starting July 1, 2021, Delta Diablo began sending two truckloads per month to the Lystek facility at Fairfield Suisun Sewer District for further processing to Class A standards.
- Mt. View Sanitary District: "*All biosolids will continue to go to the landfill in 2021. It is anticipated that biosolids will begin going to Lystek in 2022*."
- San Francisco Public Utilities Commission: "*We have phased out the use of landfill ADC entirely as of fall 2020*."

Additionally, the Silicon Valley Clean Water response noted that the agenda hopes to divert more biosolids to Bioforce Tech in late 2021.

The survey also specifically asked about agency's responses to SB 1383, which mandates diversion of organics from landfills in order to reduce short-lived climate pollutants (i.e., methane). SB 1383 will require a 75% reduction in organics from landfills compared to 2014 levels. This new legislation is expected to have two main impacts on biosolids disposal:

- Biosolids used as landfill ADC will be considered disposal instead of beneficial reuse, which will sharply limit ADC use of biosolids;
- Municipalities will need to divert organic materials (green waste, food waste, etc.) from landfills. If wastewater agencies provide opportunities for co-digestion of these diverted materials, there will be an increase in the production of digested biosolids and of biogas at POTWs.

Responses to the survey question about the status of implementation readiness for SB 1383 are summarized below in **Figure 10**, with additional details reported in **Table 6**. As summarized in **Figure 9**, agencies reported the following strategies for responding to the mandates in SB 1383.

- 11 agencies (Central Marin Sanitation Agency, East Bay Municipal Utility District, Millbrae, Oro Loma Sanitary District, Petaluma, San Francisco Public Utilities Commission, San Jose, Santa Rosa, Sewerage Agency of Southern Marin, Sunnyvale, and Union Sanitary District) plan an increased reliance on **land application**.
- 9 agencies (Delta Diablo, East Bay Municipal Utility District, Fairfield-Suisun Sewer District , Mt. View Sanitary District, Petaluma, San Francisco Public Utilities Commission, San Jose, Santa Rosa, and Union Sanitary District) will **increase the volume of biosolids sent to another facility or third party for additional treatment** (i.e., Lystek or composting).
- 4 agencies (Hayward, Silicon Valley Clean Water, South San Francisco - San Bruno, and West County Wastewater District) will **improve treatment technology at the plant** to expand use and disposal options.

- 4 agencies (Petaluma, South San Francisco - San Bruno, Union Sanitary District, and West County Wastewater District) will **add digester capacity for organics co-digestion** at the plant.

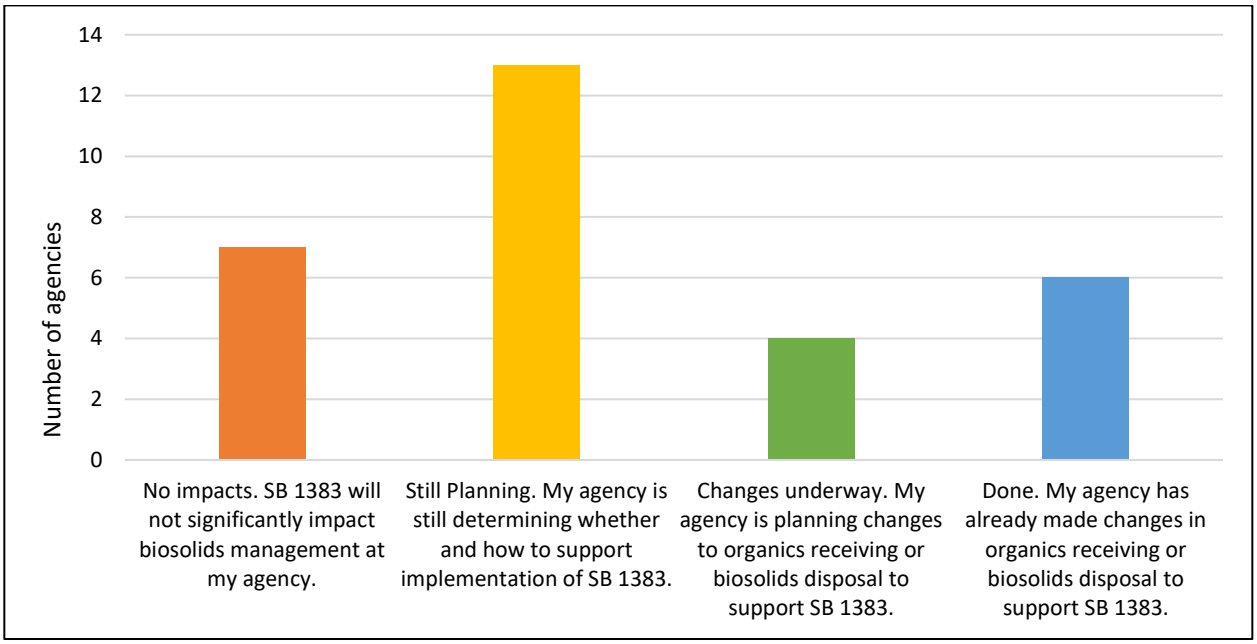


Figure 10. Survey Responses regarding Status of Implementation Readiness for SB1383.

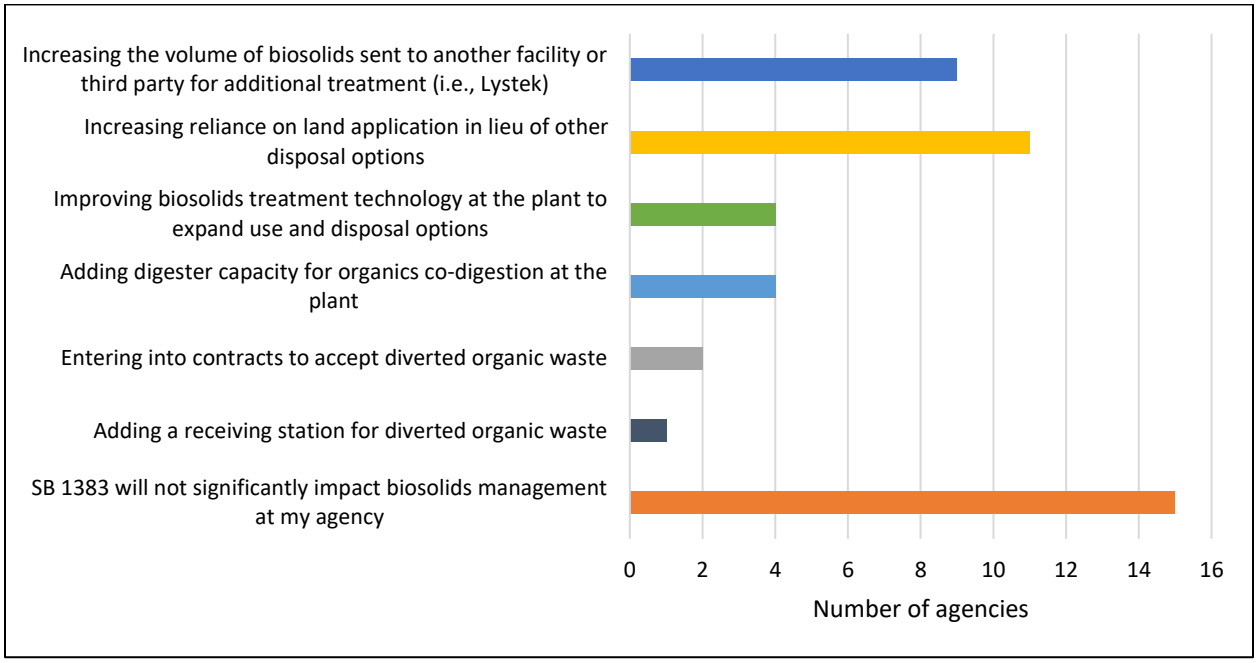


Figure 11. Agency Plans for Responding to SB 1383's Limits on Landfill Use and Disposal

Table 6. Agency Plans to Respond to SB 1383 as of 2018

Agency	Status of Implementation Readiness for SB1383				Details
	No SB1383 Impacts	Still Planning	Changes Underway	Complete	
American Canyon, City of		x			
Benicia, City of			x		Present hauler (Republic Services) to compost at their facility.
Central Contra Costa Sanitary District	x				Evaluating how classification of sewage sludge incineration as "landfilling" will affect our site
Central Marin Sanitation Agency		x			
Delta Diablo		x			
Dublin San Ramon Services District		x			SB1383 does not immediately impact our agency since we dispose of biosolids at our own Dedicated Land Disposal facility.
East Bay Municipal Utility District			x		
Fairfield-Suisun Sewer District				x	
Hayward, City of		x			
Las Gallinas Valley Sanitary District	x				
Livermore, City of	x				
Millbrae, City of	x				
Mt. View Sanitary District					
Napa Sanitation District	x				
Novato Sanitary District		x			
Oro Loma Sanitary District				x	
Palo Alto, City of		x			
Petaluma, City of				x	
San Francisco Public Utilities Comm.				x	

Agency	Status of Implementation Readiness for SB1383				Details
	No SB1383 Impacts	Still Planning	Changes Underway	Complete	
San Jose, City of			x		Dewatered biosolids will be directly land applied, composted, and/or further treated before being beneficially used.
San Leandro, City of	x				
San Mateo, City of		x			
Santa Rosa, City of				x	
Sewer Authority Mid-Coastside		x			
Sewerage Agency of Southern Marin		x			
Silicon Valley Clean Water				x	Divert 50% of biosolids to Bioforce Tech for biochar production. Currently receiving diverted organic waste
South San Francisco - San Bruno WQCP, City of		x			We are in the planning stages of trying to set up agreements with local trash company to receive organic waste to produce more methane onsite. We would add a receiving station and larger cogen to harvest the increase methane gas and go PG&E neutral. Would rehab our dewatering facility.
Sunnyvale, City of		x			The City is still evaluating a response and timeline to implement strategies in response to SB1383. In the near term, the City will be prioritizing an increased reliance on land application. Future considerations include a 5th digester (for thickened WAZ, anticipated increases in solids, and co-digestion), pursuing contracts with a third party for additional treatment (i.e., Lystek), and potentially adding a receiving station for the diversion of organic wastes.
Union Sanitary District		x			
Vallejo Flood & Wastewater District	x				
West County Wastewater District			x		

6. Public Outreach

Marketing

The survey asked whether agencies directly market their biosolids products, or whether another entity markets biosolids products on their behalf.

- No agencies reported directly marketing or branding their own biosolids products.
- 11 agencies (Benicia, Central Marin Sanitation Agency, Delta Diablo, Fairfield-Suisun Sewer District, Palo Alto, San Francisco Public Utilities Commission, Santa Rosa, Silicon Valley Clean Water, Sunnyvale, Union Sanitary District, and West County Wastewater District) report that a third party such as Lystek or Synagro markets biosolids products on their behalf.

Outreach and Education

Agencies were asked whether they conduct any outreach or publicity pertaining to their biosolids programs, and via what venue. Six agencies replied that they conduct outreach pertaining to biosolids, mainly through agency websites and/or bill inserts, as illustrated in **Figure 12**. 14 agencies in this survey replied that they conduct outreach, but not for biosolids in particular. Seven agencies replied that they do not conduct outreach at all. Overall, the responses were similar to the 2016 and 2018 responses, except that in 2018 survey agency (Napa Sanitation District) reported using print media. Napa Sanitation District continues an active outreach program through educational programs, tours, and open house events. Silicon Valley Clean Water noted that biosolids are included in the 1-week Sewer Science program at high schools in their service area.

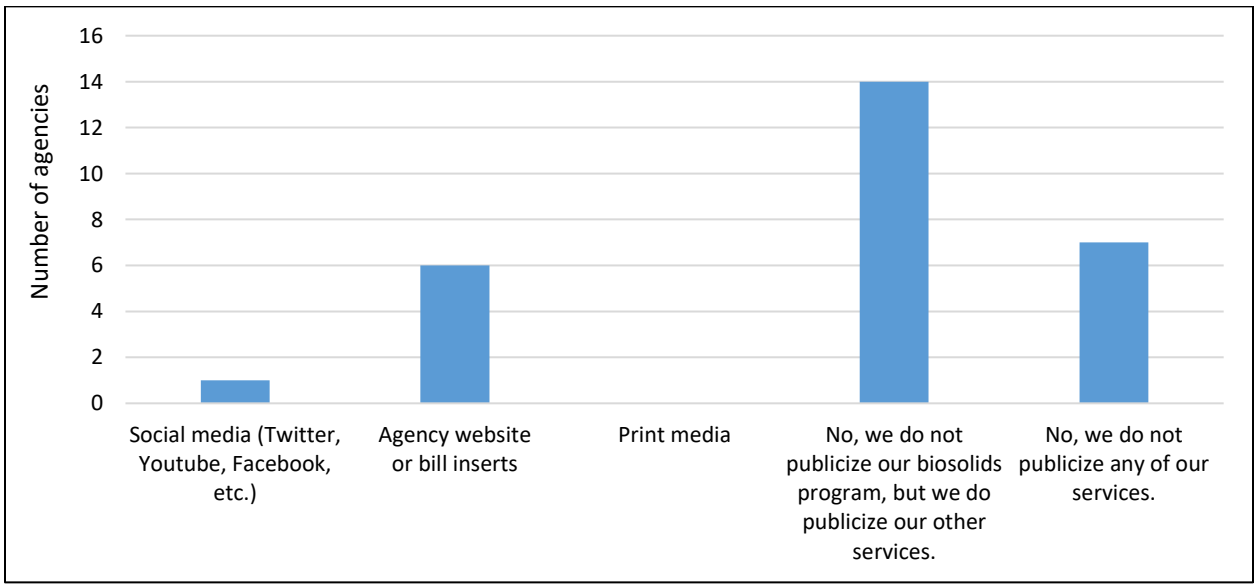


Figure 12. Number of agencies doing biosolids outreach via traditional and social media.

7. Biosolids Staffing

The survey asked respondents to describe how their agency manages biosolids staffing, including the number of Full Time Equivalent (FTE) positions. Two out of 31 agencies (Sunnyvale and West County Wastewater District) noted use of contractors to manage biosolids-related operations. Complete responses are shown below in **Table 7.** The two agencies reporting the largest dedicated staff are the City of San Jose (12 FTEs) and Central Contra Costa Sanitation District (3.5 FTEs). Adding up the 25 agencies that provided estimated staffing levels, the total is more than 50 Full Time Equivalent positions.

Table 7. Agency Staffing for Biosolids

Agency	How many Full Time Equivalent (FTE) staff are required for biosolids management?	Please describe the roles of staff assisting with biosolids management.
American Canyon, City of	0.33	Turning on the press, checking the press, sampling and reporting
Benicia, City of	0.2	Operator to dewatering solids. Hauling is performed by contract operator.
Central Contra Costa Sanitary District	3.5	operating incinerator and solids handling equipment, hauling coordination, regulatory reporting
Central Marin Sanitation Agency	2	1 FTE operation staff would set up, operate the centrifuge, which runs approximately 10hrs/day, and unload biosolids to a truck daily; 0.5 FTE engineering staff would manage the chemical procurement, biosolids hauling, and disposal contracts; 0.5 FTE maintenance staff would provide services to all the dewatering equipment.
Delta Diablo	2.5	Operators - produce and process the biosolids; Ops Supervisor - tracks digester data (temp, VSR, detention; Ops Manager - Oversees Syangro and Lystek contracts, performs reporting; Lab staff - samples, analyzes biosolids; Engineering - assists w/RFPs, contracts, regulatory issues
Dublin San Ramon Services District	1	6 seasonal staff (during harvesting season) operating dredge, tractor, injector, and soil preparation. 1 FTE oversees biosolids harvesting.
East Bay Municipal Utility District	-	No one FTE is allocated for biosolids, but at least 5 people have biosolids responsibilities: Contract and program management, quality control and reporting, invoicing, day-to-day operations.

Agency	How many Full Time Equivalent (FTE) staff are required for biosolids management?	Please describe the roles of staff assisting with biosolids management.
Fairfield-Suisun Sewer District	1	We do not have dedicated biosolids staff. Roles shared between engineering, operations, and regulatory
Hayward, City of	2	Operations manages polymer dosing and Maintenance manages the sludge drying bed process
Las Gallinas Valley Sanitary District	-	Contracted to a third party
Livermore, City of	2	They are Belt Press Operators - Contractor hauls Biosolids to land apply or ADC
Millbrae, City of	-	4 Operators. Operator is assigned to dewatering daily or as needed
Mt. View Sanitary District	1	1 Lab Analyst performs weekly process control monitoring. 5 Operators and 1 Supervisor maintain and operate sludge pumps, grit removal, sludge thickening, sludge digestion, scum handling, sludge dewatering and disposal.
Napa Sanitation District	3	(1) Manager - oversees the biosolids program, coordinates with growers, procure agronomists, record keeping, reporting (2) Reclamation Workers - prepare fields, apply solids, incorporate solids, irrigate if needed.
Novato Sanitary District	2.5	Sludge transfer and return, lab analysis of solids and health of digester(s), reporting (EPA 503), infrastructure (piping and pumps) repair and maintenance
Oro Loma Sanitary District	0.1	Pretreatment inspector manages annual off haul, billing, and required sampling. GM does annual EPA reporting and manages RFP prep/bidding. Our lab chemist, pretreatment inspector, plant manager, and General Manager all contribute.
Palo Alto, City of	1	Plant Manager, Senior Engineer, Associate Engineer and Admin. Assistants
Petaluma, City of	3	2 FTE Operations Staff, 0.5 FTE maintenance staff, 0.5 FTE analytical/regulatory staff
San Francisco Public Utilities Commission	1	Biosolids FTE staff oversees contracts related to biosolids use, manages biosolids reporting, special projects, and improvement of current program
San Jose, City of	12	Program Manager establishing contract to manage future dewatered biosolids; other/O&M staff manage current lagoons and drying bed process. 12 positions: 5 Heavy Equipment Operators, 2 Senior HEOs, 3 Wastewater Attendants, 1 Superintendent, & 1 Program Manager
San Leandro, City of	1	a maintenance staff tills and moves material part time. Operations staff press and place in beds, Lab staff sample and analyze material. Approx. 1 FTE equivalent

Agency	How many Full Time Equivalent (FTE) staff are required for biosolids management?	Please describe the roles of staff assisting with biosolids management.
San Mateo, City of	-	In typical fashion we have a liquids operator and solids operator and the solids operator manages the biosolids / dewatering process every shift. We do not have any FTE staff dedicated to biosolids. Operations manages it.
Santa Rosa, City of	3	Manager, senior maintenance worker, admin support.
Sewer Authority Mid-Coastside	-	Responsibilities shared by 5 staff members in operations
Sewerage Agency of Southern Marin	1.5	1 operator and 0.5 supervisor
Silicon Valley Clean Water	3	(1) Operator operating the Fournier Rotary Fan Press units, (1) Operator to operate equipment using in the concrete drying beds, (1) Operations Supervisor
South San Francisco - San Bruno WQCP, City of	-	Responsibilities shared by 14 Wastewater Operators: Running the belt presses, scheduling truck/hauling pick ups.
Sunnyvale, City of	1.5	Biosolids dewatering and hauling operations are managed by a contractor. There are no dedicated employees for biosolids management. Operations and Laboratory staff assist part time in the collection and analysis of biosolids samples. The Regulatory Division supports regulatory oversight and reporting of biosolids related data.
Union Sanitary District	1.5	Operations, field inspections and maintenance, engineering analysis, sampling, testing, invoice tracking, reporting and regulatory oversight
Vallejo Flood & Wastewater District	2	2 truck drivers (also function as general help when not driving), 1 program management (oversee other programs in addition to biosolids)
West County Wastewater District	1	Sample collection

8. Future Surveys

BACWA intends to repeat this survey in 2023 (covering biosolids activities in 2021 and 2022), and every two years thereafter. This will give the region the ability to track changes in biosolids trends over time.

BACWA member agencies are all permitted by the San Francisco Regional Water Quality Control Board. The Regional Water Board's jurisdiction includes oversight over impacts to groundwater and surface water from biosolids land application and land disposal. In 2021, Regional Water Board staff expressed renewed interest in local review of these biosolids uses to ensure water quality protection, especially in lowland areas adjacent to San Francisco Bay. The Regional Water Board's jurisdiction also includes regulatory requirements within NPDES permits, which indirectly affect biosolids management. Within the next few years, however, new regulations from the California Air Resources Board and the Bay Area Air Quality Management District regarding air toxics (e.g., from the combustion of biogas) and climate pollutants (e.g., methane) are expected to impact biosolids management to a greater extent than water quality-related requirements.

As SB 1383 Regulations are implemented, and the next two years bring clarity to approaches for biosolids reuse and disposal in California, future survey questions may be refined to better understand how agencies are responding to this shifting landscape.

APPENDIX A – AGENCY DATA: 2020 Biosolids Management

American Canyon, City of	
type	Landfill disposal
location	Hay Road Landfill, Vacaville
wet tons	131
cost ($/ton)	Hauling included in City's waste disposal contract
one-way distance (miles)	32

Benicia, City of	
type	Lystek
location	Lystek Organic Materials Recovery Center (OMRC)
wet tons	2488
cost ($/ton)	Hauling $512/load 6 days/week, Treatment $75/wet ton
one-way distance (miles)	20

Central Contra Costa Sanitary District		
type	Incineration	Lystek
location	Onsite	Lystek. Only for emergency use and routine testing of facility; may be used exclusively during capital improvements to the incinerators.
wet tons	66,310	206
cost ($/ton)	$0	$93
one-way distance (miles)	0	23

Central Marin Sanitation Agency			
	Destination 1	**Destination 2**	**Destination 3**
type	ADC	Land Application	Lystek
location	Redwood Landfill, Novato	Synagro Solano County land application sites	Lystek
wet tons	2,415	1,540	1,775
cost ($/ton)	$50	$55	$99
one-way distance (miles)	18	55	42

Delta Diablo		
	Destination 1	**Destination 2**
type	Land Application	Compost
location	Various fields in Solano, Sacramento, and Merced Counties	Synagro Central Valley Compost Facility
wet tons	13,615	23
cost ($/ton)	$50	$80
one-way distance (miles)	150	240

Dublin San Ramon Services District	
type	Onsite disposal
location	DSRSD Dedicated Land Disposal (DLD) site
wet tons	174,329
cost ($/ton)	Not reported
one-way distance (miles)	0

East Bay Municipal Utility District					
	Destination 1	**Destination 2**	**Destination 3**	**Destination 4**	**Destination 5**
type	Land Application	ADC	Land Application	Compost	Land Application
location	Merced County	Potrero Hills Landfill	Sacramento County	Central Valley Compost Facility	Solano County
wet tons	30,291	19,463	13,911	5,738	209
cost ($/ton)	$35	$68	$68	$68	$68
one-way distance (miles)	135	45	89	130	40

Fairfield-Suisun Sewer District	
type	Lystek
location	Lystek Organic Materials Recovery Center (OMRC)
wet tons	22,668
cost ($/ton)	Not reported
one-way distance (miles)	0

Hayward, City of	
type	ADC
location	Altamont Landfill
wet tons	4,222
cost ($/ton)	Hauling included in City's waste disposal contract
one-way distance (miles)	32

Las Gallinas Valley Sanitary District	
type	Onsite Disposal
location	Onsite surface disposal
wet tons	6,255
cost ($/ton)	$14
one-way distance (miles)	0

Livermore, City of	
Type	Land Application
Location	Silva Ranch in Galt, Sacramento County (Synagro)
wet tons	9,164
cost ($/ton)	$41
one-way distance (miles)	75

Millbrae, City of	
Type	Land Application
Location	Sacramento County
wet tons	1,464
cost ($/ton)	$76
one-way distance (miles)	120

Mt. View Sanitary District	
Type	ADC
Location	Potrero Hills Landfill
wet tons	937
cost ($/ton)	$54
one-way distance (miles)	29

Napa Sanitation District			
	Destination 1	**Destination 2**	**Destination 3**
type	Land Application	Land Application	Land Application
location	Jameson Ranch (owned by NapaSan)	Somky Ranch (owned by NapaSan). Oxidation Pond solids were land applied.	Fagundes Ranch (owned by NapaSan). Oxidation Pond solids were land applied.
wet tons	7,816	11,660	245
cost ($/ton)	Not reported	Not reported	Not reported
one-way distance (miles)	3	0.1	0.1

Novato Sanitary District	
type	onsite
location	Designated Land Disposal site
wet tons	12,865
cost ($/ton)	$220,000 flat fee contract for transfer from sludge lagoons to DLD
one-way distance (miles)	0

Oro Loma Sanitary District	
Type	Land Application
Location	Denali Water Solutions - Land Application Sites
wet tons	5,229
cost ($/ton)	$40
one-way distance (miles)	60

Palo Alto, City of		
	Destination 1	**Destination 2**
type	Lystek	Compost
location	Lystek	Synagro Central Valley Composting Facility
wet tons	6,218	11,321
cost ($/ton)	$98	$67
one-way distance (miles)	74	114

Petaluma, City of				
	Destination 1	**Destination 2**	**Destination 3**	**Destination 4**
type	ADC	Land Application	Lystek	Land Application
location	Potrero Hills Landfill	Solano County	Lystek	Sacramento County
wet tons	2,935	2,756	1,286	317
cost ($/ton)	$286 hauling fee/load, $112 loading/unloading fee/load	$316 hauling fee/load, $112 loading/unloading fee/load	$242 hauling fee/load, $112 loading/unloading fee/load	$561 hauling fee/load, $112 loading/unloading fee/load
one-way distance (miles)	45	49	38	109

San Francisco Public Utilities Commission					
	Destination 1	**Destination 2**	**Destination 3**	**Destination 4**	**Destination 5**
type	Land Application	Land Application	Storage	Lystek	ADC
location	Solano County	Sacramento County	Alameda County	Lystek	Solano County
wet tons	18100	3622	11,168	11,458	7,259
cost ($/ton)	$65	$101	$91	$101	$87
one-way distance (miles)	65	121	26	47	54

San Jose, City of	
type	ADC
location	Newby Island Landfill
wet tons	59,972
cost ($/ton)	$26
one-way distance (miles)	2

San Leandro, City of	
type	Land Application
location	Solano and Sacramento counties
wet tons	3,167
cost ($/ton)	$53
one-way distance (miles)	80-90

San Mateo, City of				
	Destination 1	**Destination 2**	**Destination 3**	**Destination 4**
type	ADC	ADC	Land Application	Land Application
location	Billy Wright Landfill	Potrero Landfill	Merced County California	Dos Palos Landfill
wet tons	2326	1488	3256	651
cost ($/ton)	$47	$47	$30	$30
one-way distance (miles)	103	70	126	126

Santa Rosa, City of			
	Destination 1	**Destination 2**	**Destination 3**
type	Land application	Composting	Storage
location	9 City-managed Land application sites	Laguna Subregional Compost Facility	City-managed sites
wet tons	21,235	2,297	1,,418
cost ($/ton)	$12	$4	$5
one-way distance (miles)	24.2	0.5	3
	Destination 4	**Destination 5**	**Destination 6**
type	Lystek	Landfill	ADC
location	Lystek	Redwood Landfill	Redwood Landfill
wet tons	5,214	1,255	1,255
cost ($/ton)	$115	$54	$54
one-way distance (miles)	48	20	20

Sewer Authority Mid-Coastside	
type	ADC
location	Ox Mountain Landfill
wet tons	2,171
cost ($/ton)	$68
one-way distance (miles)	5

Sewerage Agency of Southern Marin	
type	ADC
location	Redwood Landfill
wet tons	1,479
cost ($/ton)	$324 including fuel surcharge, regulatory cost recovery, and other fees.
one-way distance (miles)	23

Silicon Valley Clean Water			
	Destination 1	**Destination 2**	**Destination 3**
type	Biochar	ADC	Compost
location	BioForce Tech	Billy Wright Land Fill Merced County	CVC Merced
wet tons	260	63	66
cost ($/ton)	$49	$78	$80
one-way distance (miles)	0	117	141
	Destination 4	**Destination 5**	**Destination 6**
type	Land Application	Land Application	Land Application
location	Merced County	Sacramento County	Sacramento County
wet tons	1165	3548	7546
cost ($/ton)	$ 62 (winter rate) and $46 (summer rate)		
one-way distance (miles)	110	115	115

South San Francisco/San Bruno	
type	ADC
location	Potrero Hills Landfill
wet tons	9,730
cost ($/ton)	$62
one-way distance (miles)	53

Sunnyvale, City of			
	Destination 1	**Destination 2**	**Destination 3**
type	Land Application	Land Application	ADC
location	Silva Ranch, Sacramento County	Baker Ranch, Merced County	Potrero Hills, Solano County
wet tons	5,550	24	207
cost ($/ton)	$730 (per dry ton) is a flat rate per dry ton regardless of end use destination. Includes dewatering in addition to hauling fees		
one-way distance (miles)	110	120	88

Union Sanitary District				
	Destination 1	**Destination 2**	**Destination 3**	**Destination 4**
type	Land Application	Land Application	Land Application	Compost
location				
wet tons	1,296	12,609	547	6,42
cost ($/ton)	$35	$35	$35	$61
one-way distance (miles)	120	101	79	121

Vallejo Flood and Wastewater District		
	Destination 1	**Destination 2**
type	Land Application	Lystek
location	Tubbs Island	Lystek
wet tons	10,910	1,099
cost ($/ton)	$25 (estimate)	$75 (wet ton tipping fee)
one-way distance (miles)	13	17

West County Wastewater District		
	Destination 1	**Destination 2**
type	Landfill Disposal	Landfill Disposal
location	Vasco Landfill	Potrero Hills Landfill
wet tons	13,991	8,009
cost ($/ton)	Not provided	$1.3 million (flat fee)
one-way distance (miles)	Not provided	Not provided

January 7, 2021

Jack Broadbent
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
ELECTRONIC SUBMITTAL to: jbroadbent@baaqmd.gov

SUBJECT: BAY AREA CLEAN WATER AGENCIES CLARIFICATION OF COMMENTS ON THE PROPOSED REGULATION 2 AMENDMENTS DELIVERED DURING THE DECEMBER 15th PUBLIC HEARING

Dear Mr. Broadbent:

The Bay Area Clean Water Agencies (BACWA) appreciated the opportunity to provide sector feedback on the draft Regulation 2 amendments during the public hearing held December 15th. BACWA is a joint powers agency whose members own and operate publicly owned wastewater treatment works (POTWs) that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay (SF Bay) Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and human health. BACWA would like to clarify some points from the December 15th hearing that may have been misinterpreted by staff and Board members.

POTWs' core mission is to protect public and environmental health, through improving water quality, as well as complying with air quality regulations. We are enthusiastic partners in BAAQMD's goals related to environmental justice and acknowledge that many of our facilities are located in communities that are historically and disproportionately burdened by pollution. As such, our members work diligently to manage emissions from our facilities while performing an ***essential public service*** by collecting and treating municipal wastewater. POTWs are continuously upgrading facilities to provide better and more reliable water quality, and we assess each system improvement in close coordination with BAAQMD staff to remain in compliance with air regulations while responsibly investing ratepayer funds.

Our comments provided during the December 15th hearing on Regulation 2 amendments may have been misinterpreted, and we want to clarify them for the record and for consideration by BAAQMD staff and its Board.

<u>POTWs are NOT requesting an exemption to the limits in the amended Regulation, but we are recommending that POTWs be correctly and consistently defined as ***Essential Public Services*** across all BAAQMD regulations.</u>

BAAQMD previously established a definition for "Essential Public Service" in Regulation 9, Rule 8 as follows:

> ***9-8-233 Essential Public Service:***
>
> *233.1 A sewage treatment facility, and associated collection system, which is*

publicly owned and operated;

233.2 Water treatment and delivery operations;

233.3 Public transit;

233.4 Police or fire fighting facility;

233.5 Airport runway lights; or

233.6 Hospital or other medical emergency facility.

However, in the amendments to Regulation 2, there was a new definition for "Essential Public Services":

> *A police or firefighting facility, a hospital or other medical emergency facility, or a building designated as an emergency shelter location*.

This new definition excludes POTWs. We feel strongly that the definition provided in BAAQMD Regulation 9, Rule 8, should be consistent across all BAAQMD regulations. If there are to be rule-specific exemptions (or carve-outs) for special types of first responders, there should be a new definition provided for those (e.g., "Emergency Services").

Essential public service is not simply a label. Because POTWs provide essential services (vital to life and performing emergency services) that cannot be shut down, POTWs are different from many of BAAQMD's other permittees. The Board recognized this when adopting the resolution that directs the formation of a workgroup consisting of BAAQMD staff and POTW representatives. BACWA eagerly anticipates the launch of this workgroup, which will guide the implementation of Regulation 2 and address other issues related to toxic air contaminant reduction at POTWs, as well as future rule development. BACWA also strongly supports an increase in BAAQMD staffing to help relieve and prevent future POTW permit application backlogs that jeopardize continuity of our essential public services. We are looking forward to working more closely with BAAQMD on these issues.

We appreciate this and upcoming opportunities to provide our comments and would be happy to meet to answer any questions you may have. Please contact me at lfono@bacwa.org.

Sincerely,

Lorien Fono

Lorien Fono
BACWA Executive Director

Cc: Jack Broadbent, BAAQMD
Greg Nudd, BAAQMD
Damian Breen, BAAQMD
BAAQMD Board Members
BACWA Executive Board
Nohemy Revilla, BACWA AIR Committee Co-Chair
Jason Nettleton, BACWA AIR Committee Co-Chair
Courtney Mizutani, BACWA AIR Committee Support
Sarah Deslauriers, BACWA AIR Committee Support
Michael Montgomery, San Francisco Bay Regional Water Quality Control Board
Tom Mumley, San Francisco Bay Regional Water Quality Control Board

Proposal to Enhance CASA's Climate/Air Quality/Energy Advocacy

The Los Angeles County Sanitation Districts (Sanitation Districts) are reaching out to fellow wastewater agencies to request your consideration of contributing additional resources to support CASA's advocacy efforts related to climate, air quality and energy. In recent years there has been an unprecedented surge in regulatory activity pertaining to emissions, energy and climate change issues that impacts wastewater facilities, and this is only expected to intensify in the next few years. CASA staff have done an exceptional job managing these issues and providing the wastewater perspective in important forums, but resources are stretched thin and additional funding is needed to effectively engage with regulatory policymakers to ensure that CASA members can maximize our efforts to anaerobically digest food waste and produce biogas as a renewable resource in support of achieving the State's efforts to achieve the methane reduction goals of SB 1383.

CASA staff and members have been working hard to advocate for beneficial policies that span several different proposed California Air Resources Board (CARB) regulations, California Energy Commission policies and programs, and the California Public Utilities Commission proceedings. The combined efforts of these regulatory agencies are focused on achieving full electrification of the mobile source sector (e.g., Advanced Clean Fleets, Mobile Source Strategy, Scoping Plan Update, 2022 State SIP Strategy, Small Off-Road Engines (SORE) & Tier 5 Off-Road Diesel Emission Standards), and aim to achieve statewide carbon neutrality by 2035, 10 years ahead of the original goal to achieve this by 2045. For example, as drafted, CARB's Advanced Clean Fleets – Public Fleet Requirements and other proposed regulations would require new vehicle purchases, including heavy-duty vehicles utilized by wastewater agencies, to be electric commencing in 2024. Other initiatives represent competing and conflicting priorities among regulatory agencies (e.g. organics diversion mandates under CalRecycle regulations promote increased acceptance of food waste at POTWs, but CARB regulations subjecting those very facilities to increasingly strict emissions rules end up disincentivizing the effort).

Additional climate change policies and strategies that affect CASA members are being developed and implemented by agencies that include CalRecycle, the State and Regional Water Boards, the California Coastal Commission, California Department of Food and Agriculture, and the California Environmental Protection and Natural Resources Agencies. In short, we are in a time with an unprecedented level of regulatory activity, much of which is focused on achievement of the State's ambitious climate change goals. If we do not actively and quickly engage regulatory agencies at a high level and encourage them to pursue a more cohesive approach to addressing the wastewater sector, we may miss important opportunities to ensure that CASA members can meet both the challenges and opportunities presented during this period.

Although CASA has staff and a part-time consultant dedicated to these programs, we believe these staff are stretched extremely thin and additional resources are needed to help CASA achieve the best results possible in this unique window. We propose to work with CASA's Board and staff to determine the need and willingness of member agencies to contribute funding on a temporary basis to meet this important challenge through possible staff, consulting and advocacy enhancements.

January 5, 2022

Mr. Michael Montgomery, Executive Officer
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, 14th Floor
Oakland, CA 94612

Subject: NPDES Permit Requirements for Receiving Water Quality Monitoring, TMDL/SSO Support, Mercury and PCBs Watershed Permit Support, and Implementation of Copper Action Plans

Dear Mr. Montgomery:

I am writing on behalf of the Bay Area Clean Water Agencies (BACWA) and its members that own and operate publicly-owned treatment works (POTWs) and that have National Pollutant Discharge Elimination System (NPDES) permits to discharge to San Francisco Bay Area waters. The NPDES permits issued to these agencies impose some requirements that are most efficiently fulfilled as a group. The purpose of this letter is to report on behalf of BACWA members that those requirements are being met, including permit provisions related to: (A) Receiving Water Quality Monitoring; (B) Support for the RMP through the Alternate Monitoring Requirements (AMR); (C) Mercury and PCBs Watershed Permit Support; (D) Cyanide Action Plan; (E) Copper Action Plan; (F) Nutrient Watershed Permit Support; and (G) Total Maximum Daily Load Support.

A. Receiving Water Quality Monitoring

Various NPDES permits require that the permittees support the Regional Monitoring Program for Water Quality in the San Francisco Estuary (RMP), administered by the San Francisco Estuary Institute (SFEI), and established by San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Resolution 92-043, adopted April 15, 1992. BACWA members have and continue to fulfill this requirement by participating in and providing funding to the RMP. A letter from SFEI, dated December 28, 2021, confirming BACWA member agencies' contributions to the RMP, is attached for reference.

B. Participation in the Alternate Monitoring Plan

In March 2016, the Regional Water Board adopted the *Alternate Monitoring and Reporting Requirements for Municipal Wastewater Dischargers for the Purpose of Adding Support to the San Francisco Bay Regional Monitoring Program* ("AMR," Order No. R2-2016-0008), allowing POTWs to reduce monitoring frequencies for specific pollutants in exchange for increased funding to the RMP. The Order calculates the additional fee for each agency to opt into the AMR

based on its estimated cost savings associated with reduced monitoring requirements. The agencies who opted into the AMR are listed in the attached December 28, 2021 letter from SFEI.

In 2021, AMR funds were used as described below:

- AMR funds fully or partially funded the following projects in 2021:
  - 2021 Contaminants of Emerging Concern in Stormwater (Water Year 2021 was year 3 of a 4-year study; analytes include bisphenols, organophosphate esters, ethoxylated surfactants, PFAS, and a suite of urban road runoff chemicals; $100k)
  - Stormwater Monitoring Strategy for CECs ($50k)
  - Tire-related Contaminants in Bay Water (wet season; $50k)
  - Ethoxylated Surfactants in Bay Water, Margin Sediment, and Wastewater (Part 2; 30k)
  - Tires Strategy ($25.5k)
  - CEC Stormwater Load Modeling Exploration ($23.8k)

- Multiple microplastics reports were published based on the work funded by the RMP, Gordon and Betty Moore Foundation, and Ocean Protection Council:
  - Moran, K., et al. 2021. *A Synthesis of Microplastic Sources and Pathways to Urban Runoff*. San Francisco Estuary Institute: Richmond, CA. SFEI Contribution No. 1049. https://www.sfei.org/documents/synthesis-microplastic-sources-and-pathways-urban-runoff
  - Rochman, C. M., et al. 2021. "Think Global, Act Local: Local Knowledge Is Critical to Inform Positive Change When It Comes to Microplastics." *Environmental Science & Technology*, 55(1), 4-6. https://pubs.acs.org/doi/full/10.1021/acs.est.0c05746
  - Werbowski, L. M., et al. 2021. "Urban Stormwater Runoff: A Major Pathway for Anthropogenic Particles, Black Rubbery Fragments, and Other Types of Microplastics to Urban Receiving Waters." *Environmental Science and Technology Water*, 1(6), 1420-1428. https://pubs.acs.org/doi/abs/10.1021/acsestwater.1c00017
  - Zhu, X., et al. 2021. Holistic Assessment of Microplastics and Other Anthropogenic Microdebris in an Urban Bay Sheds Light on Their Sources and Fate. *Environmental Science and Technology Water*, 1(6), 1401-1410. https://pubs.acs.org/doi/abs/10.1021/acsestwater.0c00292

- Several other reports on emerging contaminants were published in 2021:
  - Buzby, N., et al. 2021. *Contaminant Concentrations in Sport Fish from San Francisco Bay: 2019.* SFEI Contribution No. 1036. San Francisco Estuary Institute: Richmond, CA. https://www.sfei.org/documents/contaminant-concentrations-sport-fish-san-francisco-bay-2019
  - Chang, D., et al. 2021. "Framework for nontargeted investigation of contaminants released by wildfires into stormwater runoff: Case study in the northern San Francisco Bay area." *Integrated Environmental Assessment and Management*, 17(6), 1179-1193. https://setac.onlinelibrary.wiley.com/doi/10.1002/ieam.4461

- Mendez, M.; Lin, D.; and Sutton, R. 2021. *Study of Per- and Polyfluoroalkyl Substances in Bay Area POTWs: Phase 1, Sampling and Analysis Plan.* SFEI Contribution No. 1020. San Francisco Estuary Institute: Richmond, CA. https://www.sfei.org/documents/study-and-polyfluoroalkyl-substances-bay-area-potws-phase-1-sampling-and-analysis-plan
- Miller, E., et al. 2021. *Summary for Managers: Non-targeted Analysis of Stormwater Runoff following the 2017 Northern San Francisco Bay Area Wildfires.* SFEI Contribution No. 1045. San Francisco Estuary Institute: Richmond, CA. https://www.sfei.org/documents/summary-managers-non-targeted-analysis-stormwater-runoff-following-2017-northern-san

On December 15, 2021, the Regional Water Board adopted Order No. R2-2021-0028, *Amendment of Monitoring and Reporting Requirements for Municipal Wastewater Dischargers and Amendment of Alternate Monitoring and Reporting Program for Municipal Wastewater Dischargers for the Purpose of Supporting the San Francisco Bay Regional Monitoring Program*, which has an effective date of January 1, 2022. For most dischargers, this new order has replaced the 2016 AMR.

C. Mercury and PCBs Watershed Permit Support

The Mercury and PCBs Watershed Permit (NPDES No. CA 0038849) was reissued in 2017 as Order No. R2-2017-0041, with an effective date of January 1, 2018. The Mercury/PCB Watershed Permit requires source control and risk reduction activities by the permittees.

In 2021, BACWA's Bay Area Pollution Prevention Group (BAPPG) continued to reach out to dental assistant and dental hygienist students to educate them about proper amalgam management and disposal. Due to the pandemic, all of the classroom visits occurred via virtual platforms. This campaign reached approximately 70 students and instructors at the following institutions:

- San Jose City College (two visits)
- College of Marin, Novato

The instructors have come to rely on these annual visits and have incorporated BAPPG's program into their instructional calendar. Further, this is a relevant audience for other messages, such as wipes, microplastics, and flea control.

The Mercury and PCB Watershed permit requires that permittees conduct or participate in programs to reduce mercury-related risks to humans from the consumption of Bay fish. In 2019, the APA Family Support Services completed a $25,000 contract to conduct risk reduction activities related to fish consumption in vulnerable populations, in compliance with the permit. In June 2021, BACWA extended the term of the existing $25,000 contract with the California Indian Environmental Alliance to continue similar work that had been paused due to the COVID-19 public health emergency. Materials generated with support from BACWA's previous grants are available on BACWA's website at https://bacwa.org/mercurypcb-risk-reduction-materials/.

As part of the RMP, SFEI published an updated report on PCBs and mercury in stormwater samples collected from water years 2015 to 2020. Additional samples were collected in water year 2021, and an updated report is expected in 2022.

- Gilbreath, A.; McKee, L.; and Hunt, J.. 2021. *Pollutants of Concern Reconnaissance Monitoring Progress Report, Water Years 2015-2020*. SFEI Contribution No. 1061. San Francisco Estuary Institute: Richmond, CA. https://www.sfei.org/documents/pollutants-concern-reconnaissance-monitoring-progress-report-water-years-2015-2020

SFEI also published a conceptual model for PCB management and monitoring for the Steinberger Slough/Redwood Creek Priority Margin Area:

- Yee D., et al. 2020. *Conceptual Model to Support PCB Management and Monitoring in the Steinberger Slough/Redwood Creek Priority Margin Unit.* SFEI Contribution No. 1009. San Francisco Estuary Institute: Richmond, CA. https://www.sfei.org/documents/conceptual-model-support-pcb-management-and-monitoring-steinberger-sloughredwood-creek

D. Cyanide Action Plan

As part of the site-specific objective (SSO) for cyanide, NPDES dischargers are required to calculate the 3-event rolling average of total cyanide concentrations in each segment of the Bay, based on RMP data. In 2021, the RMP published results from the cyanide sampling completed during the 2019 water cruise:

- Yin, J. 2021. *2019 Update to Cyanide Rolling Average.* San Francisco Estuary Institute: Richmond, CA. https://www.sfei.org/documents/2017-update-cyanide-rolling-average-0

Results indicate that ambient cyanide concentrations are below the trigger level of 1.0 µg/L in all five segments of the Bay. Results from the 2021 water cruise will be published in 2022.

E. Copper Action Plan

The copper action plan contained in many Bay Area POTW permits requires permittees to implement a plan to reduce copper discharges, conduct studies to reduce copper pollutant impact uncertainties, and implement additional measures should the three-year rolling mean in various parts of the Bay exceed site-specific concentration triggers. In 2021, the RMP published results from the copper sampling completed during the 2019 water cruise:

- Yin, J. 2021. *2019 Update to Copper Rolling Average.* San Francisco Estuary Institute: Richmond, CA. https://www.sfei.org/documents/2017-update-copper-rolling-average

Results indicate that ambient copper concentrations are below the respective trigger levels for all five segments of the Bay. Results from the 2021 water cruise will be published in 2022.

The BAPPG-hosted website Baywise.org contains resources for plumbers that focus on the key messages pertaining to copper control: use of ASTM B813 flux, and other best management practices to reduce pipe corrosion. Outreach materials are available at https://baywise.org/business/plumbing-resources.

F. Nutrient Watershed Permit Compliance

The 2nd Nutrient Watershed Permit (NPDES No. CA0038873) was adopted on May 8, 2019 as Order No. R2-2019-0017, with an effective date of July 1, 2019. Through the nutrient surcharge levied on permittees, BACWA is funding compliance with the following provisions of the Nutrient Watershed Permit on behalf of its members:

- Group Annual Reporting – BACWA submitted the sixth Group Annual Report on February 1, 2021, on behalf of all the permittees under the Nutrient Watershed Permit. The next Group Annual Report will be submitted by the February 1, 2022 deadline. The 2021 Group Annual Report is available at https://bacwa.org/wp-content/uploads/2021/02/FINAL-2020-BACWA-GAR_20210201_wAppendices.pdf
- Nutrient Reduction by Recycled Water and Nature Based Systems Special Studies – Both studies are underway and final reports are expected to be completed by the July 1, 2023 due date. The 2019 Scoping and Evaluation Plans and July 1, 2021 status updates for these two special studies are available at https://bacwa.org/document-category/2nd-watershed-permit-studies/. An updated status report for each study will be provided by the July 1, 2022 due date.
- Support of scientific studies as part of the Nutrient Management Strategy (NMS) – BACWA is providing a total of $2,2000,000 to SFEI in Fiscal Year 2022, as required by the Permit.
- An update on the science plan reflecting the 2021 calendar year will be submitted by the February 1, 2022 deadline.

G. Total Maximum Daily Load Support

Some POTW permits previously included a requirement that permittees report to the Regional Water Board any actions taken in support of Total Maximum Daily Loads (TMDLs) for 303(d) listed pollutants. Support for these efforts has been provided largely through support of the RMP.

In 2014, the RMP convened a Selenium Strategy Team and developed a Selenium Strategy in the Multi-Year Plan. In 2021, the RMP conducted the following activities implementing the Strategy:

- Continued implementation of the Selenium Strategy to track implementation of the North Bay Selenium TMDL.

- Continued the monitoring program for selenium in clams and water to support the North Bay selenium TMDL.

Please contact me if you have any questions about the information contained in this letter.

Respectfully Submitted,

Lorien Fono, Ph.D., P.E.
Executive Director
Bay Area Clean Water Agencies

Encl:
SFEI Letter regarding RMP Participation, December 28, 2021

CC: Thomas Mumley, Assistant Executive Officer, Regional Water Board
William Johnson, NPDES Permitting Division Chief, Regional Water Board
Xavier Fernandez, Planning and TMDL Division Chief, Regional Water Board
BACWA Executive Board
Chris Dembiczak, BACWA Permits Committee Chair

SFEI AQUATIC SCIENCE CENTER
4911 Central Ave, Richmond, CA 94804, p: (510) 746-7334, f: (510) 746-7300 www.sfei.org

December 28, 2021

Lorien Fono
Executive Director
Bay Area Clean Water Agencies
PO Box 24055, MS 702
Oakland, CA 94623

Dear Dr. Fono,

The Regional Monitoring Program for Water Quality in San Francisco Bay (RMP) is the only comprehensive environmental monitoring program to measure pollutants and trends in the Bay. The RMP, which began in 1993, is a successful partnership of scientists, government, municipalities, and industry to understand and improve the health of the Bay.

The goal of the RMP is to collect data and communicate information about water quality in the San Francisco Estuary in support of management decisions. The accomplishments of the RMP are summarized in the RMP Update and the Pulse. The RMP Update was published in October 2021. Current and past RMP Updates can be found here; past Pulses can be downloaded here.

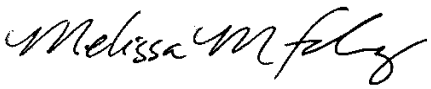
In 2021, 35 wastewater treatment facilities collectively contributed the full amount of the core RMP program costs assigned to publicly owned treatment works ($1,794,459; see Table 1 for a complete list of agencies). The process used to determine the core fees for each participant group are outlined in the Program Charter: http://www.sfei.org/documents/charter-regional-monitoring-program-water-quality-san-francisco-bay.

In March 2016, the Water Board adopted Order R2-2016-0008, establishing an alternative monitoring requirement (AMR) for municipal wastewater discharges to San Francisco Bay and its tributaries, in exchange for a set schedule of increased payments to the RMP for five years. Participating wastewater treatment facilities who opt-in to this alternative are able to reduce their effluent monitoring costs for most organic priority pollutants and chronic toxicity sensitive species rescreening. In exchange for the reduced monitoring requirements, facilities make supplemental payments to the RMP for regional studies to inform management decisions about water quality in the Bay. In 2021, the final year of the program, 36 wastewater treatment facilities made supplemental contributions to the Program under Order R2-2016-0008 ($279,301 see Table 1).

Your support is essential to the RMP. Through these financial contributions, the RMP is able to conduct regional monitoring to assess the cumulative impact of multiple sources of pollutants to the Bay, including the growing number of emerging contaminants that are a

concern. We thank you and your members for the support and look forward to serving you in 2022.

Sincerely,



Melissa Foley, PhD
RMP Manager

Table 1

Wastewater Treatment Facilities Contributing to the RMP in 2021 and AMR for FY21

POTW Dischargers	Core RMP Fees	AMR Order Fees
American Canyon, City of		YES
Benicia, City of	YES	YES
Burlingame, City of	YES	YES
Calistoga, City of	YES	YES
Central Contra Costa Sanitary District	YES	YES
Central Marin Sanitation Agency	YES	YES
Crockett Community Services District, Port Costa Sanitary Department		YES
Delta Diablo	YES	YES
East Bay Dischargers Authority	YES	YES
East Bay Municipal Utilities District	YES	YES
Fairfield-Suisun Sewer District	YES	YES
Las Gallinas Valley Sanitary District	YES	YES
Marin County (Paradise Cove), Sanitary District No. 5 of		YES
Marin County (Tiburon), Sanitary District No. 5 of	YES	YES
Millbrae, City of	YES	YES
Mountain View Sanitary District	YES	YES
Napa Sanitation District	YES	YES
Novato Sanitary District	YES	YES
Palo Alto, City of	YES	YES
Petaluma, City of	YES	YES
Pinole/Hercules, City of	YES	YES
Rodeo Sanitary District	YES	YES
San Francisco, City and County Of, San Francisco International Airport	YES	YES
San Francisco (Southeast Plant), City and County of	YES	
San José-Santa Clara Regional Wastewater Facility	YES	YES
San Mateo, City of	YES	YES

Sausalito - Marin City Sanitary District	YES	YES
Sewerage Agency of Southern Marin	YES	YES
Silicon Valley Clean Water	YES	YES
Sonoma Valley County Sanitary District	YES	YES
South San Francisco and San Bruno, Cities of	YES	YES
St. Helena, City of	YES	YES
Sunnyvale, City of	YES	YES
Union Sanitary District	YES	
US Navy (Treasure Island)	YES	YES
Vallejo Flood and Wastewater District	YES	YES
West County Wastewater District	YES	YES
Yountville, Town of	YES	YES

January 7, 2022

Zack Wasserman, Chair
San Francisco Bay Conservation and Development Commission
375 Beale St., Suite 510
San Francisco, CA 94105

Re: Support for Bay Adapt: Regional Strategy for a Rising Bay

Dear Chair Wasserman:

I am pleased to offer the Bay Area Clean Water Agencies' (BACWA) endorsement of "Bay Adapt: Regional Strategy for a Rising Bay." The Bay Adapt Joint Platform is the result of a stakeholder-led process to determine the best ways for the Bay Area to become regionally resilient to rising sea levels. BACWA is a joint powers agency whose members own and operate publicly owned wastewater treatment works (POTWs) that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay (SF Bay) Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health.

While the Bay's shoreline constitutes one-third of the California coastline, the Bay Area will likely experience two-thirds of the negative economic impacts due to the flooding caused by rising sea levels absent adequate measures to adapt and protect people, places, and habitat. As sea levels rise at an accelerating rate, the confluence of more intense winter storms, extreme high tides, and higher runoff, with higher sea levels, will increase the frequency and duration of shoreline flooding long before areas are permanently inundated by sea level rise alone.

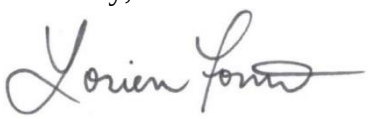
In the face of this challenge, the Bay Area must protect and energize vulnerable and historically marginalized frontline communities, enhance and restore an ecosystem that is already deeply affected by human activities, and reduce flood risks for existing built infrastructure along the vast bay shoreline. Yet, the increasingly frequent and severe impacts of climate change in the Bay Area do not conform to our governments' jurisdictional boundaries or the planning and regulatory authorities of any one agency or organization. Bay Adapt begins to address these challenges by laying out a set of guiding principles, priority actions, and vital tasks that public, private, and nonprofit organizations, including local governments with land use authorities, can voluntarily implement in a coordinated and collaborative manner to adapt faster, better, and more equitably to a rising San Francisco Bay.

It will take tremendous efforts and investments to adapt the San Francisco Bay Area to a constantly changing shoreline and continue to improve its vibrant, diverse, ecologically unique, innovative, and pioneering quality of life. Implementing Bay Adapt will reduce flood risks for communities, businesses, infrastructure, and habitat, increase technical assistance for local governments and funding for adaptation, protect natural areas and wildlife, recognize and equitably support low-income, frontline communities, robustly integrate adaptation into community-focused local plans, and accelerate permitting and project construction of local adaptation projects.

PO Box 24055, MS 702 • Oakland, CA 94623 • www.bacwa.org
Central Contra Costa Sanitary District • East Bay Dischargers Authority • City of San Jose • East Bay Municipal Utility District • City & County of San Francisco

BACWA's members have extensive low-lying infrastructure that is vulnerable to rising seas and shallow groundwater. BACWA supports the Bay Adapt Joint Platform and will support its implementation by concentrating on regional collaboration, especially pertaining to nature-based solutions to protect upgradient infrastructure. We look forward to working with BCDC and all of Bay Adapt's stakeholders to ensure that the entire Bay Area thrives in the face of rising sea levels.

Sincerely,



Lorien Fono
BACWA Executive Director

Cc: BACWA Executive Board

January 5, 2022

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board (State Water Board)
1001 I Street, 24th Floor
Sacramento, CA 95814

SUBJECT: Draft Wastewater amendments to the Water and Wastewater Arrearage Payment Program Guidelines

Dear Ms. Townsend,

On behalf of the California Association of Sanitation Agencies (CASA), the California Municipal Utilities Association (CMUA), the Southern California Alliance of POTWs (SCAP), the Bay Area Clean Water Agencies (BACWA), and the Central Valley Clean Water Association (CVCWA), thank you for the opportunity to provide comments on the Wastewater Arrearage Guidelines. CASA represents more than 125 public agencies and municipalities that engage in wastewater collection, treatment, recycling, and resource recovery. CMUA represents over 50 public water agencies that deliver drinking water to 75% of Californians. SCAP is a non-profit association representing over 80 public water/wastewater agencies in southern California who provide essential water supply and wastewater treatment for approximately 20 million people. BACWA is a joint powers agency whose members own and operate publicly-owned treatment works (POTWs) and sanitary sewer systems that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay Area.

We appreciate your team's expeditious rollout of this significant program over the last several months, as well as your engagement through the workshops with our members about the design of wastewater guidelines to account for the various bill structures that are utilized by sanitation agencies. We believe the Guidelines overall will be effective in delivering much needed assistance to wastewater agencies and their ratepayers, and we seek technical clarity on some elements to ensure they will allow for all of our members to qualify for the program.

Specifically, in Section 1, the Eligibility provision allows participation by "wastewater treatment providers that collect eligible customer revenue through property tax rolls… if they are able to identify wastewater arrearages and can directly credit customers' accounts." We respectfully request that the guidelines provide further information on how the process for those agencies that collect through the tax rolls will work, and expressly allow a prorated approach for arrears during property tax periods that partially overlap with the arrearage qualification period of March 4, 2020 through June 15, 2021.

Additionally, we request for entities that provide both water and wastewater services that they not be required to fill out another tax identification form to participate in the wastewater program. Finally, we request that the State Water Board recognize entities that are already within the Financial Information System for California (Fi$Cal) so that they are allowed to choose where they want their checks to be sent. We collectively represent public agencies whose finance departments have differing addresses from the responsible person. Enabling those affected entities to choose where the checks are sent would help to streamline processing immensely and reduce administrative costs.

In closing, we reiterate our appreciation for your efforts in launching this program so swiftly to assist utilities with debt from customers' arrears during the COVID-19 pandemic. We look forward to further collaboration as the program moves forward with applications and disbursements. If there are questions about these comments, please do not hesitate to reach us at jvoskuhl@casaweb.org, aabergel@cmua.org, lfono@bacwa.org, sjepsen@scap1.org, and eofficer@cvcwa.org.

Thank you,

Jared Voskuhl	Andrea Abergel	Lorien Fono	Steve Jepsen	Debbie Webster
CASA	**CMUA**	**BACWA**	**SCAP**	**CVCWA**
Manager of Regulatory Affairs	*Senior Regulatory Advocate*	*Executive Director*	*Executive Director*	*Executive Officer*

PFAS in San Francisco Bay Fish

A Virtual Forum • Open to Everyone

WHEN: February 4, 2022

TIME: 9:00am – 3:30pm

WHERE: Online

REGISTER: https://www.sfei.org/projects/PFASBayFish

Bringing together environmental and public health agencies, members of tribes and local fishing communities, and the general public to discuss PFAS contamination of San Francisco Bay sport fish and build consensus for next steps to protect everyone who catches and eats fish from the Bay.

AGENDA AT A GLANCE

9:00	WELCOME - **Goals of Today's Meeting and Land Acknowledgment**
9:10	SESSION 1 - **PFAS and Perspectives from Bay Fishing Communities**
10:35	**BREAK**
10:45	SESSION 2 - **State and Regional PFAS Monitoring**
11:50	**LUNCH BREAK**
12:20	SESSION 3 - **PFAS in Bay Fish**
2:00	**BREAK**
2:10	SESSION 4 - **Where do we go from here?**
3:30	**MEETING ADJOURNS**

ORGANIZING PARTNERS

CLEAN WATER ACTION | CLEAN WATER FUND

California Indian Environmental Alliance

SFEI San Francisco Estuary Institute

with assistance from Green Science Policy Institute

FUNDED BY The Gordon and Betty Moore Foundation • Rose Foundation for Communities and the Environment

WELCOME
9:00

Goals of Today's Meeting and Land Acknowledgment

Dr. Rebecca Sutton • Senior Scientist, San Francisco Estuary Institute

Andria Ventura • California Legislative and Policy Director, Clean Water Action

SESSION 1
9:10

SETTING THE STAGE:

PFAS and Perspectives from Bay Fishing Communities

▶ **Reducing Harm from PFAS for Healthier People and Environment**

Dr. Arlene Blum • Founder and Executive Director, Green Science Policy Institute

▶ **Perspectives of Frontline Communities**

LaDonna Williams • Programs Director, All Positives Possible • VALLEJO, CA

Dominique Brooks • Executive Director, Healing Impacted Communities • BAYO VISTA, RODEO, CA

Lonnie Mason • Executive Director, First Generations Environmental & Economic Development • BAY VIEW HUNTER'S POINT, SAN FRANCISCO, CA

▶ **PFASs Measured in Biomonitoring California's Asian/Pacific Islander Community Exposures (ACE) Project**

Duyen Kauffman • Health Program Specialist, Biomonitoring California Environmental Health Investigations Branch, California Dept. of Public Health

▶ **PANEL DISCUSSION**

10:35 BREAK

SESSION 2
10:45

State and Regional PFAS Monitoring

▶ **PFAS Site Investigation**

Wendy Linck • Senior Engineering Geologist, State Water Resources Control Board

▶ **Looking for Sources of PFAS in Bay Area Wastewater**

Dr. Lorien Fono • Executive Director, Bay Area Clean Water Agencies

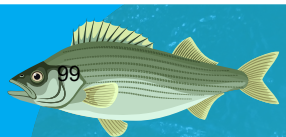
Miguel Mendez • Associate Environmental Scientist, San Francisco Estuary Institute

▶ **Regional Water Board Perspective on PFAS Sources and Management Approaches**

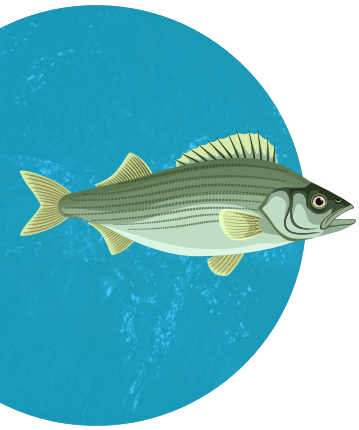
Tom Mumley • Assistant Executive Officer, San Francisco Bay Regional Water Quality Control Board

▶ **PANEL DISCUSSION**

11:50 LUNCH BREAK

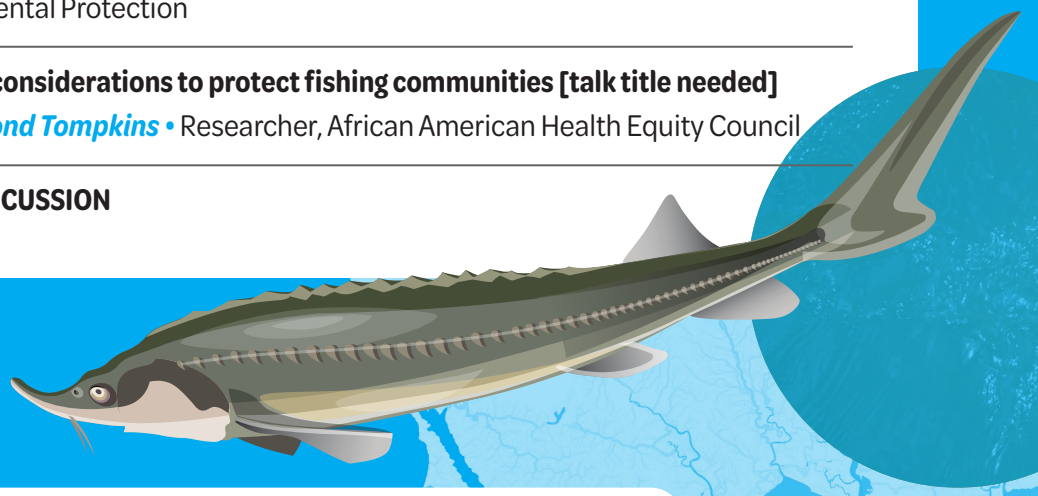


SESSION 3
12:20



PFAS in Bay Fish

- **Cultural Importance of Fishing for Local Native American Communities**
  Valentin Lopez • Chairman of the Amah Mutsun Tribal Band, President of the Amah Mutsun Land Trust
  Sherri Norris • Executive Director, California Indian Environmental Alliance (Osage Nation)
- **PFAS in San Francisco Bay Fish**
  Dr. Jay Davis • Program Director and Senior Scientist, San Francisco Estuary Institute
- **The OEHHA Fish Advisory Program**
  Dr. Susan Klasing • Senior Toxicologist, Office of Environmental Health Hazard Assessment
- **PFAS and New Jersey Fish Consumption Advisories**
  Dr. Sandra Goodrow • Research Scientist, New Jersey Department of Environmental Protection
- **Inclusive considerations to protect fishing communities [talk title needed]**
  Dr. Raymond Tompkins • Researcher, African American Health Equity Council
- **PANEL DISCUSSION**



2:00 BREAK

SESSION 4
2:10

CLOSING DISCUSSION:

Where do we go from here?

- **Moderator:** ***Juliet Christian-Smith*** • Senior Program Officer, Water Foundation
- **Wrap Up and Next Steps**
  Dr. Rebecca Sutton • Senior Scientist, San Francisco Estuary Institute
  Andria Ventura • California Legislative and Policy Director, Clean Water Action
  Sherri Norris, Executive Director • California Indian Environmental Alliance (Osage Nation)

3:30 MEETING ADJOURNS

Laboratory Committee – Report to BACWA Board

Laboratory committee meeting on: December 14, 2021
Executive Board Meeting Date: January 14, 2021
Committee Chair: Nicole Van Aken, Fairfield-Suisun Sewer District

Committee Request for Board Action: none

Regular meeting: 30 attendees via Zoom representing 24 member agencies and the Regional Water Board.

ELTAC New Methods Validation Guide

A subcommittee of ELTAC has released a draft guidebook for accrediting experimental methods used for emerging contaminants. The guidebook is a response to concerns generated during the PFAS statewide monitoring study, because there were no approved methods for PFAS. The draft has been circulated to the committee by email. The guidebook affects not only members with their own laboratory, but also members that might use a contract laboratory to run experimental methods. Comments on the draft guidebook should be provided to Nicole Van Aken or Mary Cousins by January 7th, 2022.

Agency Reports

Central San hired a contractor to complete a TNI pre-assessment for the laboratory, which was completed virtually. It was a good learning experience and highly recommended to the group. One item that was discussed in the pre-assessment was whether or not to average results for duplicates. Attachment G states that "The Discharger shall report the average of duplicate sample analyses when reporting for a single sample result (or the median if one or more of the duplicates is DNQ or ND [see Provision V.C.1.c.ii, above])." In 2019, Regional Water Board staff member James Parrish clarified by email that "the hard requirement really applies to the splitting of samples," and is not a blanket requirement for all duplicates.

Palo Alto reported results from a 3rd party safety audit, which included a focus on the need for autoclave SOPs for treatment of medical waste. There was a discussion about using alternative organisms to avoid needing to have a biosafety level 2 facility.

Attendees shared information about DO data management. Hach offers a free BOD Manager program that helps automate this task. You can export your file into a CSV format which can be opened by Excel.

The group discussed potentially having an ethics training as part of a future meeting. Hayward staff noted that APHL offers free ethics training courses. Environmental Laboratory Ethics Resources (aphl.org). An update from ELAP staff is another possible meeting topic.

Chlorine Blanket Permit Amendment

In October, the Regional Water Board adopted a blanket permit amendment modifying chlorine effluent limits and removing oil & grease monitoring requirements for BACWA members. The changes come into effect on the first day of the month after EPA approval. Members should make sure chlorine data have the right number of significant digits before uploading to CIWQS. The expected effective date is **March 1**.

Monitoring and Reporting Program – Blanket Permit Amendment

The effective date for the MRP Permit Amendment is January 1, 2022. This Order reduces effluent mercury monitoring for most Bay dischargers, as well as influent mercury monitoring, influent VOC and BNA monitoring, and biosolids VOC and BNA monitoring for some dischargers with pretreatment programs.

Results of PFAS Regional Study, Phase 2

SFEI is now under contract to prepare a Sampling and Analysis Plan for Phase 2 of the PFAS Regional Study, which will include sampling at 6 member agencies and will include analysis of individual PFAS analytes, Total Oxidizable Precursors, Total organofluorine, and polyfluoroalkyl phosphates (PAPs).

TNI Training and Implementation

- The 6th TNI training session with Diane Lawver is scheduled for Tuesday, December 21st. Recordings of previous sessions are available through the BACWA website (password required).
- On January 25, 2022, CVCWA and BACWA will host a Sampling and Sample Receipt training session with Bill Ray.

Next Regular Meeting: February 8, 2022, 10 AM – 12 PM via Zoom

Permits Committee –
Report to BACWA Board

Permits Committee Meeting on: December 14, 2021
Executive Board Meeting Date: January 14, 2021
Committee Chair: Chris Dembiczak, EBMUD

Committee Request for Board Action: None

Regular meeting: 31 attendees via Zoom representing 16 member agencies and the Regional Water Board.

Tentative Orders

The Regional Water Board has issued a tentative order NPDES permit for the City of San Leandro's planned treatment wetland and shallow water outfall. Ian Wren discussed design of the planned nitrification process, the treatment wetland, and requirements in the tentative order. The proposed effluent limits are based on anticipated water quality. Additional information from the City of San Leandro is available here. Regional Water Board staff noted that some aspects of the tentative order could be used as a guidance for permitting other wetland or nature-based treatment projects, such as the use of "internal" points of compliance for effluent limitations.

The Mt. View Sanitary District tentative order was on the Regional Water Board's 12/15 consent calendar. It includes lower ammonia limits than the previous permit, but the District anticipates being able to comply.

The Napa Sanitation District tentative order is scheduled for Regional Water Board consideration on 2/9/22.

Chlorine Blanket Permit Amendment

In October, the Regional Water Board adopted a blanket permit amendment modifying chlorine effluent limits and removing oil & grease monitoring requirements for BACWA members. The changes come into effect on the first day of the month after EPA approval. Members should make sure chlorine data have the right number of significant digits before uploading to CIWQS. Regional Water Board staff establish compliance based on the same number of digits as the limit. Regional Water Board staff announced that expected effective date is **March 1**, **2022.**

Nutrients Update

A. Science program update – Materials from the 12/10 Nutrient Management Strategy (NMS) steering committee meeting are here. Items of interest included chlorophyll-*a* and nitrate monitoring data from cruises of the South Bay shoals, and a Monitoring Advisory Group will be convening soon. The NMS science team has committed to producing some more outward-facing materials.

B. Group Annual Report - Flows and loads are expected to be lower than in previous years. HDR will present results at the 1/4/2022 BACWA Executive Board meeting.

C. 3rd watershed permit – In October, Regional Water Board staff tentatively indicated a willingness to include an enforceable load cap for all Bay dischargers as a group (a "one-Bay" approach, rather than multiple subembayments). Individual load caps for dischargers would still be included as a "trigger" for action. HDR is working on statistical analysis of historical loads through Sep. 2021 to identify representative baseline conditions.

NPDES Permit Amendment for Monitoring Requirements

The effective date for the MRP Permit Amendment is January 1, 2022. This Order reduces effluent mercury monitoring for most Bay dischargers, as well as influent mercury monitoring, influent VOC and BNA monitoring, and biosolids VOC and BNA monitoring for some dischargers with pretreatment programs. RMP invoices with supplemental fees linked to the new Order will be going out soon.

Other Announcements

- Development of the sampling and analysis plan for Phase 2 of the PFAS Regional Study is underway. The targeted window for sampling is March – May 2022.
- In January, the State Water Board intends to release a public review draft order for sanitary sewer systems (SSS-WDR) for a 60-day comment period.
- Regional Water Board staff have shared revised draft text for implementation of the statewide toxicity provisions in Region 2. BACWA requests comments from members by January 14, 2022. The language will likely start going into permits in Region 2 in mid-2022.
- Regional Water Board staff are planning to prepare an Executive Officer's Report item summarizing results of the climate change questionnaire.

Next BACWA Permits Committee Meeting: February 8, 2021, 12:30 PM via Zoom

Executive Director's Report to the Board
December 2021

EXECUTIVE BOARD MEETING AND SUPPORT

- Convened special Executive Board meeting to plan BACWA comments at BAAQMD Board meeting, 12/13
- Worked with BACWA staff to plan and manage 12/17 Executive Board meeting
- Reviewed, updated, and distributed meeting minutes from 12/17 Executive Board meeting
- Conducted the Executive Board meeting agenda review with the BACWA Chair
- Developed draft guiding principles and criteria for funding collaboratives
- Continued to track all action items to completion
- Contacted potential speakers for 2022 Annual Meeting
- Reviewed venue contract for 2022 Annual meeting
- Updated and distributed agenda for 1/6 joint meeting with R2

COMMITTEES:

- Discussed BAPPG's contribution to OWOW with CASQA
- Planned and hosted Managers Roundtable meeting, 12/2
- Attended Permits Committee meeting, 12/14

REGULATORY:

- Discussed member permit for nature based system
- Discussed PFAS in sportfish workshop with SFEI staff
- Attended and provided comments at BAAQMD Regulation 2 adoption hearing, 12/15
- Reviewed Biosolids Trends Survey report

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
- Attended microvi demonstration at OLSD, 12/8
- Participated in and drafted meeting notes for NMS Planning Subcommittee meeting, 12/1
- Participated in and drafted meeting notes for NMS Steering Committee meeting, 12/10
- Reviewed HDR SOW for statistical analysis of baseline and issued NTP
- Met with data review steering committee to kick off statistical analysis of baseline, 12/20

FINANCE:

- Reviewed the monthly BACWA financial reports per EBMUD's new accounting system
- Kicked off FY23 budgeting process
- Reviewed and approved invoices
- Reviewed funding alternatives for FY22 NMS payment
- Discussed contracting issues with AED

COLLABORATIONS:

- Presented on Bay Area POTW issues at Danish Water Day 12/2
- Planned and moderated CW Summit Partners advanced treatment webinar 12/6
- Discussed providing funding for enhanced regulatory engagement on air/biosolids/climate/energy via CASA
- Represented BACWA at CASA RWG Biosolids meeting and attended Water meeting
- Reviewed draft Estuary Blueprint

ASC (AQUATIC SCIENCE CENTER)

- Reviewed materials sent via email by ASC ED

BABC (BAY AREA BIOSOLIDS COALITION)

- Reviewed revised draft White Paper on Biosolids application in the Baylands

BACC (BAY AREA CHEMICAL CONSORTIUM)

- Reviewed BACC bid documents and retained legal advice

BACWWE (BAY AREA COALITION FOR WATER/WASTEWATER EDUCATION)

- Reviewed BACCWE email discussions

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
- Reviewed BACWA policies and began updates
- 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.
- Worked with AED on Committee Leader appreciation
- Developed and responded to numerous emails and phone calls as part of the conduct of BACWA business on a day-to-day basis.
- Delivered ED performance plan to BACWA Chair

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

Feb 2022 – April 2022 Meetings

DATE	AGENDA ITEMS
February 18, 2022	**Approvals & Authorizations:** •Contract with lab for PFAS Phase 2 study **Policy / Strategic Discussion:** **• SSS WDR** **Operational:** •Draft budget review Semi Annual Review BACWA Policies Annual Meeting Draft Agenda
March 18, 2022	**Approvals & Authorizations:** • **Policy / Strategic Discussion:** • **Operational:** •Draft budget review
April 15, 2022	**Approvals & Authorizations:** • **Policy / Strategic Discussion:** • **Operational:** •FY23 budget approval

BACWA ACTION ITEMS

Number	Subject	Task	Responsibiity	Deadline	Status
	Action Items from Dec 2021 BACWA Executive Board Meeting		**resp.**	**deadline**	**status**
2022.12.26	CASA Climate Change Regulatory initiative	BACWA Executive Director was given direction by board members to look at various funding scenarios for FY22 and FY23. A decision on funding will included in the January 2022 BACWA Executive Board meeting agenda	ED	1/14/2022	complete
2022.12.27	Debrief from Dec 15 BAAQMD adoption of Reg 2	BACWA Executive Director will develop a letter to address erroneous verbal comments made at the December 15th BAAQMD meeting. BACWA Executive Director will present letter for discussion at next BACWA Executive Board meeting.	ED	1/3/2022	complete
2022.12.28	Agency EJI initiatives - report to EPA	BACWA Executive Director will work with BACWA agencies to put together a meeting & presentation on EJI efforts.	ED		WIP
2022.12.29	Endorsement of Bay Adapt Joint Platform	BACWA Executive Director will prepare letter and submit letter of endorsement.	ED	1/14/2022	complete
2022.12.30	Draft agenda for January 6, 2022 Joint meeting with RWB	BACWA staff to revise the agenda and share with RWB staff.	ED \ RPM	1/6/2022	complete
	Action Items Remaining from Previous BACWA Executive Board Meetings				
2021.5.	BAAQMD Engagement	Prepare draft letter for BAAQMD Board of Directors regarding BACT determination	RPM \ ED	1/3/2022	complete
2022.9.15	Bruce Wolfe Scholarship fund	BACWA ED to work with EBDA on scholarship criteria	ED		complete
2022.11.23	Planning for meeting with BAAQMD leadership	Schedule a meeting with BAAQMD leadership to discuss longer-term issues such as BAAQMD staffing shortages.	ED \ RPM		WIP

FY22: 28 of 30 Action items are completed
FY21: 50 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

December 2021

BACWA BULLETIN: Completed and circulated December Bulletin.

NUTRIENTS: Participated in meeting with HDR to discuss statistical analysis of nutrient loading data. Attended Nutrient Management Strategy Steering Committee meeting.

COMMITTEE SUPPORT:

BAPPG

- Attended December committee meeting and prepared meeting summary.
- Distributed flea and tick messages to members.
- Coordinated internally regarding Our Water, Our World participation.

Biosolids

- Finalized report for 2021 Biosolids Survey (did not circulate until January due to website issues).
- Finalized report for Land Application of Biosolids in Solano County.

Collection Systems

- Discussed possible contract for review of SSS-WDR with Sam Rose.

Laboratory

- Prepared for and attended December committee meeting, and prepared meeting summary.
- Assisted with Holiday social for Lab and Permits committees
- Assisted with sixth monthly TNI training session led by Diane Lawver.
- Prepared attendance certificates for TNI training session attendees.

Permits

- Prepared for and attended December committee meeting, and prepared meeting summary.
- Coordinated with Regional Water Board staff regarding adoption of MRP Permit Amendment; attended adoption hearing.
- Reviewed draft NPDES permit language for implementation of statewide toxicity provisions, provided by Regional Water Board staff

Recycled Water

- Organized coordination meeting for preparation of site supervisor training video
- Planned January 2022 meeting agenda and invited speakers

ADMINISTRATION/STAFF MEETING – Participated in monthly staff meeting.

BACWA MEETINGS ATTENDED:
BAPPG (12/1)
BAPPG Pesticides Subcommittee (12/7)
Laboratory Committee (12/14)
Permits Committee (12/14)
Executive Board (12/17)
Lab Committee TNI Training (12/21)

EXTERNAL EVENTS ATTENDED:
Oro Loma Sidestream Treatment tour (12/8)
Nutrient Management Strategy Steering Committee (12/10)
Regional Water Board Adoption Hearing (12/15)
COVID-WEB Meeting (12/15)
CASA RWG Workgroup Meeting (12/16)

From: Jared Voskuhl
Subject: [Regulatory] CASA Regulatory Update - January 2022
Date: Monday, January 3, 2022 5:53:15 PM

Good Evening,

Please find below updates from December and for January. Due to CASA's winter conference during the third week of the month, CASA's next Regulatory Workgroup meetings will be on Thursday, January 13, and our Collection System Workgroup meeting will be held on Wednesday, January 12. Our recent November newsletter and December newsletter are also linked. Please let us know if you have any problems accessing these resources. Happy New Year!

Thank you,
The RWG Team

WATER

OPC Releases Draft Statewide Microplastics Strategy

On December 21, the Ocean Protection Council (OPC) released their draft statewide microplastics strategy, per Senate Bill 1263, which CASA sponsored in 2018. Comments are due to the OPC on Friday, January 21. The principal section about our sector is on pages 16-17, and a synopsis of their recommendations for our members is on page 20 of 35 on the PDF. CASA is planning to submit remarks, so after reviewing, please send Jared Voskuhl your feedback by Tuesday January 10.

SWB Workshop on 1/4 for Wastewater Arrearages Program

On January 4, the State Water Resources Control Board (State Water Board/SWB) will host a workshop on the wastewater utility arrearage payment program, for which the draft Guidelines were released on December 17. The portions pertinent to our sector begin on page 17 of 23 of the PDF. Due to the statutory requirement for this program to be established by the end of January, there is an accelerated timeline for these proceedings, and formal comments are due on January 5 so that the Board may adopt them on January 18. Please reach out to Adam Link and Jared Voskuhl with your feedback, questions, or remarks at your earliest convenience.

SWB Workshop on 1/20 for Wastewater Infrastructure Funding

On January 20, the State Water Board will host their second meeting on wastewater infrastructure projects that will be initiated pursuant to the $650 million state legislative budget appropriation in 2021. The formal public notice will be released later in January, with more information regarding how to access draft documents, submit written comments, and participate in the workshop. CASA participated in the first workshop in October for which the presentation is available here. Staff's initial plan included a $350 million set aside for septic-to-sewer grants of up to $10 million for projects in Disadvantaged Communities (DACs), including up to $75,000 per household, and for non-DACs of $6 million per project and $30,000 per household. Applications will be due in spring 2023, and construction must start by spring 2024 and be completed by the end of 2025. CASA is continuing to work with the SWB to ensure some of these funds are used for Clean Water SRF grant match, which could increase available funds under that program in future years. Previously the SWB tentatively scheduled to adopt the plan in February 2022. Please reach out to Adam Link with questions.

SWB Releases the Proposed Final 303(d) Listings for 2020-22 for Regions 1, 3, and 5

On December 17, the State Water Board released the proposed final 2020-22 Integrated Report and 303(d) list, Staff Report, and Response to Comments for this listing cycle. These materials are all on the program's webpage, here. Due to the process of this cycle's report, the listings originated at the State Water Board and did not have the usual Regional Water Board input. Several CASA members in the Central Valley have reviewed their listings and identified discrepancies in the lines of evidence as well as mismatched listings for bodies of water not within their jurisdictions, so we strongly encourage you to review these materials. The SWB is scheduled to adopt the final report during their two-day meeting on Tuesday and Wednesday, January 18-19, 2022. Please reach out to Jared Voskuhl if you have concerns or would like to learn more about others' issues.

ELTAC Subcommittee Meeting on 12/7 for Accrediting Experimental Methods

On December 7, the ELTAC subcommittee developing method validation procedures and processes to accredit experimental methods met. They discussed additional changes to their final draft of the guide and its checklist, and they now are accepting comments on it until January 14. The subcommittee likely will submit the draft guide to ELTAC for their use in February, after the next subcommittee meeting which is planned for the last week of January. Please review this new draft guide and provide your substantive feedback to Jared Voskuhl via track changes at your earliest convenience.

Summit Partners Host Advanced Treatment Webinar, Meeting Materials

On December 6, the Clean Water Summit Partners (BACWA, CASA, CVCWA, CWEA, and SCAP) hosted a webinar focusing on opportunities and challenges for advanced wastewater treatment. The event was designed to provide a high-level overview of various advanced treatment options as well as costs and limitations, particularly in the context of finding the most effective means of addressing constituents of emerging concern (including PFAS), nutrients, energy consumption and emissions issues, and recycled water production and usage. The programming was intended for state legislative officials and staff, State and Regional Water Board Members and staff, and environmental advocacy organizations, to hear from experts on wastewater planning and treatment, including specific case studies and examples being implemented or planned across California. The meeting videos and presentations are archived here, and the event flyer is here.

US EPA Finalizes 5th UCMR to Monitor for PFAS in Drinking Water

On December 27, the United States Environmental Protection Agency (US EPA) finalized the

Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) which will require sample collection for 30 chemical contaminants between 2023 and 2025 using analytical methods developed by US EPA and consensus organizations. This action provides US EPA and other interested parties with scientifically valid data on the national occurrence of contaminants in drinking water. Consistent with US EPA's PFAS Strategic Roadmap, UCMR 5 specifically will provide new data to improve US EPA's understanding of the frequency that 29 PFAS are found in the nation's drinking water systems and at what levels. If you have any questions or comments, please reach out to Jared Voskuhl.

SWB Hosted Workshop on 12/2 for Water Conservation and Wastewater Management

On December 2, the State Water Board hosted a workshop on wastewater management as it specifically pertains to the development of water use efficiency standards as required by the 2018 water conservation legislation (SB 606/AB 1668). The meeting is not archived yet online, but screenshots of the presentation slides are here. The SWB plans to release a methodology document for comment in February and March of this year, then release the draft report for comment in April and May, and publish the final report in September 2022. Please reach out to Jared Voskuhl with questions or comments.

CDM Smith Hosting PFAS Webinar for Utilities on 1/18

On January 18, CDM Smith will host a virtual webinar on PFAS, and CASA's Greg Kester and Jared Voskuhl will both present during the Clean Water session. Join regulators, scientists, and practitioners on Tuesday, January 18, as they share the latest on regulations, risk communications, technologies, success stories, and developments in destruction and disposal. You'll also get a chance to ask questions that you have about how the water industry is addressing PFAS in our systems. Let Jared Voskuhl know if you're interested in attending to receive further registration information.

CASA Winter Conference January 19-21, Registration Open

Join us at CASA's 2022 Winter Conference at the Hilton Palm Springs on January 19-21. This year's conference theme is "Partners in Excellence," so bring your colleagues and join the hot topic discussions we are all concerned with including infrastructure funding, climate resiliency, public messaging, PFAS, and much more! We are also bringing back all your favorite conference elements, including round-table discussions, live panels, stellar speakers, and networking opportunities. Be sure to register today, and reach out to Cheryl MacKelvie if you need assistance or have any questions.

SWB & OPC Agenda Roundup

Here are the recent State Water Board agendas for their meetings on November 2 (arrearages program, 2021 SWB performance report), November 16 and 17 (WBE resolution, microplastics workshop, and December 7 (2022 priorities, drought update). The quarterly OPC meeting was held on December 7. The next two SWB Meetings are on January 4 and 5 (emergency drought regulations, arrearages workshop) and January 18 (wastewater arrearages guidelines adoption, 303(d) list). The Executive Director reports are available for November and December, which feature a link to the SWB's recently updated calendar for developing statewide policies.

BIOSOLIDS

SB 1383 FAQ CalRecycle Page Updated

On December 13, the California Department of Resources Recycling and Recovery (CalRecycle) published an updated FAQ document relating to Article 9 of the SB 1383 regulations. These provide a strongly worded confirmation that local jurisdictions cannot enforce an ordinance which unreasonably limits or restricts, or prohibits the land application of biosolids. Greg Kester is planning to initiate discussion with counties in the new year, and this position should help considerably, so please let Greg Kester know of County ordinances which are problematic for you.

Upcoming CalRecycle Grant Opportunities for Implementing SB 1383

In December, CalRecycle provided preliminary information on funding opportunities that will

become available this winter and spring, pursuant to the legislative appropriation of funds to implement SB 1383. CalRecycle is planning to hold a public workshop soon, and a table of the opportunities is currently available. CalRecycle has been specifically appropriated $20 million dollars to award as grants to expand food waste co-digestion projects at existing wastewater treatment plants. Eligible projects may include the design and construction of integrated organic food waste preprocessing and anaerobic digestion systems that will divert significant amounts of food waste from landfill disposal to co-digestion, achieving greenhouse gas emissions reductions. CalRecycle will present the proposed program and scoring criteria in early 2022, with the application to be released the month after the public meeting presentation. Stay tuned via CalRecycle's Greenhouse Gas Reduction Fund listserv for the release of the proposed program criteria and news about other grant programs. CASA will provide more information as it is released, but let Greg Kester know if you have any questions in the meantime.

WEF Biosolids and Residuals Presentation Materials

On December 9, WEF held a virtual webinar on PFAS and biosolids that offered perspectives on the EPA Roadmap, measures states and utilities have taken, and a national research approach to PFAS in biosolids land application. US EPA provided an update on where it is with respect to the PFAS Roadmap, and participants will also be able to hear how Michigan addressed the PFAS challenge, how Pima County Regional Wastewater Reclamation Department initiated a research effort to address regulatory challenges, and how this local research effort inspired a national approach to understanding the fate and transport of PFAS in long-term land application of biosolids. The materials are all archived here. Please reach out to Greg Kester with feedback, questions, or if you're interested in being involved in the national research.

PFAS Approach in WA

In November, the state of Washington's Department of Ecology in Washington adopted a PFAS Chemical Action Plan that takes a very pragmatic approach. Biosolids are addressed in Appendix 8. Some conclusions drawn include the following, *"Adoption of extremely low regulatory limits for soil PFAS could have adverse consequences for organics and residual recycling. Such limits could interfere with established goals and benefits of recycling programs, but may not provide demonstrated risk-reduction for human health and the environment… Washington state does not have commercial production of PFAS compounds… This suggests that there may be some industrial discharge, but the vast majority of perfluorinated compounds in Washington municipal wastewater would originate from domestic sources—our homes and consumer products."* Please let Greg Kester know if you have any questions or comments.

UC Merced Publication on Biosolids is Available

Last summer, we shared a new publication out of UC Merced about research of soil carbon at three biosolids land application sites in California. The full article is now available. The Soil Science Society of America released this short news summary of the research, too. Please reach out to Greg Kester with questions or comments.

John Hopkins and WRF Biosolids Research and Sample Request

On December 1, US EPA announced awarding 4 grants totaling $6 Million for biosolids research. Greg Kester is part of two of the teams– the Johns Hopkins University research group and the Water Research Foundation/Purdue University research group.

The Johns Hopkins group was awarded $1.9 million to conduct a 3-year study for which Greg Kester is serving on the Advisory Committee. They are seeking small amounts of biosolids samples (100 – 500 g) from agencies as a first step. Please let Principal Investigator Dr. Carsten Prasse and Greg Kester know if you are willing to provide a sample. All sources will be kept anonymous, as explained in the information sheet. Contact Greg Kester if you have any questions or comments.

Soil Health and Soil Carbon Letter to NRCS

In December, the members of USDA multistate research group "W 4170 Beneficial Use of Residuals to Improve Soil Health and Protect Public, and Ecosystem Health" submitted a letter to USDA's Natural Resources Conservation Service (NRCS) about their program to

encourage farmers to use composts and biochar as tools to restore soil health and increase soil carbon reserves. The group is concerned that municipal biosolids are excluded from NRCS's program and singled out as not appropriate amendments for this goal. The W 4170 group has been a vital source of research on the safety and benefits associated with land application of municipal biosolids and other residuals-based amendments for about five decades, and Dr. Sally Brown drafted the linked letter to recommend biosolids inclusion as scientifically sound. Please let Greg Kester know if you have any comments or questions.

CASA Submits Letter on Advanced Notice of Rulemaking for Gasification and Pyrolysis Units

On December 23, CASA submitted a comment letter to US EPA about their Advanced Notice of Proposed Rule Making for Gasification and Pyrolysis units. Please let Greg Kester know if you have any questions.

WBE Wastewater Sampling by Verily Labs for Free

Verily Labs who work in collaboration with Dr. Ali Boehm at Stanford and enter data in the CDC National Wastewater Surveillance System database are offering an opportunity for no cost of analysis of primary or settled solids three times per week for a period of one year for SARS-CoV-2, including the Delta and Omicron variants. More information about the offer is in this Q & A document, and you would receive your results within 24 – 48 hours after Verily Labs receive the sample. This new phase of sampling funded by CDC is targeting mostly non-CASA members who have not previously been sampling for SARS-CoV-2, so this new opportunity provides a great solution for those of you interested in continuing or beginning to sample. Verily Lab would like to begin sampling as soon as possible so please let Brent Coco, Bradley White, Ben Yaffe, and Greg Kester know if you are interested.

CALENDAR

January 4	SWB Meeting (Emergency Drought Regulations)
January 4	SWB Workshop (Wastewater Arrearages Program Guidelines)
January 12	CASA Collection Systems Workgroup
January 13	CASA Regulatory Workgroup
January 14	ELAP Non-Approved Method Validation Guide Feedback Due
January 18	CDM Smith PFAS Webinar

January 18-19	SWB Meeting (303(d) list, wastewater arrearages guidelines)
January 19-21	CASA Winter Conference
January 24-28	ELTAC Experimental Methods Validation Committee Meeting
January 27	CASA Air Quality, Climate Change, and Energy Workgroup
February 1	SWB Meeting
February 1-4	NACWA Winter Conference
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February 1-4	NACWA Winter Conference
February 15	SWB Meeting
February 17	CASA Regulatory Workgroup
February 23	OPC Meeting (Microplastics Statewide Strategy)
February 24	SWB Water Quality Monitoring Council Meeting

Visit our website

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