BACWA
BAY AREA
CLEAN WATER
AGENCIES

Executive Board Meeting
AGENDA
Friday, February 21, 2020, 9:00 a.m. – 12:30 p.m.
SFPUC, Hetch Hetchy Room, 13th Floor
525 Golden Gate Ave., San Francisco, CA

Agenda Item		Time	Pages
ROLL CALL AND INTRODUCTIONS		**9:00 AM**	
PUBLIC COMMENT		**9:03 AM**	
CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER		**9:04 AM**	
CONSENT CALENDAR		**9:05 AM**	
1	December 20, 2019 BACWA Executive Board Meeting Minutes		**3-8**
2	January 8, 2020 Special Executive Board Meeting Minutes		**9-11**
3	January 27, 2020 Special Executive Board Meeting Minutes		**12**
4	February 3, 2020 Special Executive Board Meeting Minutes		**13**
5	December 2019 Treasurer's Reports		**14-21**
APPROVALS AND AUTHORIZATIONS		**9:06 AM**	
6	Approval: Contract with AED Jennifer Dyment		**22-27**
7	Approval: Payment to SFEI of $2.4M for support of scientific studies		**28-29**
8	Approval: Contract amendment with TDC Environmental for additional $25K		**30-35**
9	Approval: Chair Authorization - AED recruitment contract with Koff		**36-47**
POLICY/STRATEGIC			
10	Discussion: Nutrients	**9:20 AM**	
	a. Regulatory		
	i. GAR submitted to Regional Water Board — Link to GAR		
	ii. Ocean Protection Council's 5-Year Plan — Link to OPC Plan		**48**
	iii. NBS Meeting Debrief 1/17/20		**49**
	b. Technical Work		
	i. Debrief of Assessment Framework Workshop		
	ii. Nutrient Workshop WRF - March 19		
	c. Governance Structure		
	i. Planning Committee Meeting #43 Debrief		**50-52**
	ii. Planning Committee Meeting #44 Debrief		**53-55**
	iii. Steering Committee Meeting #22 Debrief		**56-63**
11	Discussion: Exfiltration - NOIs issued to member agencies by BayKeeper — Link to SCAP Exfiltration presentation		**64-65**
12	Discussion: EPA Reuse Action Plan		**66-69**
13	Discussion: Update on SWRCB's Plans for PFAS and Impact on Wastewater Facilities — Link to PFAS page		**70-77**
14	Discussion: CECs update — Link to draft CECs White Paper		
	BREAK	**10:30**	
15	Discussion: Pesticide update from DPR and TDC Environmental		**78-80**
16	Discussion: Update on Chlorine Residual Basin Plan Amendment		**81-83**
17	Discussion: BACWA Strategic Plan Update		
18	Discussion: Toxicity Update and Appendix K comment letter		**84-85**
19	Discussion: Agenda for joint meeting with Regional Water Board		**86**
20	Discussion: Revised ELAP Regulations - Notice for public comment		**87-89**
OPERATIONAL		**11:40 AM**	
21	Discussion: Annual Meeting 2021 Confirmation of Date		
22	Discussion: 2020 Annual Meeting Survey		**90-100**
23	Discussion: Draft FY21 BACWA Budget		**101-108**
24	Discussion: Update on RPM Recruitment		
25	Discussion: Succession Planning Update		**109-110**
26	Discussion: North Bay Watershed Association Conference sponsorship		**111**

REPORTS		**12:15 PM**	
27	Committee Reports		**112-118**
28	Member Highlights		
29	Executive Director Report		**119-127**
30	Regulatory Program Manager Report		**128-129**
31	Other BACWA Representative Reports		
	a. RMP Technical Committee	Mary Lou Esparza, Yuyun Shang, Samantha Engelage	**130-132**
	b. RMP Steering Committee	Karin North; Leah Walker; Eric Dunlavey	
	c. Summit Partners	Dave Williams; Lori Schectel	
	d. ASC/SFEI	Dave Williams; 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	Dave Williams	
	g. NACWA Taskforce on Dental Amalgam	Tim Potter	
	h. BAIRWMP	Cheryl Munoz; Linda Hu; Dave Williams	
	i. NACWA Emerging Contaminants	Karin North; Melody LaBella	
	j. CASA State Legislative Committee	Lori Schectel	
	k. CASA Regulatory Workgroup	Lorien Fono	**133-135**
	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; Dave Williams	
	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 Adampation Resiliancy Group	Jackie Zipkin	
32	**SUGGESTIONS FOR FUTURE AGENDA ITEMS**	**12:27 PM**	
NEXT MEETING		**12:28 PM**	
Training Room, 375 11th Street, Oakland, CA. The BACWA Holiday and Committee Appreciation Lunch will follow at 12:30 pm.			
ADJOURNMENT		**12:30 PM**	

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
David Williams	BACWA
Lorien Fono	BACWA
Tom Hall	EOA
Amanda Roa	Delta Diablo
Robert Wilson	City of Petaluma
Azalea Mitch	City of San Mateo
Mary Lou Esparza	Central San
Justin Waples	Central Contra Costa Sanitary District
Lorrie O'Neill	BACWA
Greg Baatrup	FSSD
Yun Shang	EBMUD
Dave Senn	SFEI
Steve Hogg	City of Sunnyvale
Dave Richardson	Woodard & Curran

PUBLIC COMMENT - The Board members expressed thanks to David Williams, retiring Executive Director, for his leadership and contributions to BACWA.

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER – The Executive Director asked if anyone wished to take an item out of order or if any BACWA Representative wished to present a report or request BACWA direction on an issue out of order. Item #14 was taken out of order to express the need for additional funding requested in Item #4 to complete the Residual Chlorine Basin Plan Amendment.

CONSENT CALENDAR

1. November 15, 2019 BACWA Executive Board Meeting Minutes – The approved minutes will be posted on the BACWA website.

Consent Calendar item 1: *A motion to approve was made by Lori Schectel and seconded by Eileen White. The motion was approved unanimously.*

2. December 9, 2019 BACWA Special executive Board Meeting Minutes – The approved minutes will be posted on the BACWA website.

Consent Calendar item 2: *A motion to approve was made by Lori Schectel and seconded by Eileen White. The motion was approved unanimously.*

3. September 2019 Treasurer's Reports – ED comments: BAPPG requests a budget increase to facilitate additional comment letter preparation related to EPA's pesticide registration. This item will be brought to the Board in February for approval with amount needed (supported by Jackie Zipkin and Eileen White). BACWA has received 85 percent of revenue and has the funds to send the check to SFEI.

Consent Calendar item 3: *A motion to approve was made by Lori Schectel and seconded by Eileen White. The motion was approved unanimously.*

APPROVALS & AUTHORIZATIONS

4. Approval: Executive Director Contract for FY20 – A Board Action Request was included in the Packet. Dr. Lorien Fono was selected to fill the ED position via a competitive process. She will begin in the position on February 1, 2020. BACWA will pay Dr. Fono a monthly flat rate of $15,833.00 for services rendered, for a maximum total of $79,165.00 for the remaining portion of the 2019-2020 Fiscal Year, (February 1, 2020 through June 30, 2020).

Item 4: *A motion to approve was made by Amy Chastain and seconded by Jackie Zipkin. Congratulatory comments were made by Eileen White. The motion was approved unanimously.*

5. Approval: Change Order for the Residual Chlorine Basin Plan Amendment – A Board Action Request was included in the Packet for an $8,500 amendment to the Agreement between BACWA and EOA for technical assistance needed to support the Regional Water Board's staff in the adoption of a chlorine residual Basin Plan Amendment. The Executive Director reviewed the reason why additional funds are required.

Item 5: *A motion to approve was made by Jackie Zipkin and seconded by Eileen White. The motion was approved unanimously.*

6. Approval: Authorization for the Executive Director to Incur Reimbursable Expenses in Conjunction with a Puget Sound Workshop on Nutrients – A Board Action Request was included in the Packet. The ED gave an overview of nutrient efforts that are ongoing in Puget Sound.

Item 6: *A motion to approve was made by Eileen White and seconded by Amit Mutsuddy. The motion was approved unanimously.*

7. Approval: Resolution of Appreciation for David Williams – A Resolution was included in the Packet. Comments of appreciation were made by Eileen White, Jackie Zipkin, Lori Schectel and Tom Hall for David's service to BACWA.

Item 7: *A motion to approve was made by Lori Schectel and seconded by Amit Mutsuddy. The motion was approved unanimously.*

OTHER BUSINESS-POLICY/STRATEGIC

Agenda **Item 8 –** Discussion: Nutrients

a. Regulatory
    i. Ocean Protection Council 5-Year Plan and Coalition comments – The Summit Partners submitted comments pertaining to the goal to set a deadline to eliminate Ocean Discharges. The proposed adoption is February 26. It was noted that there may be legislation developed regarding treatment of dry weather flows.
    ii. Scoping and Evaluation Plans Submitted to Water Board – The Plans were submitted before the December 1 deadline. Comments expected to be discussed at Joint Meeting with Water Board on January 8, 2020.
    iii. Group Annual Report – Presented by Mike Falk, HDR. Mike gave an overview of the GAR, noting that TIN loads have leveled off over the past three years.
b. Technical Work
    i. Quality Assurance/Control on SFEI Work Products – Presentation by Dave Senn, SFEI. Dave Senn provided an overview of the level of review associated with each type of work product. He is available for additional discussion and information about SFEI's QA procedures if Board Members want to meet with him separately.
    ii. Workshop on Assessment Framework 2.0 – Included in the Packet – Key document is page 38.
c. Governance Structure
    i. NMS Planning Subcommittee #42 Debrief - Included in the Packet.
    ii. NMS Steering Committee #22 Debrief – Included in the Packet.

Agenda **Item 9 –** Discussion: Risk Reduction Project Updates by CIEA presented by Sherry Norris of the California Indian Environmental Alliance. They would like Board participation in their Advisory Committee in their review of responses to the questions posed to the public. Involvement would be two meetings in June/July approximately 1-2 hours each. CIEA would like referrals to clinics and other venues to poll. Board suggested distribution of letters to cities with public health agencies to locate the correct type of personnel for the evaluation process of how to assess the effectiveness of behavioral changes.

Agenda **Item 10 –** Discussion: Comment Letter on Proposed ELAP Regulations – Conference call with Dan Jackson, USD, who is the Vice-Chair of BACWA's Laboratory – A draft letter was posted on the screen. Edits were suggested by the Board, made by the RPM, and submitted

before the noon deadline. Another ELAP workshop will take place in late January of February before adoption in March. Eileen White expressed her thanks to Dan for his dedicated involvement.

Agenda **Item 11 –** Discussion: Comment Letter on EPA's Draft National Water Reuse Action Plan – Included in the Packet. BACWA and CASA submitted comments on the draft Plan, highlighting how funding shortfalls and the difficulty forming interagency agreements are the biggest hurdles to recycled water project implementation.

Agenda **Item 12 -** Discussion: SWRCB Toxicity Provisions Update – Given by RPM. The State Water Board is considering how to proceed with a study aimed at reducing variability in the *Ceriodaphnia dubia* test.

Agenda **Item 13 -** Discussion: Agenda for January 8, 2020 Joint Meeting with Regional Water Board Staff – Included in the Packet.

Agenda **Item 14 –** Discussion: Update on Chlorine Residual Basin Plan Amendment – Tom Hall have an update on his efforts to establish an ML of 0.1 mg/L, or to keep the ML out of the Basin Plan, but include it in Attachment G of NPDES permit. Board directed this effort to be finished as soon as possible. Bacterial objectives will not be part of the Basin Plan amendment.

Agenda **Item 15 –** Discussion: Update on SWRCB PFAs Action Plan – ED updated the timeline; order due out in mid-February. The State Water Board stated to CASA that the POTW community will have an opportunity to review the order before it's issued.

Agenda **Item 16 -** Discussion: RMP Proposal for POTW CECs Studies for FY21 – Presentation given by RPM addressing how a small number of agencies have been providing most of the support for POTW CECs sampling. This is unfair, and does not provide a representative base for sampling. This item will be added to the budget for the next year and taken to the Board in February. Suggestions made to update the data in the White Paper.

OTHER BUSINESS-OPERATIONAL

Agenda **Item 17 –** Discussion: Annual Meeting Planning – ED to develop script for Board Members with talking points more than one week in advance and short bios for introduction of panel members. Executive Director informal gathering celebration after. Mug selected for Annual Meeting gift to attendees. Badge ribbons to be purchased to identify Board members, Committee Chairs, Staff, etc.

Agenda **Item 18** - Discussion: Arleen Navarret Award Announcement – Levi Fuller has been selected for the award and will be receiving it at the Annual Meeting on January 10, 2020.

Agenda **Item 19** - Discussion: Solano County Biosolids Report – Lorien Fono provided an

overview of the report, which is due to Solano County each year on December 15.

Agenda **Item 20** - Discussion: Recognition of CASA's Retiring Executive Director – Resolution and plaque to be presented at CASA December meeting by attendee.

Agenda **Item 21** - Discussion: Interim Support for new BACWA Executive Director – Until a new RPM can be hired, the new Executive Director will need some interim support on an as-needed hourly basis. Agreement was given by Board to initiate a recruitment process.

Agenda **Item 22** – Discussion: 2020 Executive Board Meetings Schedule – Included in Packet. Consensus to use Central San location as backup if room reservations fall through at other locations.

Announcement by Executive Director: Lorrie O'Neill, current AED, resigning. Need to recruit new AED as soon as possible. Board consensus was to use Koff & Associates for AED recruitment vs. overextending Central San's staff used in the last AED recruitment.

REPORTS

Agenda **Item 23** – Committee Reports – None

Agenda **Item 24** – Member Highlights – None

Agenda **Item 25** – Executive Director Report – Included in the packet

Agenda **Item 26** – Regulatory Program Manager Report – Included in the packet.

Agenda **Item 27 - Other BACWA Representative Reports** – BACWA Representatives were given an opportunity to provide updates. No actions were taken based on the reports.

a. RMP-TRC: Mary Lou Esparza, Nirmela Arsem – No report.
b. RMP Steering Committee: Karin North; Leah Walker; Eric Dunlavey – No report.
c. Summit Partners**:** Dave Williams; Lori Schectel **–** No report.
d. ASC/SFEI: Eileen White; Dave Williams; Amit Mutsuddy; Karin North – No report.
e. Nutrient Governance Steering Committee: Eric Dunlavey; Eileen White; Lori Schectel; Jacqueline Zipkin – No report.
    i. Nutrient Planning Subgroup: Eric Dunlavey
    ii. NMS Technical Workgroup: Eric Dunlavey
f. SWRCB Nutrient SAG: Dave Williams – No report.
g. NACWA Taskforce on Dental Amalgam: Tim Potter – No report
h. BAIRWMP**:** Cheryl Munoz, Linda Hu, Dave Williams – No report
i. NACWA Emerging Contaminants: Karin North, Melody La Bella – No report.
j. CASA State Legislative Committee: Lori Schectel – No report.
k. CASA Regulatory Workgroup – Lorien Fono – No report.

l. ReNUWIt – Jackie Zipkin, Karin North – One Water Workshop report by Jackie Zipkin – There was a discussion about working with partner agencies in Water and Stormwater to do an evaluation of what a "full reuse" scenario might look like in the Bay Area, and what are the barriers that may prevent it. Need to get BAWSCA, BASMA, BACWA, ACWA, CUWA, BAWAC, BayKeeper, etc. to join participate. BACWA could invite the various agencies for lunch and discussion.
m. RMP Microplastics Liaison: Artem Dyachenko – No report.
n. Bay Area Regional Reliability Project: Eileen White– No report.
o. WateReuse Working Group: Cheryl Munoz – No report.
p. San Francisco Estuary Partnership – Eileen White; Dave Williams – No report.
q. CPSC Policy Education Advisory Committee – Doug Dattawalker – No report.
r. California Ocean Protection Council – Lorien Fono – No report.
s. Countywide Water Reuse Master Plan - Karin North; Pedro Hernandez – No report.
t. Bay Area Chemical Consortium – Dave Williams

Agenda **Item 28 - SUGGESTIONS FOR FUTURE AGENDA ITEMS**. None.

ANNOUNCEMENTS: The next regular meeting of the Board is scheduled for February 21, 2020 from 9:00 am to 12:30 pm at SFPUC, 13th Floor, Hetch Hetchy Room, 525 Golden Gate Avenue, San Francisco, CA.

The Annual Members' Meeting will be held at the Oakland Scottish Rite Center, 1547 Lakeside Drive in Oakland, from 8:30 am to 3:00 pm with an informal gathering afterward at the Lake Chalet Bar & Grill to honor retiring Executive Director David Williams.

To receive a copy of any materials provided to the Board at a BACWA Executive Board meeting contact Lorrie O'Neill at loneill@bacwa.org.

The meeting adjourned at 12:50 pm and was followed by the Annual Holiday luncheon.

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
David Williams	BACWA
Lorien Fono	BACWA
Tom Hall	EOA
Eric Dunlavey	City of San Jose
Bill Johnson	Regional Water Board
Robert Schlipf	Regional Water Board
Tom Mumley	Regional Water Board
James Parrish	Regional Water Board
Xavier Fernandez	Regional Water Board
Mike Falk	HDR

PUBLIC COMMENT – None.

AGENDA ITEMS

Agenda **Item 1 –** Discussion: Nutrients

Mike Falk, HDR, gave a presentation on the Scoping and Evaluation Plans for the Nature Based Systems Study required under the second watershed permit. There was a discussion about the complementary projects under the OLU and Transforming Shorelines efforts, and the need to carefully use resources so that they are leveraged but not overlapping. The project aims to identify site-specific alternatives at five to ten sites, looking at four different types of treatment wetlands. There was a discussion that it's unlikely that any new high-potential projects would be identified, but this could move existing projects forward. Additionally, the proof of concept could help spur the development of a second wave of projects. Water Board staff noted that the timing of this project is good with respect to helping to inform the development of regulatory alternative.

Mike gave an overview of the Scoping and Evaluation Plans for the Nutrient Load reduction by recycled water evaluation. This project will include information about costs and Greenhouse gas emissions to compare to the Optimization and Upgrade Studies. It was noted that we should include offset greenhouse gas emissions from reduced potable water use. The Water Board would like to see consideration of RO concentrate treatment alternatives. There was a discussion about agencies that do not have recycled water plans, and that they will need to articulate the reason for that.

There was a discussion about the State Water Boards Water Recycling requirements and how they will require duplicative reporting to CIWQS and Geotracker.

A discussion about vision for the 3rd Watershed Permit was deferred to the next meeting.

Agenda **Item 2 – Chlorine residual Basin Plan Amendment**
There was a discussion about the ML/RL. BACWA proposed the ML should be left out of the Basin Plan Amendment and instead included in Attachment G of NPDES Permits, but the Water Board was concerned they would be left needing to negotiate it on a permit-by-permit basis. There was an agreement to use 0.05 mg/L as the ML, and that individual agencies that needed to demonstrate a higher number could do so. The BPA will include language that agencies can demonstrate false positives in chlorine residual stoichiometrically. POTW Oil and Grease monitoring requirements will be removed from the Basin Plan.

Agenda **Item 3 – Enterococcus Monitoring**
BACWA will perform its second round of monitoring to represent the wet season when there is a break in the storms.

Agenda **Item 4 – CECs**
BACWA provided its response to the RMP's CEC priorities questionnaire to the Regional Water Board. BACWA is also finalizing its White Paper on CEC monitoring by POTWs to provide representative participation on the Studies. BACWA is also looking to provide funding for CECs studies in POTW effluent.

There was a brief discussion about the PFAS monitoring requirements being issued by the State Water Board. It is expected that they will issue a 13267 to POTWs in or after February 2020, with facilities chosen based on their size, location, drinking water nexus, and risk due to industries in their service area.

Agenda **Item 4 – Toxicity**
The State Water Board released two appendices for public comment. Adoption is aimed for Summer 2020. Region 2 staff have developed draft NPDES permit language implementing the State Toxicity Provision and requested review by BACWA's permits committee.

The meeting adjourned at 12:17 pm.

ROLL CALL AND INTRODUCTIONS

Executive Board Representatives: Lori Schectel (Central Contra Costa Sanitary District); Eric Dunlavey (San Jose); Amy Chastain (SFPUC).

Other attendees: Lorien Fono (BACWA)

PUBLIC COMMENT - None.

APPROVALS & AUTHORIZATIONS

1. Approval: Interim Regulatory Program Manager Contract for FY20 – A Board Action Request was included in the Packet. Larry Walker Associates was selected through a competitive process to provide Interim Regulatory Program Management . The contract provides a not to exceed amount of $61,800, which is equivalent to 20 hours per week over 15 weeks, at a billing rate of $206 per hour. This level of support is intended to continue, if needed, through the May 15, 2020 BACWA Executive Board meeting, at which point it is anticipated that an ongoing contract for Regulatory Program Manager Services will be in place.

Item 1: *A motion to approve was made by Eric Dunlavey and seconded by Amy Chastain. The motion was approved unanimously.*

To receive a copy of any materials provided to the Board at a BACWA Executive Board meeting contact Lorien Fono (lfono@bacwa.org).

The meeting adjourned at 9:23am.

ROLL CALL AND INTRODUCTIONS

Executive Board Representatives: Lori Schectel (Central Contra Costa Sanitary District); Eric Dunlavey (San Jose); Jackie Zipkin (EBDA).

Other attendees: Lorien Fono (BACWA)

PUBLIC COMMENT - None.

CLOSED SESSION

A closed session was held to address personnel matters pursuant to Government Code Section 54957. Public Employment, Assistant Executive Director interviews

REPORT OUT.
There was no report-out from the closed session.

The meeting adjourned at 1:37PM.

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

February 5th, 2019

MEMO TO: Bay Area Clean Water Agencies Executive Board
MEMO FROM: Damien Charléty, Treasurer, East Bay Municipal Utility District
SUBJECT: Sixth Month FY 2020 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, 2019 through December 31, 2019** (six months of Fiscal Year 2020). 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),
- Prop84 Bay Area Integrated Regional Water Mgmt (PRP84)

FY 2020
BACWA BUDGET to ACTUAL DECEMBER 2019

BACWA BAY AREA CLEAN WATER AGENCIES

BACWA FY20 BUDGET	Line Item Description	FY 2020 Budget	Actuals December 2019	Actual % of Budget July 2019	Variance	NOTES
REVENUES & FUNDING						
Dues	Principals' Contributions	$506,774	$506,775	100%	$1	**FY20:** 2% increase. 5 @ $101,355
	Associate & Affiliate Contributions	$184,111	$110,407	60%	-$73,704	**FY20:** 2% increase. 13 Assoc: $8,364; 45 Affiliate: $1,675. One collection member cancelled in FY19
Fees	Clean Bay Collaborative	$675,000	671,390	99%	-$3,610	Prin: $450,000; Assoc/Affil: $225,000
	Nutrient Surcharge	$1,700,000	1,550,565	91%	-$149,435	See Nutrient Surcharge Spreadsheet
	Voluntary Nutrient Contributions	$0	$0	0%	$0	
Other Receipts	AIR Non-Member	$6,936	$0	0%	-$6,936	2% increase (Santa Rosa)
	BAPPG Non-Members	$3,876	$2,584	67%	-$1,292	2% increase (Sta Rosa, Sac Reg'l, Vacaville) $1,292/each
	Other	$0	$0	0%	$0	
Fund Transfer	Special Program Admin Fees	$5,100	$0	0%	-$5,100	**FY20:** WOT/BACWWE, Increase to WOT/BACWWE at 2%
Interest Income	LAIF	$20,000	$28,401	142%	$8,401	BACWA, Legal, & CBC Funds invested in LAIF
	Higher Yield Investments	$18,000	$1,588	9%	-$16,413	Alternative Investment Interest (Legal & CBC Funds invested in AltInv)
	Total Revenue	**$3,119,797**	**$2,871,710**	**92.05%**	**-$248,087**	

BACWA FY20 BUDGET	Line Item Description	FY 2020 Budget	Actuals Dec 2019	Actual % of Budget July 2019	Variance	NOTES
EXPENSES						
Labor						
	Executive Director	$207,531	$103,766	50%	-$103,766	ED requested 2.9%; $99.77/hour; contract based on full time same as FY 19, 2080 hrs
	Assistant Executive Director	$100,907	$22,798	23%	-$78,110	4.5% CPI (SF Bay Metro Area Dec 2018); $63.07/hour; Reflects 1600 hours/yr (1500 FY 19 + 100 hrs additional for FY 20)
	Regulatory Program Manager	$137,727	$64,820	47%	-$72,907	4.5% CPI (SF Bay Metro Area Dec 2018); $100.16/hour; Reflects 1375 hours/yr (1250 FY 19 + 125 additional hrs for FY 20)
	Total	**$446,165**	**$191,383**	**43%**	**-$254,782**	
Administration						
	EBMUD Financial Services	$41,616	$8,539	21%	-$33,077	2% increase
	Auditing Services (Maze)	$5,240	$4,716	90%	-$524	New contract with Auditors through EBMUD
	Administrative Expenses	$7,803	$2,012	26%	-$5,791	2% increase. Travel, Supplies, Parking, Mileage, Tolls, Misc.
	Insurance	$4,682	$4,696	100%	$14	2% increase
	Total	**$59,341**	**$19,962**	**34%**	**-$39,379**	
Meetings						
	EB Meetings	$2,601	$975	37%	-$1,626	2% increase. Catering, Venue, other expenses
	Annual Meeting	$12,000	$9,706	81%	-$2,294	2% increase. Catering, Venue, other expenses
	Pardee	$6,242	$5,835	93%	-$407	2% increase. Catering, Venue, other expenses
	Misc. Meetings	$5,202	$108	2%	-$5,094	2% increase. Hol & Comm Chair Lunch, Staff Mtgs, Fin Comm, Summit Ptnrs, CASA, NACWA Tech WS, Low Flow WS
	Total	**$26,045**	**$16,624**	**64%**	**-$9,421**	
Communication						
	Website Hosting (Computer Courage)	$600	$0	0%	-$600	Paid in advance in FY19 to lock in lower rate
	File Storage (Box.net)	$750	$720	96%	-$30	
	Website Development/Maintenance	$1,500	$618	41%	-$882	Domains (due again in FY20), website changes
	IT Support (As Needed)	$2,600	$0	0%	-$2,600	
	Other Commun (MS, SM, Backup, PollEv)	$1,750	$528	30%	-$1,222	MS Exchange, Survey Monkey (incr in FY20), Carbonite, Doodle Polls, PollEv, GoToMtg
	Total	**$7,200**	**$1,866**	**26%**	**-$5,334**	
Legal						
	Regulatory Support	$2,653	$2,144	81%	-$509	2% increase
	Executive Board Support	$2,133	$0	0%	-$2,133	2% increase
	Total	**$4,786**	**$2,144**	**45%**	**-$2,642**	

FY 2020
BACWA BUDGET to ACTUAL

EXPENSES						
Committees						
	AIR	$76,000	$3,148	4%	-$72,852	$75k consulting support, $1k misc expenses
	BAPPG	$100,000	$46,643	47%	-$53,357	Includes CPSC @ $10,000, OWOW @ $10,000, and Pest. Reg Spt. @ $15,000, Paid Baywise Hosting in FY19 to lock in rate
	Biosolids Committee	$1,000	$0	0%	-$1,000	
	Collections System	$1,000	$0	0%	-$1,000	
	InfoShare Groups	$1,000	$1,100	110%	$100	Funds for 2 workgroups (Asset Mgmt & O&M - AM on hiatus in FY20)
	Laboratory Committee	$1,000	$0	0%	-$1,000	
	Permits Committee	$1,300	$189	15%	-$1,111	all meetings moved to include lunch hour for commuting purposes
	Pretreatment	$2,000	$3,402	170%	$1,402	FY20: Includes $1,000 for training
	Recycled Water Committee	$1,000	$0	0%	-$1,000	
	Misc Committee Support	$45,000	$0	0%	-$45,000	
	Manager's Roundtable	$1,000	$0	0%	-$1,000	
	Total	**$230,300**	**$54,482**	**24%**	**-$175,818**	
Collaboratives						
	Collaboratives					
	State of the Estuary (SFEP-biennial)	$0	$0	0%	$0	Bienniel in Odd Fiscal Years. (Paid bienniely in odd years for even year conference)
	Arleen Navarret Award	$2,500	$0	0%	-$2,500	Bienniel in Even Fiscal Years. Increase in FY20
	FWQC (Fred Andes)	$7,500	$0	0%	-$7,500	
	Stanford ERC (ReNUWIt)	$10,000	$0	0%	-$10,000	
	Misc	$5,000	$1,500	30%	-$3,500	BayCAN, NBWA
	Total	**$25,000**	**$1,500**	**6%**	**-$23,500**	
Other						
	Unbudgeted Items					
	Other	$0	$0	0%	$0	
		$0	**$0**	**0%**	**$0**	
Tech Support						
	Technical Support					
	Nutrients					
	Watershed	$2,000,000	$0	0%	-$2,000,000	1st year of 2nd WS Permit less $200k paid in advance in FY19
	NMS Voluntary Contributions	$0	$0	0%	$0	
	Additional work under permit	$100,000	$37,799	38%	-$62,202	Includes HDR PO for $225k spread out over FY20-24.
	Regional Study on Non-Gray Scape	$500,000	$0	0%	-$500,000	New Line item in FY20
	Member Voluntary Nutrient Contributions	$0	$0	0%	$0	
	Nutrient Workshop(s)	$0	$0	0%	$0	Pilot Studies/Plant Review/Innovative Technologies
	General Tech Support	$52,020	$9,658	19%	-$42,362	2% increase.
	Risk Reduction	$20,000	$12,500	63%	-$7,500	$50,000 over 5 years (FY19-FY23) 2 Contracts for $25,000 each over FY19, 20, & 21
	Total	**$2,672,020**	**$59,957**	**2%**	**-$2,612,064**	
	TOTAL EXPENSES	**$3,470,857**	**$347,918**	**10.02%**	**-$3,122,939**	
	NET INCOME BEFORE TRANSFERS	**-$351,060**				
	TRANSFERS FROM RESERVES	**$351,060**				aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS	**$0**				
	TOTAL OPERATING BUDGET	**$798,837**				
	OPERATING RESERVE	**$199,709**				

BACWA Fund Report as Of December 31, 2019

BACWA FUND BALANCES - DATA PROVIDED BY ACCOUNTING DEPT.

DEPTID	DESCRIPTION	FISCAL YEAR BEGINNING FUND BALANCE	TOTAL RECEIPTS TO-DATE	TOTAL DISBURSEMENTS TO-DATE	MONTH-ENDING FUND BALANCE	OUTSTANDING ENCUMBRANCES	MONTH-END UNOBLIGATED FUND BALANCE
800	BACWA	1,185,382	700,462	273,667	1,612,177	383,221	1,228,956
804	LEGAL RSRV	300,000	-	-	300,000	-	300,000
805	CBC	1,926,714	2,245,753	59,957	4,112,510	705,319	3,407,191
	SUBTOTAL 1	*3,412,096*	*2,946,215*	*333,624*	*6,024,687*	*1,088,540*	*4,936,147*
802	BABC	-	283,305	8,183	275,122	-	275,122
806	BACC	-	-	*1,265*	(1,265)	-	(1,265)
810	WOT	322,375	-	39,417	282,958	-	282,958
	SUBTOTAL 2	*322,375*	*283,305*	*48,865*	*556,815*	-	*556,815*
811	PRP84	161,590	-	(2,859)	164,449	-	164,449
	SUBTOTAL 3	*161,590*	-	*(2,859)*	*164,449*	-	*164,449*
	GRAND TOTAL	**3,896,061**	**3,229,520**	**379,630**	**6,745,951**	**1,088,540**	**5,657,411**

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 RECEIPTS TO-DATE	TOTAL DISBURSEMENTS TO-DATE	MONTH-ENDING FUND BALANCE	RECONCILIATION TO FINANCIAL STATEMENTS	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	1,185,382	700,462	273,667	1,612,177	139,610	1,751,787	1,751,787	-	0%	-		priority # 3 for allocation
804	LEGAL RSRV	300,000	-	-	300,000	-	300,000	-	300,000	13%	-		priority # 1 for allocation
805	CBC	1,926,714	2,245,753	59,957	4,112,510	-	4,112,510	2,149,910	1,962,600	87%	-		priority # 2 for allocation
	SUBTOTAL 1	3,412,096	2,946,215	333,624	6,024,687	139,610	6,164,297	3,901,697	2,262,600	100%	-		
802	BABC	-	283,305	8,183	275,122	-	275,122	275,122	-	0%	-		pass-through funds, no allocation
806	BACC	-	-	1,265	(1,265)	-	(1,265)	(1,265)	-	0%	-		
810	WOT	322,375	-	39,417	282,958	-	282,958	282,958	-	0%	-		pass-through funds, no allocation
	SUBTOTAL 2	322,375	283,305	48,865	556,815	-	556,815	556,815	-	0%	-		
811	PRP84	161,590	-	(2,859)	164,449	-	164,449	164,449	-	0%	-		pass-through funds, no allocation
	SUBTOTAL 3	161,590	-	(2,859)	164,449	-	164,449	164,449	-	0%	-		
	GRAND TOTAL	**3,896,061**	**3,229,520**	**379,630**	**6,745,951**	**139,610**	**6,885,561**	**4,622,961**	**2,262,600**	**-**			
						verification	-	-	-		-		

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

Reconciliation to Trial Balance - accrual basis

Per Report above:			STB	1493	2,262,600	
General		2,946,215	STB	1505	4,622,961	
WOT		283,305			**6,885,561**	-
PROP		-	STB	2135	(139,610)	
subtotal		**3,229,520**			**6,745,951**	-

Billings-Pending Receipts

4686	Mem Contrib	20,110
4687	Transfer	-
4690	Assoc Contrib	5,025
4696	Other	157,663
4731	State Grant	-
4732	Grant Retention	-
subtotal		**182,798**

Trial Balance Revenue Accounts

4411	Interest	(29,988)
4686	Mem Contrib	(1,368,275)
4687	Transfer	(113,305)
4690	Assoc Contrib	(187,388)
4696	Other	(1,713,362)
4731	State Grant	-
4732	Grant Retention	-
subtotal		**(3,412,317)**
Difference		**0**

BACWA Revenue Report as of December 31, 2019

FUND #	DEPARTMENT	JOB	REVENUE TYPE	AMENDED BUDGET	CURRENT PERIOD			YEAR TO DATE				UNOBLIGATED
					Admin & General	Contributons	Interest, Transfers,Others	Admin & General	Contributons	Interest, Transfers,Others	ACTUAL	
800	Bay Area Clean Water Agencies	0408511	Administrative & General	-	-	-	-	-	-	-	-	-
800	Bay Area Clean Water Agencies	1011099	BDO Member Contributions	506,774	-	-	-	-	506,775	-	506,775	(1)
800	Bay Area Clean Water Agencies	1011108	BDO Other Receipts	-	-	-	-	-	-	-	-	-
800	Bay Area Clean Water Agencies	1011109	BDO Fund Transfers	5,100	-	-	-	-	-	-	-	5,100
800	Bay Area Clean Water Agencies	1011117	BDO- Interest Income from LAIF	20,000	-	-	-	-	-	4,603	4,603	15,397
800	Bay Area Clean Water Agencies	1011133	BDO Assoc.&Affiliate Contr	184,111	-	18,403	-	-	110,407	-	110,407	73,704
800	Bay Area Clean Water Agencies	1014251	BDO Non-Member Contr BAPPG	3,876	-	-	-	-	2,584	-	2,584	1,292
800	Bay Area Clean Water Agencies	1014252	BDO Non-Member Contr AIR	6,936	-	-	-	-	-	-	-	6,936
800	Bay Area Clean Water Agencies	1014511	BDO-Alternative Investment Inc	18,000	-	-	-	1,588	-	-	1,588	16,413
800	Bay Area Clean Water Agencies	1015265	BDO Other Receipts (Misc)	-	-	-	-	-	2,550	-	2,550	(2,550)
800	Bay Area Clean Water Agencies	1015266	BDO Affiliate/Associate Dues	-	-	3,350	-	-	35,175	-	35,175	(35,175)
800	Bay Area Clean Water Agencies	1015267	BDO Affil/CS/Assoc Dues	-	-	-	-	-	36,781	-	36,781	(36,781)
	BACWA TOTAL			**744,797**	**-**	**21,753**	**-**	**1,588**	**694,272**	**4,603**	**700,462**	**44,335**
805	WQA-CBC	1011099	BDO Member Contributions	675,000	-	115,519	-	-	671,390	-	671,390	3,610
805	WQA-CBC	1011108	BDO Other Receipts	1,700,000	-	217,398	-	-	1,550,565	-	1,550,565	149,435
805	WQA-CBC	1011117	BDO- Interest Income from LAIF	-	-	-	-	-	-	23,798	23,798	(23,798)
805	WQA-CBC	1014528	BDO-Voluntary Nutrient Contrib	-	-	-	-	-	-	-	-	-
	WQA CBC TOTAL			**2,375,000**	**-**	**332,917**	**-**	**-**	**2,221,955**	**23,798**	**2,245,753**	**129,247**
	TOTAL			**3,119,797**	**-**	**354,670**	**-**	**1,588**	**2,916,227**	**28,401**	**2,946,215**	**173,582**

	DEPARTMENT	JOB	REVENUE TYPE	AMENDED BUDGET	CURRENT PERIOD			YEAR TO DATE				UNOBLIGATED
					Admin & General	Contributons	Interest, Transfers, Others	Admin & General	Contributons	Interest, Transfers, Others	ACTUAL	
802	BABC	1011099	BDO Member Contributions	-	-	23,000	-	-	170,000	-	170,000	(170,000)
802	BABC	1011109	BDO Fund Transfers	-	-	-	-	113,305	-	-	113,305	(113,305)
	BABC TOTAL			**-**	**-**	**23,000**	**-**	**113,305**	**170,000**	**-**	**283,305**	**(283,305)**
810	WOT	1011117	BDO- Interest Income from LAIF	-	-	-	-	-	-	-	-	-
	WOT TOTAL			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

	DEPARTMENT	JOB	REVENUE TYPE	AMENDED BUDGET	CURRENT PERIOD			YEAR TO DATE				UNOBLIGATED
					Admin & General	Contributons	Interest, Transfers, Others	Admin & General	Contributons	Interest, Transfers, Others	ACTUAL	
811	PROP 84	1011142	Administrative Support	-	-	-	-	-	-	-	-	-
	PROP TOTAL			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Grand Total			**3,119,797**	**-**	**377,670**	**-**	**114,892**	**3,086,227**	**28,401**	**3,229,520**	**(109,722)**

BACWA Expense Detail Report for December 2019

EXPENSE TYPE	JOB	AMENDED BUDGET	CURRENT PERIOD ENC	CURRENT PERIOD PV	CURRENT PERIOD DA	CURRENT PERIOD JV	YEAR TO DATE ENC	YEAR TO DATE PV	YEAR TO DATE DA	YEAR TO DATE JV	OBLIGATED	UNOBLIGATED
LABOR						-						-
AS-Executive Director	1011123	207,531	(51,883)	51,883	-	-	103,766	103,766	-	-	207,531	-
AS-Assistant Executive Directo	1011124	100,907	(6,930)	6,243	-	-	58,245	22,798	-	-	81,043	19,865
AS-Regulatory Program Manager	1011149	137,727	(20,433)	19,681	-	-	83,090	64,820	-	(11,885)	136,024	1,703
ADMINISTRATION												
AS-EBMUD Financial Services	1011125	41,616	-	-	-	-	33,077	8,539	-	-	41,616	-
AS-Audit Services	1014512	5,240	-	-	-	-	524	4,716	-	(5,240)	-	5,240
BDO Other Receipts	1011108	-	-	-	3,000	-	-	-	3,000	-	3,000	(3,000)
AS-BACWA Admin Expense	1011118	7,803	-	-	471	-	-	-	2,012	(167)	1,845	5,958
AS-Insurance	1011126	4,682	-	-	-	-	-	-	4,696	-	4,696	(14)
MEETINGS												
GBS-Meeting Support-Annual	1014514	12,000	-	-	1,004	-	-	-	9,706	-	9,706	2,294
GBS-Meeting Support-Exec Bd	1014513	2,601	-	-	80	-	1,935	666	309	-	2,910	(309)
GBS-Meeting Support-Misc	1014516	5,202	-	-	-	-	-	-	108	-	108	5,094
GBS-Meeting Support-Pardee	1014515	6,242	-	-	-	-	-	-	5,835	-	5,835	407
COMMUNICATION												
CAR-BACWA File Storage	1014518	1,500	-	-	-	-	-	-	720	-	720	780
CAR-BACWA IT Software	1014520	1,750	-	-	-	-	-	-	528	-	528	1,222
CAR-BACWA IT Support	1014519	2,600	-	-	-	-	2,600	-	-	-	2,600	-
CAR-BACWA Website Dev/Maint	1011116	600	-	-	348	-	-	-	618	-	618	(18)
CAR-BACWA Website Hosting	1014517	750	-	-	-	-	-	-	-	-	-	750
LEGAL												
LS-Executive Board Support	1011110	2,133	-	-	-	-	2,133	-	-	-	2,133	-
LS-Regulatory Support	1011107	2,653	(1,165)	1,165	-	-	509	2,144	-	-	2,653	-
COMMITTEES												
AIR-Air Issues&Regulation Grp	1014253	76,000	-	-	-	-	72,420	2,580	568	-	75,568	432
BC-BAPPG	1011147	100,000	(4,725)	4,725	7,392	-	24,922	21,078	25,565	-	71,565	28,435
BC-Biosolids Committee	1011101	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-Collections System	1011097	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-InfoShare Groups	1011102	1,000	-	-	269	-	-	-	1,100	-	1,100	-100.00
BC-Laboratory Committee	1011103	1,000	-	-	-	-	-	-	-	-	-	1000.00
BC-Permit Committee	1011098	1,300	-	-	-	-	-	-	189	-	189	1,111
BC-Pretreatment Committee	1011146	2,000	-	-	-	-	-	-	3,402	-	3,402	(1,402)
BC-Water Recycling Committee	1011100	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-Manager's Roundtable	1014777	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-Miscellaneous Committee Sup	1011104	45,000	-	-	-	-	-	-	-	-	-	45,000
COLLABORATIVES												
CAS-Arleen Navaret Award	1012201	2,500	-	-	-	-	-	-	-	-	-	2,500
CAS-FWQC	1012202	7,500	-	-	-	-	-	-	-	-	-	7,500
CAS-Misc Collaborative Sup	1014521	5,000	-	-	-	-	-	-	1,500	-	1,500	3,500
CAS-PSSEP	1011112	-	-	-	-	-	-	-	-	-	-	-
CAS-Stanford ERC	1011969	10,000	-	-	-	-	-	-	-	-	-	10,000
BACWA TOTAL		**798,837**	(85,136)	83,697	12,564	-	**383,221**	**231,105**	**59,855**	**(17,292)**	**656,890**	141,948
TECH SUPPORT												
WQA-CE Addl Work Under Permit	1014254	100,000	(37,799)	37,799	-	-	182,202	37,799	-	-	220,000	(120,000)
WQA-CE-Technical Support	1011127	52,020	(4,090)	4,090	-	-	23,117	8,998	660	-	32,776	19,244
WQA-CE Risk Reduction	1014023	20,000	-	-	-	-	-	-	12,500	-	12,500	7,500
WQA-CE-Nutrient WS Permit Comm	1014021	2,000,000	-	-	-	-	-	-	-	-	-	2,000,000
WQA-CE-Nature Based Solutions	1015367	500,000	-	-	-	-	500,000	-	-	-	500,000	-
TECH SUPPORT (CBC) TOTAL		**2,672,020**	**(41,889)**	**41,889**	**-**	**-**	**705,319**	**46,797**	**13,160**	**-**	**765,276**	**1,906,744**
GRAND TOTAL		**3,470,857**	**(127,025)**	**125,586**	**12,564**	**-**	**1,088,540**	**277,902**	**73,015**	**(17,292)**	**1,422,166**	**2,048,692**
BABC												
AS-Assistant Executive Directo	1011124	-	-	-	-	-	-	275	-	-	275	(275)
BDO Contract Expenses	1011143	-	-	-	-	-	-	-	6,182	-	6,182	(6,182)
AS-Regulatory Program Manager	1011149	-	-	751	23	-	-	1,703	23	-	1,726	(1,726)
BABC TOTAL		**-**	**-**	**751**	**23**	**-**	**-**	**1,978**	**6,205**	**-**	**8,183**	**(8,183)**
BACC												
Administrative Support	1011142	-	-	688	-	-	-	1,183	82	-	1,265	(1,265)
BACC TOTAL		**-**	**-**	**688**	**-**	**-**	**-**	**1,183**	**82**	**-**	**1,265**	**(1,265)**
WOT												
Administrative Support	1011142	-	-	-	-	-	-	-	3,667	-	3,667	(3,667)
BDO Contract Expenses	1011143	-	-	-	-	-	-	-	35,750	-	35,750	(35,750)
		-	**-**	**-**	**-**	**-**	**-**	**-**	**39,417**	**-**	**39,417**	**(39,417)**
GRAND TOTAL (BDO, CBC, BABC, BACC, WOT)		**3,470,857**	**(127,025)**	**127,025**	**12,587**	**-**	**1,088,540**	**281,062**	**118,718**	**(17,292)**	**1,471,031**	**1,999,827**

BACWA Revenue Report as of December 31, 2019

Prop 84

DEPTID	DEPARTMENT	JOB	REVENUE TYPE	AMENDED BUDGET	CURRENT PERIOD			YEAR TO DATE				UNOBLIGATED
					Admin & General	Contributons	Interest, Transfers,Others	Admin & General	Contributons	Interest, Transfers,Others	ACTUAL	
811	Prop84BayAreaIntegRegnlWtrMgmt	1011117	BDO- Interest Income from LAIF	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011142	Administrative Support	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011691	Water Efficient Landscape Reba	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011702	Sears Point Wtlnd & Wtrshd Res	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011705	Regional Green Infrastructure	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011706	Hacienda Ave Green St Improvem	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011707	WQ Improve Flood Mgmt & EP	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011911	Stream Restoration w/Schools i	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1011912	Flood Infrastructure Mapping	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012209	Water Efficient LRP	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012210	Bay Friendly Landscape TP	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012211	Weather Based Irrigation Cntrl	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012212	High Efficiency Toilet & UR	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012213	High Efficiency Toilet & UI	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012214	High Efficiency Clothes Washrs	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012215	Napa Co. Rainwater HP	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012216	Conservation Program Admin	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012218	Stream Restoration in North BD	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012219	Flood Infrastructure Mapping T	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012220	Stormwater Improvements & PBP	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012221	Richmond Shoreline & San PFP	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012222	Pescadero Integrated FRAH	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012223	Restoration Guidance, San FC	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012224	SF Estuary Steelhead MP	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	1012225	Watershed Program Admnstrtn	-	-	-	-	-	-	-	-	-
	PROP 84 TOTAL			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

BACWA Expense Detail Report for December 2019

EXPENSE TYPE	JOB	AMENDED BUDGET	CURRENT PERIOD ENC	CURRENT PERIOD PV	CURRENT PERIOD DA	CURRENT PERIOD JV	YEAR TO DATE ENC	YEAR TO DATE PV	YEAR TO DATE DA	YEAR TO DATE JV	OBLIGATED	UNOBLIGATED
LABOR						-						-
AS-Executive Director	1011123	207,531	(51,883)	51,883	-	-	103,766	103,766	-	-	207,531	-
AS-Assistant Executive Directo	1011124	100,907	(6,930)	6,243	-	-	58,245	22,798	-	-	81,043	19,865
AS-Regulatory Program Manager	1011149	137,727	(20,433)	19,681	-	-	83,090	64,820	-	(11,885)	136,024	1,703
ADMINISTRATION												
AS-EBMUD Financial Services	1011125	41,616	-	-	-	-	33,077	8,539	-	-	41,616	-
AS-Audit Services	1014512	5,240	-	-	-	-	524	4,716	-	(5,240)	-	5,240
BDO Other Receipts	1011108	-	-	-	3,000	-	-	-	3,000	-	3,000	(3,000)
AS-BACWA Admin Expense	1011118	7,803	-	-	471	-	-	-	2,012	(167)	1,845	5,958
AS-Insurance	1011126	4,682	-	-	-	-	-	-	4,696	-	4,696	(14)
MEETINGS												
GBS-Meeting Support-Annual	1014514	12,000	-	-	1,004	-	-	-	9,706	-	9,706	2,294
GBS-Meeting Support-Exec Bd	1014513	2,601	-	-	80	-	1,935	666	309	-	2,910	(309)
GBS-Meeting Support-Misc	1014516	5,202	-	-	-	-	-	-	108	-	108	5,094
GBS-Meeting Support-Pardee	1014515	6,242	-	-	-	-	-	-	5,835	-	5,835	407
COMMUNICATION												
CAR-BACWA File Storage	1014518	1,500	-	-	-	-	-	-	720	-	720	780
CAR-BACWA IT Software	1014520	1,750	-	-	-	-	-	-	528	-	528	1,222
CAR-BACWA IT Support	1014519	2,600	-	-	-	-	2,600	-	-	-	2,600	-
CAR-BACWA Website Dev/Maint	1011116	600	-	-	348	-	-	-	618	-	618	(18)
CAR-BACWA Website Hosting	1014517	750	-	-	-	-	-	-	-	-	-	750
LEGAL												
LS-Executive Board Support	1011110	2,133	-	-	-	-	2,133	-	-	-	2,133	-
LS-Regulatory Support	1011107	2,653	(1,165)	1,165	-	-	509	2,144	-	-	2,653	-
COMMITTEES												
AIR-Air Issues&Regulation Grp	1014253	76,000	-	-	-	-	72,420	2,580	568	-	75,568	432
BC-BAPPG	1011147	100,000	(4,725)	4,725	7,392	-	24,922	21,078	25,565	-	71,565	28,435
BC-Biosolids Committee	1011101	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-Collections System	1011097	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-InfoShare Groups	1011102	1,000	-	-	269	-	-	-	1,100	-	1,100	-100.00
BC-Laboratory Committee	1011103	1,000	-	-	-	-	-	-	-	-	-	1000.00
BC-Permit Committee	1011098	1,300	-	-	-	-	-	-	189	-	189	1,111
BC-Pretreatment Committee	1011146	2,000	-	-	-	-	-	-	3,402	-	3,402	(1,402)
BC-Water Recycling Committee	1011100	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-Manager's Roundtable	1014777	1,000	-	-	-	-	-	-	-	-	-	1,000
BC-Miscellaneous Committee Sup	1011104	45,000	-	-	-	-	-	-	-	-	-	45,000
COLLABORATIVES												
CAS-Arleen Navaret Award	1012201	2,500	-	-	-	-	-	-	-	-	-	2,500
CAS-FWQC	1012202	7,500	-	-	-	-	-	-	-	-	-	7,500
CAS-Misc Collaborative Sup	1014521	5,000	-	-	-	-	-	-	1,500	-	1,500	3,500
CAS-PSSEP	1011112	-	-	-	-	-	-	-	-	-	-	-
CAS-Stanford ERC	1011969	10,000	-	-	-	-	-	-	-	-	-	10,000
BACWA TOTAL		**798,837**	(85,136)	83,697	12,564	-	**383,221**	**231,105**	**59,855**	**(17,292)**	**656,890**	141,948
TECH SUPPORT												
WQA-CE Addl Work Under Permit	1014254	100,000	(37,799)	37,799	-	-	182,202	37,799	-	-	220,000	(120,000)
WQA-CE-Technical Support	1011127	52,020	(4,090)	4,090	-	-	23,117	8,998	660	-	32,776	19,244
WQA-CE Risk Reduction	1014023	20,000	-	-	-	-	-	-	12,500	-	12,500	7,500
WQA-CE-Nutrient WS Permit Comm	1014021	2,000,000	-	-	-	-	-	-	-	-	-	2,000,000
WQA-CE-Nature Based Solutions	1015367	500,000	-	-	-	-	500,000	-	-	-	500,000	-
TECH SUPPORT (CBC) TOTAL		**2,672,020**	**(41,889)**	**41,889**	**-**	**-**	**705,319**	**46,797**	**13,160**	**-**	**765,276**	**1,906,744**
GRAND TOTAL		**3,470,857**	**(127,025)**	**125,586**	**12,564**	**-**	**1,088,540**	**277,902**	**73,015**	**(17,292)**	**1,422,166**	**2,048,692**
BABC												
AS-Assistant Executive Directo	1011124	-	-	-	-	-	-	275	-	-	275	(275)
BDO Contract Expenses	1011143	-	-	-	-	-	-	-	6,182	-	6,182	(6,182)
AS-Regulatory Program Manager	1011149	-	-	751	23	-	-	1,703	23	-	1,726	(1,726)
BABC TOTAL		**-**	**-**	**751**	**23**	**-**	**-**	**1,978**	**6,205**	**-**	**8,183**	**(8,183)**
BACC												
Administrative Support	1011142	-	-	688	-	-	-	1,183	82	-	1,265	(1,265)
BACC TOTAL		**-**	**-**	**688**	**-**	**-**	**-**	**1,183**	**82**	**-**	**1,265**	**(1,265)**
WOT												
Administrative Support	1011142	-	-	-	-	-	-	-	3,667	-	3,667	(3,667)
BDO Contract Expenses	1011143	-	-	-	-	-	-	-	35,750	-	35,750	(35,750)
		-	**-**	**-**	**-**	**-**	**-**	**-**	**39,417**	**-**	**39,417**	**(39,417)**
GRAND TOTAL (BDO, CBC, BABC, BACC, WOT)		**3,470,857**	**(127,025)**	**127,025**	**12,587**	**-**	**1,088,540**	**281,062**	**118,718**	**(17,292)**	**1,471,031**	**1,999,827**

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 6
FILE NO.: 20-31
MEETING DATE: February 21, 2020

TITLE: Approval of Fiscal Year 2020 Assistant Executive Director Contract

☐RECEIPT ☐DISCUSSION ☐RESOLUTION ☒APPROVAL

RECOMMENDED ACTION

Authorize the approval of a contract for up to $32,500 for services by Jennifer Dyment as the BACWA Assistant Executive Director (AED) for FY 20.

SUMMARY

With the departure of the previous contractor providing services to BACWA as the AED, a Request for Proposals was issued soliciting interest for providing the AED services. Following a short-listing process and interviews, Jennifer Dyment was selected as the best contractor to provide the services as detailed in the scope of work. A contract was negotiated for providing the services at a rate of $65/hour with a not to exceed amount of $32,500 for the remainer of FY 20. This is equivalent to 500 hours, a third of the intended 1,500 contract hours for an entire Fiscal Year. The contract can be extended by amendments for additional years of service.

FISCAL IMPACT

The funding for this contract is consistent with the approved FY 20 Workplan and Budget for BACWA.

ALTERNATIVES

Do not award the contract and seek another contractor. This is not recommended as Ms. Dyment was selected as the best candidate through a competitive process.

Attachments:
1. Contract and Scope of Work for the BACWA AED

Approved: Date:

Lori Schectel, Chair
BACWA

BAY AREA CLEAN WATER AGENCIES
PROFESSIONAL SERVICES CONTRACT
Assistant Executive Director

This PROFESSIONAL SERVICES CONTRACT, effective February 21, 2020, is between Bay Area Clean Water Agencies ("BACWA"), a joint powers agency which exists as a public entity separate and apart from its Member Agencies, created January 4, 1984 by a Joint Powers Agreement between Central Contra Costa Sanitary District, East Bay Dischargers Association, East Bay Municipal Utility District, the City and County of San Francisco and the City of San Jose, with a mailing address of P.O. Box 24055, MS 59, Oakland, CA 94623, and Jennifer Dyment ("Consultant"), an individual doing business in Albany, CA, for professional services as described in any Exhibit A attached hereto.

The primary purpose of BACWA is to advocate for regulations that are based on sound science. BACWA often supports scientific investigations such as funding the collection of data on aquatic life and quality of waters in the San Francisco Bay system, interpretation of the data to assess the effects of pollution and other factors on the Bay, developing and disseminating information about the Bay, and carrying out other programs of interest to its members.

In consideration of the mutual covenants, stipulations and agreements, the parties agree as follows:

1. Consultant will perform the Services as described by and in accordance with Exhibit A in a manner acceptable to BACWA. Contractor retains the sole right to control and direct the manner in which it provides the services. Notwithstanding the foregoing, BACWA shall, have a right to inspect the work, which shall include the right to stop the work if necessary to ensure that it conforms to BACWA's standards and expected results.

2. Consultant shall not contract with or otherwise use any subconsultants, subcontractors or other non-employee persons or entities ("Subconsultants") to perform the Services without the prior written approval of BACWA. If Consultant and BACWA agree that Subconsultants shall be used, Consultant shall ensure Subsconsultants' compliance with all the terms and conditions of this agreement.

3. BACWA will pay Consultant for services at an hourly rate of $65.00, up to a maximum annual amount of $32,500 for the 2020 fiscal year. Consultant will not exceed the maximum amount payable without obtaining prior written approval from BACWA. Any future increases shall be implemented via an amendment to this contract.

4. BACWA agrees to reimburse Consultant for actual and reasonable expenses necessary to carry out the work described in Exhibit A. This includes, but is not limited to, travel expenses for BACWA-related meetings and events, and the cost of attending trainings necessary for the Consultant to act as the Assistant Executive Director. Travel to meetings, events and trainings outside of the San Francisco Bay and Sacramento Area must be approved by the Executive Director in advance.

5. Consultant shall submit invoices on a monthly basis. Payments under this Contract will be due thirty (30) days after BACWA's receipt of invoices. BACWA may withhold from any progress or final payment any damages, back charges or claims incurred or anticipated by BACWA to the extent caused by Consultant.

6. Consultant will maintain all records relating to this Contract in accordance with generally accepted accounting principles and for at least three years following termination of this Contract. Consultant will grant BACWA and its representatives to access upon request to all such records and all other books, documents, papers, drawings, and writings of Consultant that refer or relate to this Contract.

7. All drawings, specifications, reports, programs, manuals, and other work product of Consultant that result from this Contract ("Work Product") will be considered the exclusive property of BACWA. Consultant agrees that it will not use, disclose, communicate, publish or otherwise make available to third parties any products, analyses, data, compilations, studies, proposals, technical or business information, and any other information related to the Services provided to BACWA without BACWA's prior written approval.

8. The Consultant expressly agrees to indemnify, defend and hold BACWA, its officers, and directors, free and harmless from and against any and all loss, liability, expense, claims, costs, suits and damages, including attorney's fees, arising out of negligence of the Consultant's work and or performance under this Contract, excepting only such injury or damage as may be caused by the negligence of BACWA.

9. This contract shall automatically terminate on June 30, 2020. Either party may also terminate this Contract in whole or in part at any time for its convenience. For a termination for convenience, the termination will be effective thirty (30) days following receipt of a written notice of termination by one party from the other.

10. This contract is non-exclusive. Contractor is free to perform services for his or her other clients outside the scope of this Agreement, provided such services do not create a conflict of interest with BACWA.

This Contract constitutes the entire, legally binding contract between the parties regarding its subject matter. No waiver, consent, modification or change of terms of this Contract is binding unless in writing and signed by both parties.

The following document is incorporated into and made a part of this Contract. Any conflicts between this document and this Contract will be resolved in favor of this Contract.

Exhibit A — Scope of Work

CONSULTANT: _____

_____

Street Address

_____

City, State, Zip Code

Tax Identification No.

Consultant Signature Date

Name, Title

BACWA Signature Date

Lori Schectel, BACWA Executive Board Chair
Name, Title

Exhibit A
BACWA ASSISTANT EXECUTIVE DIRECTOR
SCOPE OF SERVICES

CONSULTANT will act as the Assistant Executive Director and provide professional services as requested by the BACWA Executive Director (ED) to support BACWA and its Special Programs at a rate of $65.00/hour consistent with the following key activities:

1. Financial Management

- Communicate and coordinate with EBMUD Accounting to ensure proper and timely processing of contracts, invoices, dues and contributions to specific accounts and payments to BACWA vendors;

- On a monthly basis scan the EBMUD Treasurer's Report for consistency with BACWA's requests for payment of invoices and update the BACWA budget to actual revenue and expense spreadsheet;

- Coordinate with EBMUD Treasurer on the amount of reserves invested in longer term accounts to ensure that BACWA cash flow needs are met;

- Assist with annual budget development and management;

- Act as an intermediary between Project Managers and EBMUD Accounting to track revenues and expenditures for specific projects and Special Programs;

- Provide recommendations and support for revisions to accounting processes and financial reporting,

- Assist in developing contracting and fiscal policies for BACWA.

2. Meeting Support

- Attend monthly BACWA Board meetings and selected other meetings;

- Assist Executive Director in developing the Executive Board agenda and meeting packet; prepare and distribute meeting minutes;

- Work with the ED, Committee Chairs, consultants, and Project Managers on coordination, preparation, attendance, recordkeeping, meeting facilitation and follow up for special meetings, including but not limited to the following: Budget Planning Workshops, Pardee Technical Seminar, Annual Membership Meeting, Committee or BACWA-sponsored training and workshops.

- Assist with the coordination and facilitation of other meetings (e.g., Committee meetings) as requested by the ED.

3. Document Management

- Manage retention, organization, maintenance and storage of BACWA electronic and paper files;

- Maintain electronic records of policies, procedures, forms, and templates.

- Work with ED, Committee Chairs, and Project Managers to draft, edit, and execute contracts, amendments, contract scopes, and approval forms (e.g. Board Action Request (BAR)), Executive Director Authorizations, Chair Authorization, Travel Request), and other agreements;

- Compile background information or supporting documentation in response to requests from ED, Project Managers, and Committee Chairs;

- Act as BACWA's Filing Official and Filing Officer for Statements of Economic Interest as required by FPPC;

4. Communication and Website Management

- Manage the delivery of documents and information to members, including e-mail correspondence;

- Maintain BACWA contacts and distribution lists;

- Assist with the development of the BACWA Annual Report, including working with ED, Consultants, and Committee Chairs to compile content, edit draft, and oversee production and distribution;

- Assist with the delivery of selected communications to the RWQCB, including invitations to meetings, and formatting and submitting comment letters;

- Create, maintain and revise website content;

- Coordinate website revisions with consultants and Committee Chairs, including maintenance of the dynamic calendar and uploading of promotional materials;

- Provide content management system instructions for committees and others as needed;

- Manage BACWA private website user authorization;

- Assist ED with the development and implementation of communications plan, including website improvements and a newsletter;

- Respond to inquiries from the general public and members.

5. Miscellaneous

- Assist with other tasks and projects upon request from the ED

BACWA EXECUTIVE BOARD AUTHORIZATION REQUEST

AGENDA NO.: 7

FILE NO.: 20-32

MEETING DATE: February 21,2020

TITLE: Request for BACWA 2nd Watershed Permit Fund Commitment for $2,400,000

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

RECOMMENDED ACTION

Authorize payment in the amount of $2,400,000 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 is reallocating how the funds are 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	$2,800,000	$2,600,000	$2,000,000	$1,000,000	**$11,000,000**

This authorization of payment in the amount of $2,400,000 to SFEI will meet the obligation for the first year of the Discharger's annual obligation under the five-year Watershed Permit per the above schedule.

FISCAL IMPACT

This payment and subsequent 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 $2,400,000 invoice.

ALTERNATIVES

1. Do not fund the Commitment. This alternative is not recommended since the payment is a regulatory requirement. BACWA members who do not participate in the payment of the Nutrient Surcharge will have individual permits issued by the Water Board.
2. Fund only at the $2,200,000 required by the permit. This alternative is not recommended since the BACWA Executive Board has supported accelerating the pace of scientific studies so that results can inform the 3rd Watershed Permit.

Attachments: SFEI Invoice

Approved: Date: _____

_____
Lori Schectel, Chair
BACWA Executive Board

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 8

FILE NO.: 20-33

MEETING DATE: February 21, 2020

TITLE: Request for BACWA Executive Board Approval for Amendment #2 to the Agreement with TDC Environmental, LLC for BAPPG Pesticide Regulatory Support

☐RECEIPT ☐DISCUSSION ☐RESOLUTION ☒APPROVAL

RECOMMENDED ACTION

Authorize Amendment #2 to the contract with TDC Environmental, LLC to track pesticide regulatory activities through the US Environmental Protection Agency (EPA) Office of Pesticide Programs and California Department of Pesticide Regulation (CDPR); provide key points for comment letters; communicate with pesticide regulatory agencies; and leverage opportunities to prevent pollution at the source through regulatory and/or policy actions, in an amount not to exceed $55,000 for Fiscal Year 2020 (FY20). This is an increase of $25,000 over Amendment #1.

SUMMARY

At the June 15, 2018 Executive Board Meeting, the BACWA Executive Board approved a contract with TDC Environmental LLC to provide support to BACWA/BAPPG on regulatory, technical, and outreach issues related to emerging contaminant priorities, with a focus on pesticides. The contract allows for up to four one-year extensions, and was amended to include $30,000 for FY20 on June 21, 2019. Work under this contract is described in the attached Scope of Work, and includes the tracking of pesticide-related regulatory activities by the EPA and CDPR and making recommendations regarding regulatory participation and other follow-up steps, including recommending key points for comment letters, reviewing draft comment letters, setting up meetings with key staff at the pesticide regulating agencies to continue educating them about downstream wastewater impacts from their actions to register and/or re-register pesticide uses, and working to change the tools and information used in the registration processes to be protective of wastewater.

BACWA hosts a pesticides subcommittee that makes recommendations for efforts to respond to EPA's pesticide re-registrations. The workgroup has reviewed the US EPA schedule and consultant recommendations on the first group of risk assessments/risk management proposals issued in BACWA's current fiscal year. Two or three more groups of these documents are expected to be issued this fiscal year. Recognizing the budget challenge, the workgroup has elected to send letters only on (1) highest priority items and (2) simple, low-cost items to complete prior efforts (e.g., wrapping up our long-term effort to improve root control chemical and swimming pool chemical label language to protect workers and collection systems). The latter small items are expected to be accomplished within the workgroup's budget. The workgroup does not expect to be able to complete the three large items within its budget.

Due to this budget shortfall, the workgroup requests that BACWA approve supplemental funding of $25,000 to allow the workgroup to both complete these letters and to continue its routine tasks for the remainder of the fiscal year.

FISCAL IMPACT

The funding for this contract is consistent with the FY20 workplans and budget for BACWA and Special Programs. Sufficient funds are available in the Miscellaneous Committee Support budget line item.

ALTERNATIVES

1. Cease workgroup activity other than on the letters, or select only a subset of the items for comments. This alternative is not recommended since this work will assist BACWA with comment letters on important regulatory actions that can reduce wastewater pollution from pesticides and other products at the source. In addition, the staff at the San Francisco Regional Water Quality Control Board is supportive of this work by BACWA, and views this as part of the proactive approach it would like to see BACWA pursuing to prevent pollution at the source. The Regional Water Quality Control Board dedicates staff resources to participate in BACWA's monthly Pesticide Steering Committee and submits comment letters that echo BACWA's key points.

Attachments: FY19 Agreement with TDC Environmental, LLC
FY20 Scope of Work and Rates
FY20 Amendment #2

Approved: _____ Date:_____
Lori Schectel, Chair,
BACWA Executive Board

19-10 Date: 6/15/18

BAY AREA CLEAN WATER AGENCIES

CONSULTING AGREEMENT

TO:	Dr. Kelly Moran TDC Environmental, LLC 462 E. 28th Ave. San Mateo CA 94403	kmoran@tdcenvironmental.com (650) 627-8690
FROM:	David Williams, Executive Director BACWA PO Box 24055, MS702 Oakland, CA 94623	dwilliams@bacwa.org Phone: 925-765-9616 FAX: (510) 287-1351

RE: BACWA Agreement for FY19 with TDC Environmental, LLC to provide pesticide regulatory and technical support to the BAPPG Committee.

This Agreement covers professional services to be performed by TDC Environmental, LLC in order to provide support for: (1) tracking pesticide regulatory activities through the US EPA and California Department of Pesticide Regulation, providing key points for comment letters, and communicating with pesticide regulatory agencies; and (2) seeking opportunities to prevent pollution at the source. The work under this contract will be carried out under the supervision of Autumn Cleave of SFPUC (acleave@sfwater.org). The total cost of professional services to be performed by TDC Environmental, LLC is not to exceed $30,000. This contract will be funded under the BAPPG Committee line item.

This agreement may be extended for up to four additional one-year terms upon approval of the BACWA Executive Board and an amendment to this agreement.

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

TDC Environmental, LLC shall submit invoices to the BACWA Project Managers for approval, who will then transfer the approved invoice to the BACWA Assistant Executive Director for payment. Invoices shall indicate hours associated with each task. Invoices will be paid within thirty (30) days of receipt.

BACWA AED E-mail: Sherry Hull shulll@bacwa.org

Approved:

By _____
Lori Schectel
Chair, BACWA Executive Board

Date: June 15, 2018

By Kelly Moran
Dr. Kelly Moran
TDC Environmental, LLC

Date: June 15, 2018

BACWA EIN: 94-3389334

Scope of Work
TDC Environmental, LLC
Pesticide Regulatory and Technical Support
July 2019-June 2020

- Coordinate with BAPPG representatives to maintain a list of highest priorities pesticides for BACWA's attention (currently copper, silver, fipronil, imidacloprid, and pyrethroids). Periodically update (to the extent possible) a schedule of anticipated pesticide regulatory activities on these pesticides.
- Track pesticide-related regulatory activities by EPA and Department of Pesticide Regulation (DPR) that have significant potential to affect BACWA member agencies. Notify BAPPG of such items as they arise. Based on regulatory documents, relevant scientific information, and the regulatory context, make recommendations regarding regulatory participation or other follow-up steps. When so directed and as resources allow, provide key points for comments and review draft comment letters.
- Based on existing lines of communication with pesticide regulators and pesticide manufacturers (which are maintained for other clients), notify BAPPG of important information obtained through these contacts.
- Coordinate and provide scientific support for communications with EPA and DPR about wastewater pesticides discharges, wastewater pesticides monitoring, and improving wastewater pesticides predictive modeling to support registration decisions.
- Continue efforts to change EPA standard procedures that currently ignore the contribution of pet flea control products (spot-ons and collars) to wastewater.
- Continue follow-up up work to finalize new swimming pool, spa, and fountain product label language to direct owners to contact their local sanitation agency prior to discharging treated water.
- Continue follow-up work to secure POTW notification prior to applications of root control chemicals in wastewater collection systems.
- Coordinate scientific review with other agencies (DPR, Water Board) and work with other BACWA and member agency consultants to provide key points for comment letters for select, high-priority ecological risk assessments and risk management decisions. In 2019-20 these are anticipated to include: pyrethroids, fipronil, imidacloprid and other neonicotinoids, metam sodium (root control) and several swimming pool and pet flea control products.
- Obtain scientific information to support the above activities (recognizing that pesticides regulatory programs are science based). This may include attendance at scientific conferences, with prior review and approval by BACWA's Project Managers.
- Provide technical information to support BACWA's coordination with NACWA on Federal pollution prevention topics, including pesticides.
- Track TSCA reform implementation and support BACWA's coordination with NACWA on providing comments.

- Based on the above tasks, develop an agenda and materials for a monthly BACWA Pesticides Workgroup teleconference meeting to determine appropriate actions and to coordinate actions with NACWA and San Francisco Bay Regional Water Board staff. Provide staff support during the meetings and an action item list after each meeting.
- Provide technical and regulatory advice to support development of BAPPG program(s) or materials to address pesticides, such as planned pet flea control-related outreach.
- Upon request, provide responses to pesticide-related regulatory or scientific questions.

All work to be conducted by Kelly D. Moran, Ph.D. with the support of Tammy Qualls, P.E. In conjunction with similar work funded by CASQA, Ms. Qualls support activities (anticipated to involve <30% of total expenditures) will include tracking pesticides regulatory schedules, preparing periodic regulatory schedule updates, providing workgroup meeting staff support and action item tracking, and when so directed and as resources allow, providing key points for draft comment letters.

All services identified in this Scope of Work shall be compensated on a time and materials basis:

- Kelly D. Moran, Ph.D. – $210 per hour
- Tammy Qualls, P.E. – $160 per hour
- Direct costs – at cost

Total expenditures not to exceed $30,000.

Contractor

TDC Environmental, LLC
Kelly D. Moran, Ph.D., President
462 E. 28th Ave.
San Mateo CA 94403
650-627-8690
kmoran@tdcenvironmental.com

AMENDMENT NO. 2
TO AGREEMENT BETWEEN
BAY AREA CLEAN WATER AGENCIES and
TDC Environmental, LLC
FOR
BAPPG Pesticide Regulatory Support

This Amendment No. 2 is made this 21st day of February 2020, in the City and County of San Francisco, State of California, to that certain agreement of June 15, 2018, and Amendment No. 1 of June 21, 2019, by and between TDC Environmental LLC and Bay Area Clean Water Agencies, (BACWA) (the "Agreement") in consideration of the covenants hereinafter set forth.

1. BACWA and TDC Environmental, LLC agree to a new contract amount of $55,000.00 for BAPPG Pesticide Regulatory Support for Fiscal Year 2020.

2. Except as herein expressly modified, the Agreement will remain in full force and effect.

BAY AREA CLEAN WATER AGENCIES

By _____ Date _____
Lori Schectel, Chair
BACWA Executive Board

By _____ Date _____
Kelly Moran
TDC Environmental

BACWA CHAIR AUTHORIZATION REQUEST

TITLE: BACWA Executive Board Chair Authorization for an Agreement in the amount of $10,000 with Koff & Associates for the recruitment of the BACWA Assistant Executive Director.

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

ACTION

Approve a contract with Koff & Associates for recruitment of the Assistant Executive Director in the amount of $10,000.

SUMMARY

With the unexpected resignation of the Assistant Executive Director and the pending retirement of the current Executive Director, the newly selected Executive Director will need immediate assistance in continuing the operations of the organization. This agreement provides for a fast-track recruitment to select a new Assistant Executive Director. Once selected, a contract will be negotiated and presented to the Executive Board for approval.

A contract for the recruitment along with a scope of work and schedule is included as Attachment A.

FISCAL IMPACT

The need for Assistant Executive Director recruiting services in FY20 was not included in the FY20 adopted budget. However, BACWA does have a line item for Administrative Expenses for which the adopted budget of $7,803 would be exceeded. BACWA has more than adequate reserves to cover this unanticipated expense.

ALTERNATIVES

Do not complete this work – This is not recommended due to the immediate need to replace the Assistant Executive Director.
Select another consultant to conduct the work - This is not recommended as K&A was recently selected, via a competitive process, to undertake the Executive Director recruitment.

Attachments: Attachment A - K&A contract

Approved:

Date 12/31/19

Lori Schectel, Chair
BACWA

Attachment A

FILE # Date:

BAY AREA CLEAN WATER AGENCIES

CONSULTING AGREEMENT

TO:	Richard O'Donnell, Recruitment Manager Koff & Associates, Inc. 2835 Seventh Street Berkeley, CA 94710	Email: rodonnell@koffassociates.com Phone: 510-679-3983
FROM:	David Williams, Executive Director BACWA PO Box 24055, MS702 Oakland, CA 94623	Email: dwilliams@bacwa.org Phone: 925-765-9616 FAX: (510) 287-1351

RE: BACWA Agreement for FY20 with Koff & Associates to provide Assistant Executive Director recruitment support to the Bay Area Clean Water Agencies (BACWA).

This Agreement covers professional services to be performed by Koff & Associates in order to conduct a recruitment for a new BACWA Assistant Executive Director. The Scope of Services is provided in Exhibit 1. Exhibit 2 provides the schedule for completion of the Scope of Work. The work under this contract will be carried out under the supervision of Richard O'Donnell, Recruitment Manager for Koff & Associates. The total cost of professional services to be performed by Koff & Associates is not to exceed $10,000. This contract will be funded by the BACWA Budget under the Administrative Expenses line item.

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

Koff & Associates shall submit invoices to the BACWA Assistant Executive Director via email upon completion of the Scope of Work. Invoices will be paid within thirty (30) days of receipt by BACWA.

BACWA AED Email: Lorrie L. O'Neill, loneill@bacwa.org

Approved:

By _____
Lori Schectel, Chair
BACWA Executive Board

Date December 31, 2019
BACWA EIN: 94-3389334

By _____
Richard O'Donnell
Koff & Associates

Date _____
EIN/TIN: 61-1493064

BACWA

Scope of Work

Assistant Executive Director

K&A Recruiting is brightening the California market with a focus on innovation and diverse candidate pools, integrating a forward-thinking recruiting philosophy with traditional public-sector values.

K&A RECRUITING

Celebrating 35 Years 1984-2019

Richard O'Donnell

Recruitment Manager

rodonnell@koffasscoiates.com

510-679-3983

Project Deliverables

Deliverables	
Ideal Candidate Profile Development	**Step 1**
Brochure Design and Posting	**Step 2**
Modern Sourcing Techniques	**Step 3**
Pre-Screens and Recommendations	**Step 4**

Step 1 | Ideal Candidate Profile

In collaboration with key stakeholders, we will host conversations to identify the specific needs of the Agency and the key comptencies and characteristics of the "ideal candidate" to be used in our advertising and sourcing strategies.

Step 2 | Job Description & Posting

Working closely with our professional design team, a modern and mobile friendly recruitment brochure will be designed. We will advise on which sites to advertise. We will remove bias in our ads with the help of writing tools and education. Our team will also use our social media presence, such as Twitter and LinkedIn to promote the opportunity.

Step 3 | 14-Day Window of Application & Sourcing

Once the recruitment has launched, the window of application will remain open for 14-days. During which time we will use our extensive network in combination with modern recruiting tools to grow the candidate pool. We will develop a diverse and robust candidate pool. We will track all applications received and all communications, including demographic data to monitor and understand candidate diversity trends overtime.

Step 4 | Pre-Screens and Presentation of Recommendations

At the conclusion of the 30-day window of application, your team will have access to a portal specific to your agency, where you will be able to view all candidates associated with your position and corresponding activity. Our team will evaluate and schedule top-ranked candidates for phone screens, organized in the client facing protal.

We will also prepare a digital Applicant Materials Binder summarizing our analysis and recommendations, which will contain K&A Recruiting's Pre-Screen Evaluation score (Table 2.0) to summarize our conversations and assign the respective canddiate a numerical score - making our recommendations concise and easy to understand.

Our Offer:

Fee

Project : Assistant Executive Director

Offer : $10,000

Our fee for the Assistant Executive Driector recruitment project is $10,000. This is a not-to-exceed fee including advertising and job description development

We would expect the following method of payment:
1. Completion of Phase 1
2. Completion of Phase 2

We will submit and support the levels of coverage and endorse your agency with our General Liability coverage upon award of a contract for each project.

Workers' Compensation:	Statutory Limits
Commercial General Liability:	$2,000,000 per occurrence
Professional Liability (Errors & Omissions):	$1,000,000 per occurrence
Automobile Insurance:	$1,000,000 per occurrence

Our insurance broker is Ms. Eileen Hollander, Sr. Account Manager/Commercial Lines, Integro Insurance Brokers, 2300 Contra Costa Blvd., Suite 375, Pleasant Hill, CA 94523.

Project Budget Breakdown

Phase 1	$3,000
Ideal Candidate Development	
Job Description	
Launch: Posting of Advertisement	
Total	**$3,000**

Phase 2	$7,000
Sourcing, Identification, Targeting, Organizing of Candidates	
K&A Recruiting Pre-Screens	
Presentation of Recommendations	
Total	**$ 10,000**

Innovative Practices

Many of our clients use our services year in, year out because of our forward-thinking, pushing-the-envelope approach and commitment to success. Our well-structured and modern process ensures thorough, thoughtful and strategic sourcing, evaluation, selection, and vetting of applicants who fit your agency's requirements. Applicants are never discriminated against.

Our team quickly develops robust candidate pools that cater to the uniqueness of each position. By pushing the envelope with innovative technology, we assemble candidate pools that not only meet minimum qualifications, but also mesh well with the community you serve.

We are experienced with organizations of all cultures, sizes, and stages. Our outreach stratey is structured to attract candidates that align with the uniqueness of your agency.

Confidential Safeguards

The advantage of hiring K&A Recruiting is that the bulk of all documentation and recordkeeping will be done by us and only very specific information and documents will be shared with key stakeholders.

We understand that confidentiality is one of the utmost important values when it comes to all things hiring-related We also understand the potential sensitivity of job applicants' information, especially when they are currently still employed and don't want their employer to learn about their job search activities, or cases where job candidates potentially know each other.

Of course, we will never share job candidate information or application documents with any third parties. We will only contact job candidates' current employers with their express permission (although we typically require such during the final background and reference checking, at the latest when a conditional job offer has been made).

Public-Sector Roots

Thank you for your business

Thank you for working wiht K&A Recruiting

K&A Recruiting

Koff & Associates
2835 Seventh Street
Berkeley, CA 94710

Telephone: 510-658-5633
Website: https//:KoffAssociates.com/Recruitment
E-mail: recruiting@koffassociates.com

EXHIBIT 2

Projected Timeline

Application Window Opens (Post Brochure)	Monday, January 6th
Application Window Closes	Thursday, January 23rd
Recruiter Conducts Phone Screens & Presents Applicant Materials Binder By	Tuesday, January 28th
On-Site Interviews	Week of January 28th

Target 1.1.7 Work with partners to ensure an additional 10,000 acres of coastal wetlands will be protected, restored or created by 2025, and increase the acreage of coastal wetlands in California by 20% by 2030 and 50% by 2040.	**Partners** CCC BCDC SCC CDFW DSC

Objective 1.2

Minimize Causes and Impacts of Ocean Acidification and Hypoxia

Target 1.2.1 Based on the latest scientific research, advance adoption of regulations, as needed, establishing water quality objectives for ocean acidification and hypoxia that include, but are not limited to, publicly owned treatment works, stormwater, and non-point source pollution, by 2025, with scientific analysis of the relationship between nutrient inputs and acidification hot spots completed by 2022.	**Partners** SWRCB RWQCBs ARB OST
Target 1.2.2 Starting in 2020, with the water recycling industry, and state and federal government, increase funding for water reuse projects coastwide.	**Partners** SWRCB RWQCBs
Target 1.2.3 By 2022, based on the latest scientific results, establish interim goals as needed for significantly reducing nutrient loading and/or phasing out coastal sewage discharge into the ocean. Work with partners to achieve a goal of 80-90% coastal wastewater recycling that can be put to beneficial use by 2040.	**Partners** SWRCB RWQCBs
Target 1.2.4 Ensure implementation of California's Ocean Acidification Action Plan's Goals by 2023.	**Partners** CDFW FGC SWRCB RWQCBs CCC SCC BCDC OST

Objective 1.3

Improve Understanding of Climate Impacts on California's Coast and Ocean

Target 1.3.1 Identify and continue to fund needed climate-related research, with summary reports issued in 2022 and 2025.	**Partners** SWRCB CDFW SCC SLC FGC BCDC CCC OEHHA

Objective 1.4

Understand the Role of California's Marine Protected Areas in Conferring Climate Resilience

Target 1.4.1 Release a scientific report summarizing current knowledge regarding the ability of California's Marine Protected Areas (MPAs) to provide ecosystem resilience to climate change impacts by 2020 and update with state-funded research by 2023.	**Partners** CDFW FGC OST

MEETING AGENDA

BACWA Nature-Based Solutions Contract Management Group (CMG), Meeting #5

Friday, January 17, 2020, 10:00 - noon

Location: San Leandro Water Pollution Control Plant, 2512 Davis St, San Leandro, CA 94577

Conference Call Information: Phone Number: (669) 900-9128; Meeting ID: 257 983 1092;

https://zoom.us/j/2579831092

Agenda

1. **Introductions** **10:00**
2. **Review Outstanding Action Items** **10:10**
    - Submit Final Scoping and Evaluation Plan (SFEI) - **complete**
    - Present at BACWA Annual Meeting (SFEI) - **complete**
    - Develop survey questions for submission to BACWA agencies (SFEI) - **On-going**
    - Identify opportunities to engage regulatory and agency stakeholders interested in meeting with the group periodically (SFEI) - **On-going**
    - Identify projects (e.g. flood control) with a potential nexus to nature-based treatment systems (SFEI) - **in progress**
3. **Priority Updates** **10:20**
    a. Update re: Plan Bay Area/CHARG request for information
    b. *Scoping & Evaluation Plan* submission and Water Board comments
    c. Update on aligned projects (Transforming Shorelines/OLU Phase 2)
    d. Plan and process for conducting the desk-based GIS analysis
    e. Process & recommendations for survey/request for information
    f. Discuss priorities for outreach and regulatory engagement
4. **Plan for Next Meetings** **11:40**
    - Identify potential agenda items
    - Upcoming meetings:
        - Friday, April 10, 10-12PM @ TBD
5. **Announcements/Agency Updates (all)** **11:50**
6. **Meeting Adjourn** **12:00**

Planning Subcommittee (PS) Meeting No. 43
January 7, 2019
2:30 pm – 5:00 pm
Water Board Offices
Chair: Eric Dunlavey

Meeting Summary

Attendees: David S., Ian W., Eric D., Tom M., Kevin L., Richard L., Lorien F., Robert S., David W.

1. Agenda Modifications: There were no modifications to the agenda, but with the transition of the BACWA Executive Director from David Williams to Lorien Fono, the Planning Subcommittee (PS) took the opportunity to review the history of the Nutrient Management Strategy (NMS) and its governance. In the course of the discussion, the question arose as to whether or not the Charter was ever formally adopted to recognize the PS as the subgroup of the Steering Committee (SC) that served to plan for SC activities and make recommendations for decision making. It was also noted that there was not an official modified document that served as the record of all approved revisions to the Charter. ***Action Item: The Program Coordination Team will (1) develop a revision to the Charter, for SC approval, that recognizes the Planning Subcommittee; (2) updates the Charter for all past modifications; and (3) keep the Charter updated. (IW)***

2. Review Outstanding Action items: There were a few outstanding action items from previous meetings as follows:

Action item: Prepare modifications to the Charter on how meetings will be facilitated (IW)

Action Item: The Program Coordinator will work with the Water Board (WB) to help facilitate the development of the regulatory forecast for the 3rd Watershed Permit

Action Item: The Science Manager (SM) will provide LINKS to the underlying research that supports each finding presented at the Dec 13, 2019 SC meeting.

3. Science Program update

a. **Staffing –** The SM provided an update on the program staffing. He noted that the person overseeing the moorings program had returned to graduate school but another person has been hired to help with the program. A recruitment has been initiated to replace Zhenlin, the previous modeler, and a consultant has been retained at 50 - 75% full time to continue providing modeling services. The SM is also bringing on a modeler from their collaborator Deltares who will plug in on key areas at roughly 25% full time for the next 6-12 months. Another modeler will be returning to grad school in the summer and a recruitment will also be initialed to fill her position.

b. **Other –** The SM provided an update on the USGS monitoring program explaining that an agreement had been worked out with USGS to provide for continued use of the boat and crew through September 2020. USGS has been notified that, by March 2020, SFEI needs to know if the USGS will continue the current agreement for one or more years. The SM will be coordinating with USGS to gain certainty on the fate of the USGS monitoring program.

The SM then discussed the use of $70k in funds remaining on projects completed in FY 19. He explained that $20k had been returned to the Science Plan reserves and proposed that the remaining $50k be spent on needed staffing to move forward on projects already approved by the NMS SC. After a thorough discussion of options for use of the funds, the PS concurred that funds remaining on completed projects could be used on a variety of tasks, including program management, needed to further progress on other projects already approved by the SC but not yet funded.

4. Priority Updates:

a. **Report-Outs -** There were no reports

b. **Current Issues** - The SM asked if the SC EPA representative should be invited to be a member of the PS. The EPA representative has been an active participant on the NMS SC and has expressed interest in the development of the Assessment Framework 2.0. Given the current

workload of the EPA SC member, the PS felt inviting him to PS meetings that were of particular interest to him would be the best approach.

c. **NMS Calendar Review**

i. Review future SC and PS meeting schedules - The schedule for future meetings was reviewed. It was decided to continue to schedule time and date certain meetings to allow folks to get these on their calendars. The PS meetings are scheduled for the 1st Wednesday of each month. It was felt that scheduling all three PS meetings in between SC meetings was a good practice and should be continued given that a PS meeting can be cancelled if not needed. ***Action Item: Schedule future PS meetings (IW)***

Several on-going topics requiring further discussion at PS meetings are the USGS boat; staffing the Science Plan and ensuring that the SM has adequate management support. There was also interest in perhaps scheduling a SC meeting on the USGS boat if possible.

5. Other Updates

a. **Discussion: 2nd Watershed Permit planning** – No report

b. **Discussion: Planning for next AF Meeting –** The SM stated he will be recruiting an expert workgroup on fish physiology to assist on development of the Assessment Framework 2.0. The Program Coordination team will also be refining the GAMS for trending analyses.

6. Planning the next Steering Committee meeting

a. **Review of Action items from meeting** - All Action Items were reviewed
b. **Next steps**

7. Adjourn or address Parking Lot items

Parking Lot of Identified PS Future Agenda Items

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

Planning Subcommittee Meeting No. 44 Minutes
February 5, 2020
9:00 am – 12:00 pm
Water Board Offices
Chair: Ian Wren

Attendees: Tom Mumley, Richard Looker, Eric Dunleavy, Lorien Fono, Ian Wren, Dave Senn.

1. Agenda Modifications (All) 5 min 9:00

An item was added to address the continuation of the USGS ship-based monitoring program.

2. Review Outstanding Action items (DW) 5 min 9:05

- Continue to review charter.
- A proposal was made to formalize a process to choose a chair and define a term.
- There was a decision at the last meeting to add all potential future meetings to participants' calendars, then cancel if necessary.

3. Science Program update (DS) 10 min 9:15

a. Staffing

Erica finished recently, and has been replaced by Krista, a USC graduate. For modelling, there is an active advertisement. Depending on the candidate, SFEI will replace departing staff, but perhaps not fully. The decision will be made based on the pool of candidates. They are also considering a candidate who could assist with program management. There was a discussion about how to manage turnover, as well as improve delegation of management tasks. The need for modeling in SFEI extends beyond the NMS, so cost sharing with the RMP may be an option. There was a discussion of the possibility of creating a center in conjunction with local universities.

b. Other

There was a discussion about buying intellectual property versus working with public models.

4. Priority Updates

a. Report-Outs - 10 min 9:25

None

b. Current Issues – 25 min 9:50

Dave has contacted Mark Gold to discuss NMS strategy pertaining to Ocean acidification. There is the possibility of SFEI getting access to a supercomputer.

c. NMS Calendar Review -10 min 10:00

i. Review future SC and PS meeting schedules (DW/IW)

The next meeting will take place March 4.

5. Other Updates – 60 min 11:00

a. Discussion: AF Meeting and next steps

Terry Fleming and Joe Dillon both joined the last AF meeting. There will a discussion about how there needs to be a transparent regulatory process. It is problematic to make listings based on second-order indicators, rather than based on direct impairments such as DO. There was a differentiation between using indicators for early warning vs. regulatory decisions. There will be a process to develop a route between the science strategy and a probable future basin planning project. It will be important to anticipate regulatory scenarios to reduce uncertainty in implementation and its consequences. There was discussion about bolstering monitoring in the margins/shoal areas, which needs some definition. There will be a presentation on this at the Steering Committee meeting. There is a possibility to put sensors for other parameters on the new monitoring stations. There was a discussion about the role of the AF workgroup in terms of translating scientific findings and trends analysis to regulatory decisions and management findings. There would be a path to a "yellow flag" that would lead to intensified monitoring, leading possibly to "red flag" of nutrient load reductions. What about linking degree of certainty to level of expenditure.

Dave put up a presentation pertaining to decision making pathways, and load reduction scenarios. The impacts due to load would be very region specific. There are three possible routes:1) evidence of existing impacts, 2) current conditions are acceptable, or 3) there is a change in future SF Bay behavior. There is the question of to what extent will decisions be made based on novel events. Dave presented a conceptual framework for a table showing thresholds, trends and scenarios versus different load cap scenarios.

There was a discussion about subembayment development. SFEI staff are doing tracer studies, and developing an approach to allocating load impacts. This could also be accomplished by modeling, but models may need to get more sophisticated.

b. Discussion: Technical workgroups (trends and LSB DO)

None

c. USGS ship-based monitoring

In early December, SFEI met with USGS staff with concerns about the future of the program and that decisions were being dragged out. Dave is asking for feedback on dates and terms. It was suggested that a plan should be in place by April 1. It's possible that a document from the NMS would help USGS staff advocate for this program to their management. The steering committee will develop a memo letter to

USGS on timeline and terms for an agreement with USGS. Dave will meet with them soon.

6. **Planning the next Steering Committee meeting – 30 min** **11:30**

The likely elements of the Annual Workplan will be teed up at this meeting. There were several multiyear projects that were lined up next year, so some FY21 funds are already allocated. The PSC will first review the list of projects at our March meeting. We would like to propose the Charter Update, which would include schedule for Chair appointment, as well as how to accommodate a chair in the absence of a designated chair. There will be a presentation on shoal monitoring, and oxygen concentrations in the shallows.

a. **Review of Action items from meeting (LF)**

- Charter review, with process for Chair appointment – Tom
- Charter review – Lorien
- Add item to March PSC to update Charter
- Multiyear planning visualization – Ian and Dave
- Develop a memo/letter on timeline and technical assistance for USGS agreement – Dave
- Develop table to inform assessment framework discussions – Dave and Ian

b. **Next steps (ALL)**

7. **Adjourn or address Parking Lot items** **12:00**

Parking Lot of Identified PS Future Agenda Items

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

San Francisco Bay Nutrient Management Strategy (NMS)
Steering Committee Meeting # 22
December 13, 2019
Meeting Summary

Steering Committee Attendees

Organization	First	Last	Role	Present	Comments
BASMAA	Adam	Olivieri	Member		
	Tom	Hall	Alternate	X	
	Matt	Fabry	Alternate		
	Geoff	Brosseau	Alternate		
BACWA	Eileen	White	Member	X	
	Lori	Schectel	Alternate	X	
	Eric	Dunlavey	Member	X	
	Jackie	Zipkin	Alternate	X	
Cal DFW	Becky	Ota	Member		
	Bill	Paznokas	Alternate		
Delta Stewardship Council	Rainer	Hoenicke	Alternate		
Napa County Farm Bureau	Jeff	Page	Member		
U.S. Geological Survey	Deb	?	Member	X	On phone
NOAA Fisheries	Joe	Dillon	Member	X	
	Melanie	Harrison	Alternate		
Regional San	Lisa	Thompson	Member	X	
San Francisco Baykeeper	Ian	Wren	Member	X	
South Bay Salt Pond Restoration Project	David	Halsing	Member	X	
Interagency Ecological Program	Steve	Culberson	Member		
SFCWA	Lynda	Smith	Member	X	
	Frances	Brewster	Alternate		
	Stephanie	Fong	Alternate		
U.S. EPA	Terry	Fleming	Member	X	
	Luisa	Valiela	Alternate		
U.S. FWS	Leanna	Zweig	Member		
WSPA	Kevin	Buchan	Member		
	Mike	Armour	Alternate		
Central Valley Water Board	Adam	Laputz	Member		
	Janis	Cooke	Alternate	X	

	Christine	Joab	Alternate		
SF Bay Water Board	Tom	Mumley	Member	X	
	Richard	Looker	Alternate	X	

Additional Attendees

David Williams, BACWA
Melissa Foley, SFEI, Facilitation
David Senn, SFEI, Science Manager, Program Coordinator Team
Robert Schlipf, Water Board
Kevin Lunde, Water Board
Yuyun Sheng, EBMUD
SFEI staff

1 Welcome, Introductions and Agenda Review: Introductions were made and there were no changes to the agenda.

2 Decision: Approve Prior SC Meeting Summaries: The meeting summary from June 14, 2019 was approved.

Materials:

- June 14, 2019 meeting summary

3 Information: Action items

- Update on action items from previous meetings – It was reported that all Action Items had been completed.

Materials:

- Action Items Table

4 Information: Planning Subcommittee Report Out

- Update on Planning Subcommittee (PS) action items - The PS has been developing a workplan for Assessment Framework 2.0 (AF) which will be discussed later in the agenda.

The PS had evaluated submitting a grant application to EPA but decided against doing so since the grant was geared towards demonstration of innovative technologies.

5 Information: NMS Program Update

- Financials – The Science Manager (SM) introduced several members of his team and described their role on the team. He then presented spreadsheets showing the program budget and the various projects. It was reported that the USGS had committed to an additional year of funding for the boat used in the monitoring program but that there still needs to be efforts expended on how to gain future commitments from USGS for providing the boat.

- Program/Projects – The SM then discussed key projects for the current FY and answered questions on the projects. A key staff member engaged in the modeling effort had recently left SFEI and the SM had executed a short-term contract with a modeler to help fill the gap left by the vacancy. Efforts are being made to provide additional needed modeling expertise for the NMS science program.

Materials:

- Quarterly Financial Report
- Program update

6 Discussion: Review FY 20 Program Plan and Science Plan 2.0

- Recap of FY 20 Program Plan and overview of FY 20 projects - The SM reminder the Steering Committee (SC) of the previously approved approach of authorizing the science team to purse more projects than the FY 20 budget provided for pending receipt of additional funding. This would allow getting started on several multi-year projects as opposed to waiting until all the funds were in place. It was also noted that BACWA had recently agreed to "front load" their annual science funding.

  The SM is planning to convene an expert panel in early 2020 to determine the best approach for investigating the appropriate levels of DO for the Lower South Bay. The SM also provide an update on the moored sensor program and interfaces with the Delta Science Program.

- Science Plan 2.0 overview, and potential approaches for structuring and sharing detailed components of 5-yr. science plan – As an introduction to the Science Plan 2.0 the SM presented a listing of findings to date. A suggestion was made to provide LINKS to the underlying research that supports the finding for those who want to delve deeper into the technical investigations. ***Action Item: the SM will provide LINKS to the underlying research that supports each finding.***

The SM then described the program areas for Science Plan 2.0. The areas are as follows:

1. Loads
2. Phyto blooms and low DO
3. HABs & toxins
4. Coastal ocean impacts
5. Future scenarios

The budget for the Science Plan through the year 2024 will be split with roughly 65% of the budget devoted to investigations of DO in the deep subtidal and the shallows of the Bay and 35% devoted to mechanistic studies of HABs, biotic end points, risk and future scenarios, and coastal effects.

A graphic was presented which depicted the various areas of study and the confidence levels hoped to be attained by the end of 2024. After much discussion, the consensus of the SC was the Science Plan was on the right track and provided for flexibility to make adjustments in focus areas as projects were undertaken and conclusions drawn.

Materials:

- FY 20 Program Plan Overview
- State-of-Science Jul-2019
- Refresher: Science Plan 2.0 (Mar 2019); Program Plan FY 20

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7 Discussion: Assessment Framework Concept: The SM started the discussion by providing an overview of how an AF would be used and the progress made, and concerns raised, with AF 1.0.

A workplan has been developed for AF 2.0. The workplan has five elements as follows:

1. Indicators
2. Thresholds
3. Trends
4. Special studies
5. Reporting

AF 2.0 will focus on development of early warning signals of increased eutrophication, triggers for increased monitoring and informing the need for management actions. It was noted that several projects in the Science Plan will specifically address development of indicators of low DO in the open Bay and the margins and sloughs, plus analyses of trends. The initial assumption is that 5.0 mg/l DO in the Bay is protective, but an assessment needs to be conducted for future scenarios. An expert workgroup will be convened to assist in the assessment of protective levels of DO in various parts of the Bay. An expert workgroup will also be convened to determine if algal toxins can be used as an indicator of impairment.

The SM noted that the biogeochemical model will play a key role in assessing conditions, particularly in the margins and sloughs of the Bay

The SM asked if any of the SC members would like to participate in the expert workgroups. It was decided that two levels of participants will be established (1) active, for those who will be attending the expert panel workgroups and (2) passive, for those who just want to be informed of the discussion and conclusions.

Materials:

- Draft Assessment Framework work plan

Desired Outcome:

- Feedback on the conceptual strategy

8 Technical Update: Biogeochemical field program

- Background on data needs related to measuring biogeochemical transformations – Understanding transformations is critical to assessing the impacts of nutrients on habitats. The transformations are complex and need to include the sediments as well as the water column. Some studies were completed in the 1980's that provide needed data.

- Overview of draft workplan and report-out on discussion and feedback from Oct 1-2 expert working group - An expert workgroup provided the following feedback:

1. Sampling should consist of a combination of core sediment measurements as well as field scale inferences
2. LSB and SB require different approaches
3. Benthic fauna should be sampled
4. Variable should be stated
5. Field program should be a stand-alone study

The Workplan for Year 1 will focus on LSB and use of high frequency sensors. The Year 2 Workplan will focus on SB and 3 target areas with more intensive use of high frequency sensors.

There are several limitations and challenges associated with the Field Program as follows:

1. Missing spatial component (North Bay)
2. Missing interannual variability
3. Can't measure all processes
4. High frequency sensor work is a risky approach
5. limited budget

To overcome these challenges and help guarantee success of the Field Program, the SM proposes to use experts for advice, use tried and true methods to the extent practicable, use collaborators to build core incubation and use the first year of the program to troubleshoot any issues that arise.

Materials:

- Draft workplan, including background technical report

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9 Technical Update: Modeling

- Summary of modeling goals for FY 20 and underway projects - The SM presented a chart of projects already underway and reviewed the modeling goals.
- Update on modeling work, Jul-Nov 2020 - The SM presented an overview of the hydrodynamic model runs for 2017. There was good correlation with tidal activity as well as temperature and salinity. Correlation on stratification was ok, but not great in all subembayments. It was also demonstrated that the most important nitrogen loss process is the phytoplankton uptake while the most important nitrogen source process is the degradation of the phytoplankton.

Materials:

- Modeling Update - technical report (distributed at meeting)
- Refresher: Modeling 5yr Workplan; Model Validation (Dec2018)

10 Technical Update: HABs

- Overview of HAB program goals, and past and on-going work – Key questions in the HAB investigations include; are there substantial harmful algae present; who the sensitive populations are; and what is the role of nutrients. With respect to nutrients, key questions include what are factors that regulate nutrients, the role of nutrients, and what are protective levels. Key unknowns for HABs at this time are what are the inputs from the ocean and freshwater sources and how much are HABs growing in the Bay. Also need to look at future scenarios of growth under varying light levels.

  Update on two recent pilot projects - Monitoring to date has included collecting samples of mussels at floating docks. These samples show that both domoic acid and saxitoxin are present and at times saxitoxin, which is produced by the Alexandrium organism, exceeds the human health levels. However, some data may be suspect since the counts changed dramatically when a technician involved in the counting retired. Microsystin is also found in the Bay but the source is not clear since this is a freshwater organism

Materials:

- Utility of molecular techniques for HABs (distributed at meeting)
- Evaluating HAB-toxin levels in anchovies (distributed at meeting)

11 Other Business

● Updates from other activities/members

San Jose – announced that they will be continuing their fish trawls activities for another two years

USGS – their vessel will be available through September 30, 2020, SFEI is looking at a broader need for a vessel as a way to help fund

Regional San – continuing their large capital program to reduce nutrients

BACWA – considering holding a workshop on innovation in nutrient technology

12 Action Items and Wrap-up

Confirm next meeting date: March 13, 2020 @ SFEI

Following meeting: June 12, 2020 @ SFEI

Surprising Levels of Pollution from two South Bay Cities

Posted February 6, 2020

Baykeeper's field team has been busy investigating the causes of pollution to South Bay creeks and rivers that feed into San Francisco Bay. During the last few rainy seasons, our scientists spent many weeks scrambling down hillsides and wading into mud to collect water samples from storm drain outfalls.

We got surprising results. The water samples from the cities of Sunnyvale and Mountain View contained bacteria pollution at levels 50 times higher than the legal limits. The samples revealed especially dangerous levels of E. Coli from raw sewage.

The runoff also likely contains other pollutants associated with sewage and stormwater runoff, including petroleum hydrocarbons, heavy metals, microplastics, mold spores, pharmaceuticals, and numerous cancer-causing toxics.

We believe aging water infrastructure and inadequate pollution controls are the cause.

Many of the two cities' older clay sewer pipes are cracked and probably leaking raw sewage into the stormwater pipes. The cities also have inadequate urban pollution controls, so that contaminants flow freely from streets into

storm drains.

This toxic stew runs directly into Stevens Creek, Calabazas Creek, Sunnyvale East Channel, and Guadalupe Slough, which empty into the south end of San Francisco Bay.

And sadly, wildlife is on the receiving end of Sunnyvale and Mountain View's polluted runoff. Stevens Creek, for instance, is one of the last remaining viable fish habitats for the threatened Central California Coast Steelhead. Birds exposed to the pollution in the impacted areas include the California clapper rail, the western burrowing owl, and the western snowy plover.

City residents also face harm. Parks and trails, including the Bay Trail, near the polluted waterways are popular destinations—despite the fact that these beautiful neighborhood creeks may have toxic water that's unsafe for human contact.

So this week, Baykeeper filed lawsuits under the Clean Water Act. We're working to ensure Sunnyvale and Mountain View control this harmful pollution.

Fortunately, both cities have indicated a commitment to solving the problem.

"Mountain View and Sunnyvale clearly want to do the right thing for the Bay and their residents," says Baykeeper Executive Director Sejal Choksi-Chugh. "We're collaborating with them now on a plan for stopping the flow of pollution to creeks and the Bay."

We'll be advising the cities to fix broken sewer pipes and install Bay-friendly green infrastructure that captures pollutants before they enter storm drains. These upgrades will also improve drought resistance by capturing more rainwater flow.

Stemming the flow of toxic pollution from Sunnyvale and Mountain View will reap benefits beyond just these two cities for people and wildlife in every corner of the Bay.

Photo of a kite surfer near the Yahoo campus in Sunnyvale by Meggle, Flickr/CC (https://flic.kr/p/akhsYj)

Water Reuse Action Implementation Plan

Please adhere to the content guidance below to allow for compatibility with anticipated formats of the February 2020 WRAP release.

Action Title:	*Support Local and Regional Reuse Projects by Identifying Challenges, Opportunities and Models for Interagency Collaboration*
Action Origin and No.:	☐ Existing action from draft Action Plan (Action No. 2. _6__ . _1_) ☐ Modified action from draft Action Plan (Action No. __ . _) ☒ New action
Strategic Theme Area:	*Indicate the most relevant Strategic Objective/Theme Area (from draft WRAP Section 2, where applicable).*

☒ Integrated Action	☐ Research Integration
☒ Policy Coordination	☒ Outreach and Communication
☐ Science and Specifications	☐ Workforce
☐ Technology	☐ Metrics
☐ Water Information	☐ International Collaboration
☐ Finance	

Brief Description of the Action:	Identify institutional challenges to water reuse, assess opportunities for interagency collaboration and publicize agreements and other legal models that support implementation of water reuse and other integrated water management projects among "water cycle" utilities. Prepare and widely distribute a report based on this research and hold a national webinar to discuss report findings. As resources permit, hold one or more regionally targeted workshops with interested local water agencies to assist development of interagency agreement structures designed to enable cross-program and interjurisdictional collaboration to implement water recycling, stormwater capture and other projects involving reuse of impaired water sources.
Action Owner(s) and Key Contact:	*Eric Rosenblum (eric@envirospectives.com), David Smith, EPA (smith.davidw@epa.gov)*
Partner(s)	*Bahman Sheikh (bahman.sheikh@gmail.com), Robert S. Raucher (BRaucher@Raucher.LLC), Felicia Marcus (feliciaamarcus@gmail.com)*
Interested Collaborators:	California Association of Sanitation Agencies (CA), Bay Area Clean Water Agencies (CA), King County (WA)

Background:	The production and distribution of recycled water requires the participation and collaboration of numerous public and private parties. By definition, wastewater reclamation and stormwater capture for reuse bring together communities, wastewater agencies, municipal stormwater programs, and/or drinking water agencies that often have single-purpose mandates and limited ability to pursue integrated water management strategies. Similarly, many reuse/capture project opportunities involve multiple jurisdictions within regions and watersheds. Enabling agencies and communities to work across programs and jurisdictions is critical to designing successful projects to reclaim wastewater for reuse and capture stormwater for use. To be successful in designing and implementing water reuse and capture projects, communities and agencies invested in the water cycle need tailored legal mechanisms that enable them to work with each other across traditional program and jurisdictional boundaries. There are currently no readily available resources that identify a menu of options for creating interagency agreements to enable this type of cross program and inter-jurisdictional collaboration. Identifying these legal mechanisms to enable interjurisdictional and interagency collaboration in reuse/capture project planning will be critical to overcoming the barriers caused by fragmentation in water governance.
Opportunities to be Gained:	• Identify the motivations, opportunities, impediments and tools related to interagency collaboration for water reuse/capture. • Investigate the fragmentation of benefits and costs accruing to the various water cycle stakeholders and assess its impact on project implementation. • Examine how administration of water and wastewater regulations can affect interagency cooperation and suggest strategies to facilitate reuse. • Explore the limits of legislative mandates and incentives for interagency cooperation in integrated water resource management, of which water reuse and stormwater capture are key components. • Evaluate the ways that agreements can allow agencies to work together as "virtual utilities" to plan, develop, implement, and operate recycled water projects. • Demonstrate how utility managers and other stakeholders can resolve challenges and select appropriate legal models to lead successful, interjurisdictional water reuse programs.
Photo / Image / Relevant Quote: (optional)	✓ TBA ✓ "The Action Plan cannot overlook the opportunity to support collaboration on a regional and local level between water and wastewater utilities." E. Rosenblum, R. Raucher, B. Sheikh ✓
Implementation Milestones:	✓ See below

	IMPLEMENTATION MILESTONE	LEAD(S) Contact(s)	PARTNER(S) Contact(s)	TARGET COMPLETION DATE	ACTUAL COMPLETION DATE	
1	Convene work team to evaluate collaboration structure options and develop report and outreach efforts.	Eric Rosenblum; David Smith (EPA Region 9)	Bahman Sheikh, Robert Raucher, Felicia Marcus; California Association of Sanitation Agencies (CA); Bay Area Clean Water Agencies (CA); King County (WA)	4/20		
2	Perform a literature review of institutional challenges to water reuse projects, innovative governance structures that support or incentivize enhanced cooperation; and agreement models that allow agencies to work together as "virtual utilities" acting in a coordinated manner.	Action work team		8/20		
3	Identify examples of water reuse governance models and interagency agreements used successfully by water agencies and communities. Select at least four (4) case studies of different kinds of interagency agreements. Analyze their advantages, constraints, similarities, differences, and adaptability to different settings.	Action work team		10/20		
4	Prepare a report to be posted on the EPA Water Reuse Action Plan website summarizing institutional challenges, innovative governance structures and models, and critical factors to consider in selecting among available interagency collaboration models.	Action work team		12/20		
5	Prepare and deliver a national webinar describing the report findings featuring 1-2 case studies, to be posted and recorded on EPA Website	Action work team		2/21		
6	As resources permit, identify 1-2 local or regional settings where governance fragmentation inhibits interagency or interjurisdictional collaboration in development of reuse/capture projects.	Action work team	Local/regional sites	2021		
7	Conduct 1-2 day workshops with each candidate site to evaluate local needs, facilitate identification of most promising interagency collaboration structures, and identify necessary steps to implement selected interagency agreement structure(s).	Action work team	Local/regional sites	2021		

Notes/References/Resources

Insert relevant notes, references, and resources, as desired for organizational / future reference purposes. This section will not be included in the print or online versions of the WRAP.

Water Research 95 (2016) 142–149

Contents lists available at ScienceDirect

Water Research

journal homepage: www.elsevier.com/locate/watres

Poly- and perfluoroalkyl substances in wastewater: Significance of unknown precursors, manufacturing shifts, and likely AFFF impacts

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ARTICLE INFO

Article history:
Received 30 October 2015
Received in revised form
5 February 2016
Accepted 27 February 2016
Available online 10 March 2016

Keywords:
Aqueous film forming foam (AFFF)
Poly- and perfluoroalkyl substances (PFASs)
San Francisco Bay
Wastewater effluent
Total oxidizable precursor method

ABSTRACT

In late 2014, wastewater effluent samples were collected from eight treatment plants that discharge to San Francisco (SF) Bay in order to assess poly- and perfluoroalkyl substances (PFASs) currently released from municipal and industrial sources. In addition to direct measurement of twenty specific PFAS analytes, the total concentration of perfluoroalkyl acid (PFAA) precursors was also indirectly measured by adapting a previously developed oxidation assay. Effluent from six municipal treatment plants contained similar amounts of total PFASs, with highest median concentrations of PFHxA (24 ng/L), followed by PFOA (23 ng/L), PFBA (19 ng/L), and PFOS (15 ng/L). Compared to SF Bay municipal wastewater samples collected in 2009, the short chain perfluorinated carboxylates PFBA and PFHxA rose significantly in concentration. Effluent samples from two treatment plants contained much higher levels of PFASs: over two samplings, wastewater from one municipal plant contained an average of 420 ng/L PFOS and wastewater from an airport industrial treatment plant contained 560 ng/L PFOS, 390 ng/L 6:2 FtS, 570 ng/L PFPeA, and 500 ng/L PFHxA. The elevated levels observed in effluent samples from these two plants are likely related to aqueous film forming foam (AFFF) sources impacting their influent; PFASs attributable to both current use and discontinued AFFF formulations were observed. Indirectly measured PFAA precursor compounds accounted for 33%–63% of the total molar concentration of PFASs across all effluent samples and the PFAA precursors indicated by the oxidation assay were predominately short-chained. PFAS levels in SF Bay effluent samples reflect the manufacturing shifts towards shorter chained PFASs while also demonstrating significant impacts from localized usage of AFFF.

1. Introduction

Poly- and perfluoroalkyl substances (PFASs) are a class of chemicals whose notable uses include imparting oil and water repellency in consumer products and reducing surface tension in firefighting foams. Two 8-carbon (C8) PFASs, perfluorooctane sulfonate (PFOS) and perfluorooctanoate (PFOA), were historically manufactured in the largest quantities (Wang et al., 2014; Paul et al., 2009) and have been detected in surface waters (Huset et al., 2008; Ahrens et al., 2009; Zushi and Masunaga, 2009; Meyer et al., 2011), humans (Wang et al., 2011a; Kato et al., 2011; Yeung et al., 2013a, 2013b; Wu et al., 2015), and biota (Giesy and Kannan, 2001; Houde et al., 2011) in areas far from known point sources.

Over the last fifteen years, the production of C8-based PFASs has been phased out by some of their largest manufacturers and the U.S. and Europe have taken steps to regulate or limit the production and import of PFOS and PFOA (U.S. EPA, 2006, U.S. EPA, 2013, Commission Regulation No 552/2009). As a result of these changes, PFOS and PFOA have largely declined in concentration in the blood of Americans and Europeans (Wang et al., 2011a; Kato et al., 2011; Yeung et al., 2013a, 2013b). As C8 compounds have been phased out, the production of PFASs containing C4 and C6 perfluorinated moieties has increased, and PFASs containing C2 and C3 perfluorinated groups connected by ether linkages are also being manufactured (Wang et al., 2015).

Municipal and industrial wastewaters are an important type of real-time tracker of PFASs that humans and wildlife may be exposed to. The perfluoroalkyl acids (PFAAs) are very non-reactive

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http://dx.doi.org/10.1016/j.watres.2016.02.055
0043-1354/

to typical wastewater and drinking water treatment processes, and only long-chain PFAAs are effectively removed by sorption (Schultz et al., 2006; Appleman et al., 2014; Guo et al., 2010). Polyfluorinated compounds can undergo transformation during treatment processes, but their products are often other measureable PFASs that contain a similarly sized (*i.e.*, equivalent or one to two carbons shorter) perfluorinated group (Rhoads et al., 2008; Schultz et al., 2006). Because of their potential to form PFAAs, these polyfluorinated compounds are often referred to as PFAA precursors. Thus, PFASs measured in effluent are likely to reflect PFASs in current use products, along with PFASs in historical products still in use or slowly released into wastewater. PFOS and PFOA were still the main forms of PFAAs in municipal wastewater treatment plan (WWTP) effluent five to ten years after the major phase-outs of C_8-based PFASs commenced (Schultz et al., 2006; Ahrens et al., 2009; Guo et al., 2010; Klosterhaus et al., 2013), suggesting a lingering C8 source associated with consumer products.

In a large, urbanized metropolitan area like the San Francisco Bay (SF Bay) Area, the discharge of WWTP effluent may represent a large contribution to the total PFASs in the receiving water body. From 2004 to 2009, PFOS was observed in SF Bay seals and cormorant eggs at concentrations an order of magnitude greater than those collected nearby from a less-urbanized setting (Sedlak and Greig 2012), and wastewater was speculated to be one potential source of exposure. Six SF Bay wastewater samples collected in 2009 contained an average of 24 ng/L PFOS (Klosterhaus et al., 2013), similar to concentrations observed in municipal effluent in other regions (Schultz et al., 2006; Boulanger et al., 2005; Ahrens et al., 2009; Guo et al., 2010). More than 300 million gallons per day (MGD) (1.1 million m^3) of WWTP effluent is discharged to SF Bay with design loading rates varying from <1 MGD to more than 100 MGD (Pacific Institute, 2009). Both individual high volume plants with high concentrations and the aggregate loading from all the treatment plants combined could present a major source of PFASs to the region. The current profile and concentrations of PFASs in SF Bay WWTP effluent may be an important predictor of wildlife PFAS exposure going forward.

In this study, final effluent was collected from eight WWTPs that discharge to SF Bay and analyzed for a suite of twenty PFASs. The samples were also oxidized with hydroxyl radical to quantify the total oxidizable PFAA precursor concentration by adapting a previously developed method (Houtz and Sedlak, 2012; Houtz et al., 2013). One of our objectives was to understand how PFAS profiles have changed in WWTP effluent as a result of manufacturing changes. These data were used to provide temporal and spatial significance to the high levels of PFASs previously observed in SF Bay wildlife. Additionally, the total oxidizable precursor assay was used to evaluate the extent to which effluent may serve as a source of future PFAAs such as PFOS and PFOA through the transformation of PFAA precursors. Differences in PFAS concentrations among effluent samples were explained in part by PFAS sources within the sewersheds, namely aqueous film forming foam (AFFF). While AFFF is typically associated with elevated PFAS concentrations in groundwater (Schultz et al., 2004; Houtz et al., 2013; Backe et al., 2013; McGuire et al., 2014), this study demonstrates that AFFF may be a significant contributor to elevated levels of PFASs in industrial and municipal wastewater.

2. Material and methods

2.1. Materials

All analytical standards of PFASs and their stable-isotope surrogates were purchased from Wellington Laboratories (Guelph, Ontario). PFAS abbreviations are defined in Table S1. Milli-Q water was used from an in-house system. JT Baker brand UPLC-grade methanol, ammonia strong, and ammonium acetate were purchased from VWR. >99.5% purity potassium persulfate, sodium hydroxide, and concentrated hydrochloric acid were purchased from Fisher Scientific.

2.2. Collection and storage of wastewater effluent

Single grab samples of treated final effluent were collected during peak diurnal flow in September and October 2014 from eight WWTPs that discharge to SF Bay. 1-L polypropylene containers were filled with 500 mL to 1 L of final effluent from discharge outlets considered free of Teflon-coated materials. Collection occurred during the dry season to minimize storm water inflow and infiltration. A field replicate and a field blank (Milli-Q water) were included for quality control (Table S2). WWTP operators measured total suspended solids (TSS) at the time of sample collection (Table 1). Details of treatment plant loads, hydraulic retention times, and relevant treatment train steps are reported in Table 1. To verify higher levels of PFASs observed at Fairfield Suisun and San Francisco Airport Industrial WWTPs in 2014, an additional effluent sample was collected from each plant in June 2015.

Samples were received blind at the laboratory and were subsequently stored at 4 °C. Samples were oxidized, extracted, and analyzed within three weeks of sample receipt.

2.3. Oxidation of wastewater samples for indirect measurement of PFAA precursors

Each effluent sample was aliquoted into duplicate 50-mL subsamples to be oxidized for indirect measurement of PFAA precursors according to a previously developed method (Houtz and Sedlak, 2012; Houtz et al., 2013). Samples were diluted two-fold in a basic persulfate solution prepared in Milli-Q water for a final concentration of 60 mM persulfate and 125 mM NaOH. The samples were thermalized in 125 mL HDPE-plastic bottles overnight at 85 °C in a temperature-controlled water bath, resulting in the decomposition of persulfate to sulfate radical and subsequent scavenging by hydroxide to form hydroxyl radical. Following thermolysis, samples were neutralized to a pH between 5 and 9 using concentrated HCl.

This method efficiently converts PFAA precursor compounds in the sample to PFAAs (Houtz and Sedlak, 2012). In previous control experiments, only PFCA products were generated from the oxidation of runoff and groundwater samples amended with fluorotelomer compounds and perfluorinated sulfonamido compounds (Houtz and Sedlak, 2012; Houtz et al., 2013). In this study, an expanded set of PFAA precursors that included polyfluorinated phosphinates (PFPis) were amended to wastewater samples in control experiments; a mixture of PFCAs and perfluorinated phosphonic acids (PFPAs) resulted from the oxidation of 6:6, 6:8, and 8:8 PFPi in wastewater samples (Fig. S1a–b). Other PFAA precursors containing a bond between phosphorous and a perfluorinated group may also be expected to generate PFPA products upon oxidation. The molar concentration of additional PFCAs and PFPAs generated in the sample is a conservative estimate of the concentration of PFAA precursors present in the sample (Houtz and Sedlak, 2012).

Additional details of the validation of this method in wastewater and the anticipated products and yields from various PFAA precursors are included in the SI.

2.4. Sample extraction and analysis

Oxidized and unoxidized wastewater samples were prepared

Table 1
Characteristics of WWTPs included in this study.

Wastewater treatment plant	Effluent TSS, mg/L	Flow, MGD	Hydraulic residence time, hours	Relevant treatment steps
San Jose Santa Clara (SJ Santa Clara)	1.0	83	8–10	Filtration
East Bay Dischargers Association (EBDA)[a]	9.0	50	10–23	
East Bay Municipal Utilities District (EBMUD)	13	46	12–18	
Central Contra Costa	5.3	30	6–7	UV disinfection
Palo Alto	0.50	20	22	Filtration
Fairfield Suisun (Oct 2014)	1.4	12	24	Filtration, UV disinfection
Fairfield Suisun (June 2015)	<1.0	12	24	Filtration, UV disinfection
San Mateo	5.5	8.5	15	Filtration
San Francisco Airport Industrial (SFO) (Oct 2014)	5.1	0.63	6	
San Francisco Airport Industrial (SFO) (June 2015)	5.1	0.63	6	

[a] Combined effluent of multiple plants with a single discharge point.

for analysis of twenty individual PFAS analytes by concentrating them with solid phase extraction (SPE) (Oasis WAX SPE cartridges, 3 cm^3, 60 mg, 30 μm; Waters, Milford, MA). Fifty-mL duplicate aliquots of each sample were spiked with 20 ng/L internal standard mixture prior to extraction. An extraction blank and oxidized blank were included with each set of 8–12 extracted samples. SPE cartridges were pre-conditioned on an SPE manifold (Supelco) with 3 mL each of 0.5% NH_4OH in methanol, acetonitrile, and Milli-Q water before pulling the sample through under vacuum. After extraction, cartridges were rinsed with 2 mL HPLC-grade water, dried under vacuum for twenty minutes, and eluted with 4 mL acetonitrile and 4 mL 0.5% NH_4OH in methanol. Samples were evaporated to near dryness and reconstituted in 250 μL methanol. Reconstituted extracts were heated for 30 min at 40 °C and vortexed before transferring to HPLC vials containing 250 μL of Milli-Q water. PFAS measurements in procedural blanks are reported in Table S2. Limits of detection and quantification are reported in Table S3 and accuracy, precision, and recoveries are reported in Table S4.

Samples were analyzed by UPLC-MS/MS using a Shimadzu Nexera UPLC and a SciEx 5500 QTrap operating in multiple reaction monitoring mode. The UPLC was modified to minimize background contamination by replacing accessible PTFE lines with PEEK tubing. The solvent degasser was bypassed and solvents were degassed offline. A Waters Cortecs UPLC C18 column (1.6 μm, 3.0 × 30 mm) was placed after the mixing point of solvents and before the injector to delay and separate background PFAS signals from sample PFAS signals. PFASs were separated on a Waters Acquity UPLC BEH C18 column (1.7 μm, 2.1 × 50 mm). Details of the UPLC and analytical methods can be found in Tables S5–S7.

3. Results and discussion

3.1. PFAS levels in WWTP effluent

Fifteen analytes were present above method detection limits in all wastewater samples (Fig. 1a–b). In the eight samples from treatment plants collected in 2014, PFHxA was detected at highest median concentrations (24 ng/L), followed by PFOA (23 ng/L), PFBA (19 ng/L), PFOS (15 ng/L), PFPeA (9.7 ng/L), PFNA (9.0 ng/L), PFHxS (4.9 ng/L), and PFBS (2.8 ng/L). Low levels of the C6 and C8 PFPAs, PFHxPA (1.3 ng/L, median) and PFOPA (0.9 ng/L, median) were also detected in all 2014 wastewater effluent samples. Four PFAA precursors were present above detection limits in all samples; 6:2 FtS was measured at a median concentration of 3.4 ng/L, and MeFOSAA (2.1 ng/L), EtFOSAA (1.4 ng/L), and 8:2 FtS (0.9 ng/L) were also detectable in all samples.

Of the eight WWTPs sampled in 2014, six had total individual PFAS concentrations between 80 and 160 ng/L (Fig. 1a), while Fairfield Suisun and SFO Industrial had significantly higher total concentrations (390 ng/L and 2900 ng/L, respectively) (Fig. 1b). Fairfield Suisun contained elevated levels of PFOS (220 ng/L), PFHxS (19 ng/L), and 6:2 FtS (15 ng/L) but otherwise contained similar concentrations of PFASs to the other six low concentration effluent samples. SFO Industrial effluent contained higher concentrations of PFASs across the range of analytes (Fig. 1b). Due to the elevated levels of PFASs observed in effluent from these two sites, a second set of effluent samples from these plants was collected in June 2015 to verify whether elevated concentrations might be routinely observed. Effluent from Fairfield Suisun contained approximately three times as much PFOS (620 ng/L) and twice as much PFOA (68 ng/L) as it had in 2014, while most analytes in SFO Industrial effluent were within ±35% of the concentrations measured in 2014.

3.2. Temporal changes in PFASs in SF Bay WWTP effluent

PFASs in wastewater effluent discharged to SF Bay were previously measured in 2009 (Table 2) (Klosterhaus et al., 2013); average values and standard deviations for seven PFCAs and three PFSAs were reported for final effluent collected from six unspecified municipal WWTPs. When considering the six municipal treatment plants in this study that contained similar amounts of PFASs (Fig. 2a), PFBA, PFPeA, and PFHxA rose in average concentration 150%–220% since 2009. An unpaired *t*-test showed that the increases seen in PFBA and PFHxA were statistically significant at $p < 0.019$ and at $p < 0.008$, respectively; PFPeA increases were not statistically significant. Average concentrations of PFOA and PFOS in municipal WWTP effluent declined by 34% and 47%, respectively, from 2009 to 2014. These changes were not statistically significant, largely because much more variation was observed in PFOA and PFOS WWTP effluent concentrations in 2009 than in 2014 (Table 2). The concentration of PFOS in Fairfield Suisun WWTP effluent is ten to thirty times higher than the 2009 average PFOS concentration, significantly outside of the range of PFOS measured in municipal effluent that year.

Changes in PFAS production are reflected in these PFAS temporal changes in SF Bay municipal WWTP effluent. The rise in short chain C4 and C6 PFCAs reflects the increase in production of C6 fluorotelomer compounds, which are capable of transforming to C4 to C6 PFCAs in the presence of aerobic WWTP bacteria (Lee et al., 2010; Wang et al., 2011b). High variance in WWTP effluent concentrations of PFOA and PFOS in 2009 make it more challenging to point to concrete trends with those analytes.

3.3. PFAA precursors measured by oxidation

Oxidation of each effluent sample revealed the presence of polyfluorinated PFAA precursor compounds that were not directly detected as specific analytes (Figs. 2–3). The total molar concentration of PFASs was approximated by the summation of measured

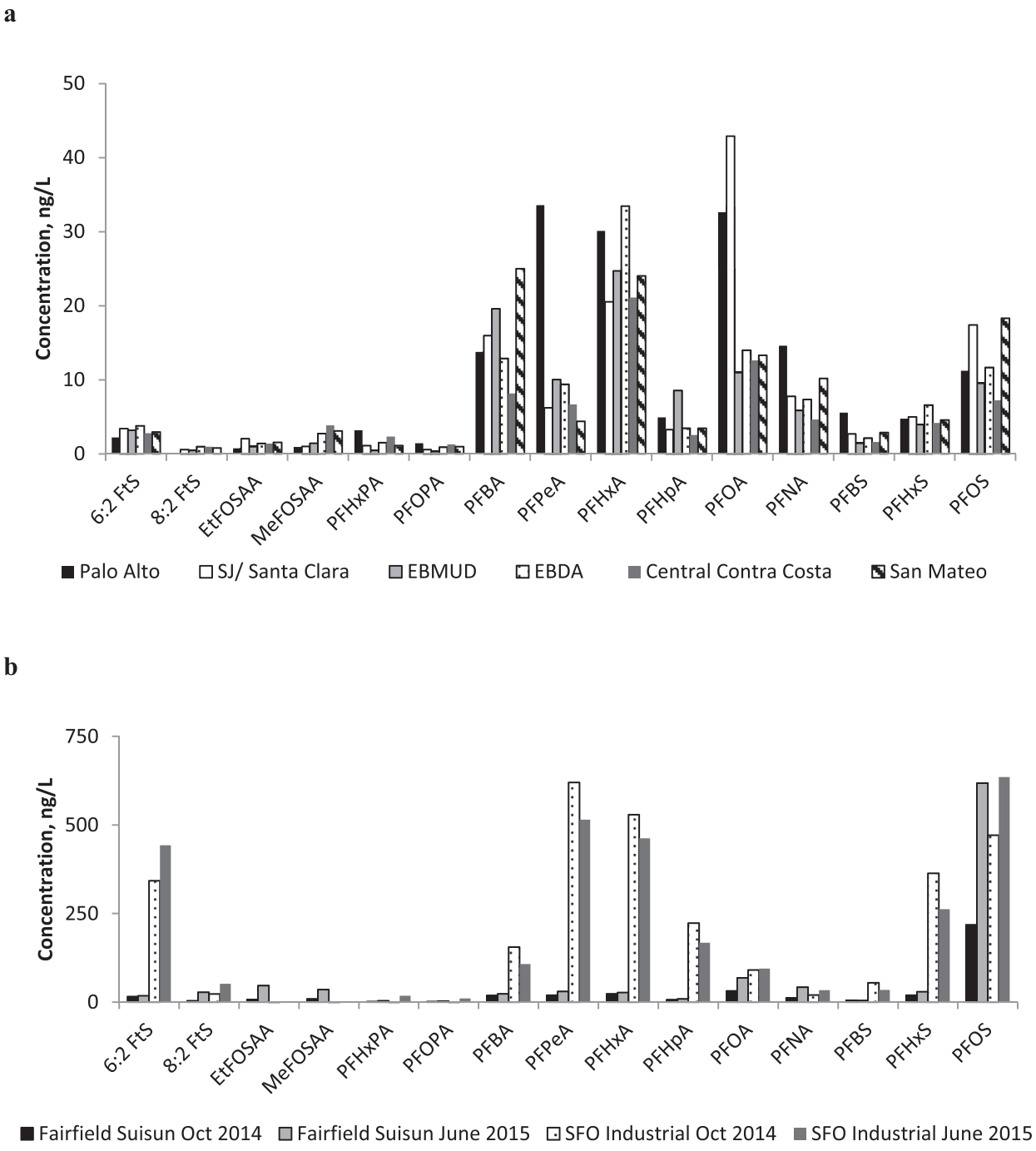

Fig. 1. Concentrations of PFASs in (a) effluent samples from six WWTPs collected in Fall 2014 and (b) effluent samples from two additional WWTPs collected in Fall 2014 and Summer 2015.

Table 2
Average concentrations (±standard deviation) of PFASs in domestic WWTP effluent discharged to SF Bay in 2009 (Klosterhaus et al., 2013) and 2014 (this study).

Average concentration, ng/L	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFBS	PFHxS	PFOS
Effluent, 2009 (n = 6)[a]	7.4 ± 4.7	6.7 ± 7.5	17 ± 4.0	5.3 ± 1.2	32 ± 30	12 ± 5.6	3.8 ± 1.8	6.0 ± 6.5	5.5 ± 5.5	24 ± 32
Effluent, 2014 (n = 6)[b]	16 ± 5.8	12 ± 11	26 ± 5.1	4.4 ± 2.2	21 ± 13	8.4 ± 3.6	3.5 ± 1.7	2.7 ± 1.5	4.8 ± 0.9	13 ± 4.4

[a] The PFAS concentrations reported from 2009 are from undisclosed WWTPs (Klosterhaus et al., 2013). Some or all of the WWTPs may be the same as those reported in the 2014 average.
[b] Average 2014 PFAS values and their standard deviations are calculated from the six WWTPs reported in Fig. 1a.

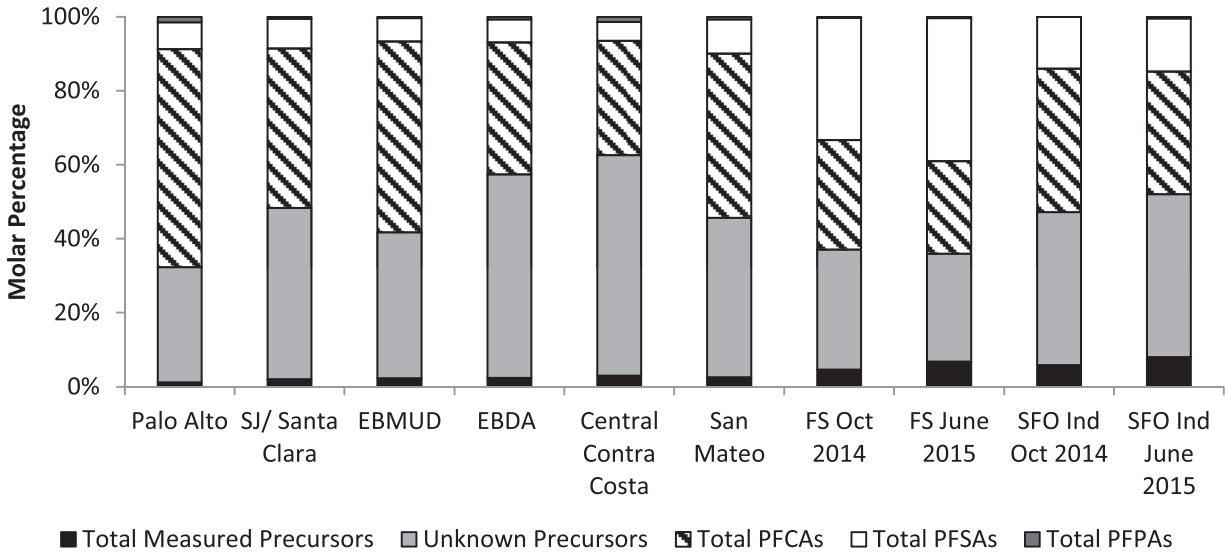

Fig. 2. Molar percentage of measured precursors, unknown precursors, and total measured PFCAs, PFSAs, and PFPAs in WWTP effluent samples. The concentration of unknown precursors is the total concentration of PFAAs generated upon oxidation, less the oxidation products expected from the precursors directly measured.

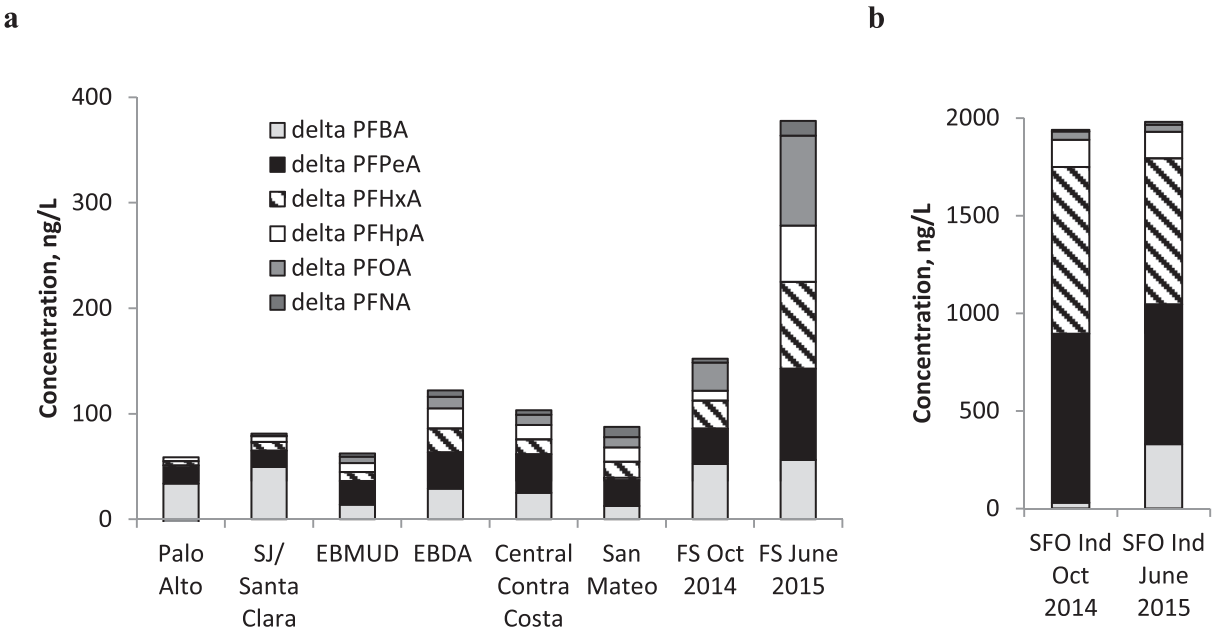

Fig. 3. a–b: Concentrations (ng/L) of individual PFAAs generated in oxidized wastewater samples. Production of PFPAs was negligible. "Delta" refers to the ng/L increase observed in that analyte's concentration after the sample was oxidized.

PFCAs, PFSAs, PFPAs, measured precursors, and unknown precursors (*i.e.*, the summation of delta [PFCAs] not attributable to PFCAs generated by measured precursors). The molar fraction of PFAA precursors ranged from 33% (Palo Alto) to 63% (Central Contra Costa) of the total concentration of PFASs. Notably, the most PFAS-contaminated effluent samples, Fairfield Suisun and SFO Industrial, contained between 36% and 52% PFAA precursors, which is within the range observed among the less PFAS-contaminated effluent from other WWTPs. The oxidation products generated from measured precursors accounted for 3.0%–18% of the increase in PFCAs observed. 6:2 FtS accounted for the greatest fraction of oxidation products attributable to measured PFAA precursors in all samples, and in particular in SFO Industrial and Fairfield Suisun effluent samples.

The concentrations of PFAA precursor compounds in aqueous samples have been quantified in a handful of previous studies via the total oxidizable precursor assay (Ye et al., 2014; Houtz and Sedlak, 2012; Houtz et al., 2013); compared to those samples, these effluent samples have a somewhat higher percentage of PFAA precursors. In this study, PFCA mass concentrations increased by 124%, on average, after oxidation and the molar fraction of PFAA precursor concentrations was, on average, 46% of total PFASs. In 2013 samples collected from the Tama River region in Japan, effluent concentrations of PFCAs increased by an average of 21% after oxidation (Ye et al., 2014). PFCAs in river water increased by 28% in the Tama River and 69% in the Tama River's tributaries. In urban runoff collected around SF Bay in 2010, PFCA concentrations increased by a median of 64% after oxidation (Houtz and Sedlak,

2012). In groundwater collected from AFFF-impacted sites in 2011, about 25% of total PFASs were precursors, and 55% were identified by direct measurement. While these effluent samples contain a higher fraction of PFAA precursors than observed in other environmental samples, they will not increase overall PFAA loading by more than a factor of two or three upon eventual transformation to PFAAs.

Most PFCAs generated in samples were C6 and shorter (Fig. 3a–b), suggesting minor presence of long-chain PFAA precursors (Fig. 3a–b). The production of PFOA and PFHpA indicate the presence of C8-based precursors such as 8:2 fluorotelomer compounds and perfluorooctane sulfonamido compounds; PFNA is also generated in small amounts by 8:2 fluorotelomer compounds, as well as PFAA precursor compounds with longer perfluorinated chain lengths (Houtz and Sedlak, 2012). With the exception of Fairfield Suisun (FS), more than 62% by mass (>72% by mole) of PFCAs generated by oxidizing each effluent sample was composed of PFBA, PFPeA, and PFHxA.

In Palo Alto and San Jose/Santa Clara effluent, no increase in PFOA and minimal production of PFHpA were observed, suggesting a lack of C8-precursors (Fig. 3a). (Note: the generation of PFOA from the 2–3 ng/L of directly measured C8 precursors was within the range of precision of PFOA measurement (12%, Table S4) for those oxidized samples.) These two effluent samples also have the greatest concentrations of PFOA, which may indicate that C8-precursors are transformed to PFOA at greater rates in these treatment plants. Alternatively, these two plants have the lowest total suspended solids (TSS) concentrations (Table 1), so C8-precursors, which are more likely to be particle associated, may be removed in these plants through filtering.

Oxidation products in Fairfield Suisun effluent are 26%–40% C7 and longer, by mass, suggesting a higher percentage of long-chain PFAA precursors than other samples. The high percentage of long chain precursors may be related to the same C8-based PFAS source in Fairfield Suisun's sewershed that led to the effluent's disproportionately high percentage of PFOS (Fig. 1b). However, like Palo Alto and San Jose/Santa Clara, Fairfield Suisun also has very low TSS and enhanced removal of C8-based precursors would be expected.

3.4. Sources of elevated PFASs in wastewater effluent

The higher levels of PFASs observed in effluent from the Fairfield Suisun and SFO Industrial WWTPs are likely related to AFFF usage and subsequent transport of AFFF-related constituents to those two treatment plants. PFOS is a principal ingredient of historical formulations of AFFF manufactured by 3 M (Place and Field, 2012; Houtz et al., 2013), and 6:2 FtS is a putative breakdown product of PFASs found in fluorotelomer-based AFFF manufactured by Ansul, National Foam, and possibly others (Houtz et al., 2013). 6:2 FtS was recently observed as a biotransformation product of Ansul AFFF incubated in aerobic soil microcosms (Harding-Marjanovic et al., 2015) and of an Ansul ingredient, 6:2 fluorotelomercaptoalkylamido sulfonate, incubated in activated sludge (Weiner et al., 2013). Both 6:2 FtS and PFOS are commonly observed at AFFF firefighter training areas at the highest levels of all PFASs (Moody et al., 2003; Schultz et al., 2004; Backe et al., 2013; Houtz et al., 2013). Second, both WWTPs have customers that use AFFF. The SFO Airport uses AFFF in emergencies and for periodic proficiency testing. Fairfield Suisun receives approximately 10% of its flow (personal communication with treatment plant operator) from a nearby U.S. Air Force Base that uses AFFF in emergencies and, historically, for firefighter training (AFCEC, 2015).

AFFF management practices at the SFO Airport suggest that much of the PFAS contamination in the final effluent of its industrial plant measured in this study is a residual from historical AFFF usage and annual testing of AFFF products. The industrial plant only intentionally receives AFFF-impacted waste once a year, when AFFF is tested to ensure it meets the Federal Aviation Administration's foam performance standards. Testing of AFFF occurred over a several day period approximately one month after the 2014 sample was collected and seven months before the 2015 sample was collected. Based on discussions with the plant operators, AFFF was discharged to the plant within hours to days. Thus, neither effluent sample reported here is likely to be heavily impacted by a recent AFFF introduction event. When AFFF is employed for emergencies, runoff from the area of usage is typically diverted and collected for off-site treatment and disposal and not delivered to the industrial plant.

The type of AFFF currently used by SFO Airport suggests that the high levels of PFOS observed in the treatment plant effluent are from a historical residual. Since 2008, SFO Airport has purchased approximately 9000 gallons of Ansulite 3% AFFF (personal communication with treatment plant). This type of AFFF is likely to form the observed 6:2 FtS and shorter chain PFCAs such as PFHxA, PFPeA, and PFBA from its 6:2 fluorotelomer-based PFAS ingredients (Place and Field, 2012; Harding-Marjanovic et al., 2015; Weiner et al., 2013). However, PFOS should not be introduced from this type of AFFF and is more likely the result of washoff from historical usage of AFFF manufactured by 3 M. Safety data sheets maintained at SFO indicate that at one time, AFFF manufactured by 3 M was used by the airport.

Fairfield Suisun WWTP receives approximately 10% of its flow from Travis Air Force Base (AFB), but it does not receive any regular or planned AFFF inputs from the AFB. According to a recent Air Force Civil Engineering Center (AFCEC) Report on PFASs at Travis, the AFB has two firefighter training areas on-site where AFFF has impacted underlying groundwater (AFCEC, 2015). The groundwater is treated in an on-site system using activated carbon and is not discharged into the sanitary sewer. However, floor drains in at least one airplane hangar and one fire station at the AFB flow into the sanitary sewer (AFCEC, 2015); accidental AFFF releases occurred in 2011 and 2014 in the hangar connected to the sanitary sewer (AFCEC, 2015).

The AFCEC (2015) report notes that Ansulite 3% AFFF was stored at Travis AFB in 2014; no mention is made of the use of AFFF manufactured by 3 M, but the presence of μg/L concentrations of PFOS in groundwater on site is a likely indicator of its historical use at Travis. Final effluent at Fairfield Suisun has concentrations of PFOS that are elevated ten to thirty times compared to the WWTPs without known AFFF inputs. If the high levels of PFOS are the result of AFFF usage at Travis AFB, it is likely from washoff of historical contamination of the hangars, AFFF distribution systems, or sewage lines. 6:2 FtS, the primary compound measured here that would be related to Travis's known Ansulite usage, was elevated three to six times in Fairfield Suisun effluent compared to effluent from the WWTPs without known AFFF inputs.

Unlike SFO Airport, Fairfield Suisun WWTP receives wastewater from many industrial, commercial, and municipal users. Travis AFB is a possible source of Fairfield Suisun's high PFOS levels due to its significant contribution to Fairfield's overall flow and its history of AFFF usage, but it may not be the primary source of Fairfield Suisun's PFOS contamination.

4. Conclusions

The impact of each individual plant is determined both by its overall flow and its level of PFAS contamination. The WWTP with the highest effluent flow rate, San Jose/Santa Clara WWTP, discharges the greatest mass of PFASs for all analytes except PFOS. Its effluent discharge point is within ten miles of Mowry Slough,

where some of the highest global levels of PFOS have been recorded in cormorant eggs and harbor seals (Sedlak and Greig, 2012). Due to its comparatively highly contaminated effluent, SFO Industrial may be a source of significant PFAS exposure immediately adjacent to its outfall or right after AFFF testing events, but its typical contribution to overall PFAS loading is among the smallest of all the plants. Fairfield Suisun effluent may have a significant localized and Bay-wide impact with its PFOS loading, as it is responsible for at least 40% of the mass of PFOS discharged from all the plants in this study combined.

The determination of total PFAA precursor concentrations in effluent samples indicated that 33%–63% of PFASs in effluent are a mixture of PFAA precursor compounds, which are not-routinely-quantified. While this contribution will increase the overall PFAS loading of WWTP effluent to the Bay, it will change it by less than an order of magnitude. Additionally, most effluent samples pose an insignificant source of additional PFOS and PFOA via the eventual transformation of PFAA precursors, as most PFAA precursors in effluent are C6 and shorter. Biosolids from these wastewater treatment plants may contain significantly higher amounts of PFOS and PFOA and their precursors (Sepulvado et al., 2011; Lindstrom et al., 2011).

PFAS contamination from AFFF is typically associated with groundwater (Moody et al., 2003; Schultz et al., 2004; Houtz et al., 2013; Backe et al., 2013) and accidental releases to surface water (Moody et al., 2002; Awad et al., 2011; Kärrman et al., 2013). This study is among the first to demonstrate that AFFF may be a primary source of PFAS contamination to effluent, and that PFASs in AFFF-impacted wastewater may occur at much higher levels than in typical municipal wastewater. While effluent discharges to SF Bay do not impact local drinking water, AFFF-impacted wastewater may be especially problematic in cases where wastewater is intentionally or inadvertently reused as a drinking water source.

Disclaimer

The views expressed herein are those of the authors and do not necessarily reflect those of the California Department of Toxic Substances Control.

Acknowledgments

The authors would like to acknowledge participants from the following wastewater treatment plants in our study: City of Palo Alto Wastewater Treatment Plant, Fairfield Suisun Sewer District, Central Contra Costa Sanitary District, East Bay Municipal Utility District, East Bay Dischargers Authority, City of San Mateo Wastewater Treatment Plant, San Jose/Santa Clara Regional Wastewater Facility, and San Francisco International Airport Industrial Waste Treatment Plant and Reclaimed Water Facility. The authors would further like to acknowledge Pete Kauhanen for preparing the visual abstract GIS image. The authors thank the assistance of Mark Smith and Merrie Schilterlowe for answering clarifying questions about AFCEC's Report on Travis AFB. The authors thank Kris Nipple and Jennifer Acton for providing details on SFO Airport's management of AFFF.

Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.watres.2016.02.055.

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PESTICIDE UPDATE
2/21/20

Background
US EPA is reviewing three types of pesticides that are known to pass through Bay Area POTWs at concentrations exceeding aquatic life toxicity thresholds: Pyrethroids (23 pesticides), Imidacloprid, and Fipronil. US EPA only reviews pesticides once every 15 years. Their process and timing are both pretty opaque, so we cannot easily predict the timing and workload for our reviews of their risk assessments and risk management proposals. In October, EPA released a crystal ball schedule indicating that risk management proposals for the pyrethroids and imidacloprid, and a risk assessment for fipronil are all scheduled for release between November and early spring 2020. This is an unexpectedly large workload for the current fiscal year that was not anticipated within our budget.

US EPA controls pesticides labels, which define how pesticides are allowed to be used and who can use them. It has stronger authorities to regulate consumer products - like pet flea control products - than DPR. In light of the inaction in some areas at the federal level, DPR is testing its authorities in new ways, so if US EPA doesn't act, DPR may be able to provide assistance. Obtaining DPR action is more likely than obtaining US EPA action, but it is significantly more costly. Based on prior experience, obtaining DPR regulatory action will require POTWs to mount significant multi-year DPR management educational effort and then likely ongoing participation in engagement with DPR and pesticide manufacturers in scientific and management discussions before DPR action occurs (usually this takes 5+ years).

Since the beginning of our participation in the pesticides/water quality work, BACWA's pesticides budget has been based on the assumption that many of the routine regulatory tracking, agency networking and collaboration, watch list development, and initial document review costs would be largely borne by a larger ($200,000-$250,000/year) effort funded by CASQA that is also staffed by our consultant team. Due to immediate CASQA budget challenges unrelated to pesticides, CASQA funding for calendar year 2020 has been drastically cut (to about $60,000, entirely from two agencies that rely on CASQA for pesticides-related NPDES permit compliance activities). This has forced them to reluctantly immediately narrow their pesticides work to a minimum set of regulatory and reporting tasks required for a few members' permit compliance, terminating their central role in carrying on all routine pesticides regulatory tracking, networking/collaboration, science, and preliminary document review work. Since this has always been a lean effort, CASQA's budget reduction will have a significant impact on BACWA's pesticide workgroup's capacity this calendar year. The workgroup has dealt with prior CASQA budget reductions (about 20-30% reduction over the prior two years) by using member funds - primarily from Palo Alto - to cover preparation of comment letters (a variable and difficult to predict cost) and using BACWA funds to cover time on core activities.

This situation is unlikely to be permanent. CASQA anticipates that all municipal urban runoff programs will have pesticide regulatory participation requirements upon adoption of the State Water Board's proposed Urban (Runoff) Pesticides Amendments, expected in 2021, and

implementation of these requirements in permits (expected by the mid-2020s). CASQA is developing a long-term funding plan whereby all programs would contribute a fair share to CASQA's annual $200,000-$250,000 budget. If this effort is successful, in a few years, they would be positioned to return to their former leadership role in the "Urban Pesticides Pollution Prevention Partnership" ("UP3 Partnership"). In the meantime, CASQA is seeking to expand member agency contributions to continue their pesticides regulatory work, but this effort is challenging given the stormwater program funding situation, lack of a direct, immediate regulatory driver for most urban runoff programs, and need to fund CASQA's engagement in ongoing development of the Urban Pesticides Amendments and its associated monitoring program.

Letters to US EPA in Current Fiscal Year

The workgroup has reviewed the US EPA schedule and consultant recommendations on the first group of risk assessments/risk management proposals issued in BACWA's current fiscal year. We expect two- three more groups of these documents to be issued this fiscal year. Recognizing the budget challenge, the workgroup has elected to send letters only on (1) highest priority items and (2) simple, low-cost items to complete prior efforts (e.g., wrapping up our long-term effort to improve root control chemical and swimming pool chemical label language to protect workers and collection systems). The latter small items are expected to be accomplished within the workgroup's budget. The workgroup does not expect to be able to complete the three large items within its budget.

Due to this budget situation, the workgroup requests that BACWA and its members consider supplemental funding to allow the workgroup to both complete these letters and to continue its routine tasks for the remainder of the fiscal year. Alternatives include ceasing workgroup activity other than on the letters or selecting only a subset of the items for comments.

Cost Estimates

Comments on US EPA risk assessments and risk management proposals require a detailed scientific review, use of the scientific literature, networking with allies including DPR and the Water Boards, and workgroup consultation to determine the comment strategy and approach. Complex letters cost about $5,000 (range = $3,500 - $7,500). Simple letters on simple topics that do not break new scientific or policy ground can be completed for $1,000 or less.

The pyrethroids risk management proposal was released just prior to Thanksgiving - it was unexpectedly complex and obtuse. We reviewed it in detail and networked with DPR and our water board, and NGO partners on analyzing and developing a response. The holiday timing and EPA's procedures (which do not account for holidays and disfavor comment period extensions) required us and our partners in our pesticides work to mount a major team effort just to get the comment period extended to provide sufficient review time. Our effort (which generated almost 3 dozen extension requests from stormwater, POTWs, water boards, DPR, and NGOs) was successful and comments were due in mid-February. The total cost of this letter (scientific analysis, scientific conversation with DPR and partners, setting up full workgroup scientific call

with DPR, POTW share of work on comment period extension requests, BACWA leadership in preparing a detailed comment letter, and networking with NACWA, the Water Board, and NGO partners to request they echo BACWA comments), was in the $7500 range. To control costs and maximize effectiveness, the workgroup did a detailed review of a list of potential comment topics, keeping most, but removing those requiring additional research; the Water Board took the lead on developing comments to correct errors in EPA's POTW cost/benefits assessment; and the workgroup obtained assistance from BAPPG on finding a "don't pour down the drain" graphic to recommend be placed on all urban pyrethroids products.

EPA's imidacloprid risk mitigation proposal was released last week. It consists of dozens of separate documents that we are still triaging. It appears that EPA did not address POTWs in its proposal. (This is a great surprise given the EPA approach on pyrethroids, which was unsatisfactory, but reflected a genuine effort on EPA staff's part to find something they could do to help POTWs). The Pesticides Workgroup will have an initial discussion of its approach to preparing a comment letter tomorrow (2/13), with a likely plan to build off of topics covered in the pyrethroids comment letter and to structure the imidacloprid letter in a manner that will make it useful for kicking off a conversation with DPR if EPA is not responsive. Depending on the workgroup's decisions, the workload estimate is in the $5,000-$7500 range.

We do not yet have any insights into the structure/contents of the EPA fipronil risk assessment. The rough workload estimates is about $7,500 for the letter, based on costs for prior complex items and the new inability to rely on work that was previously funded by CASQA (which reduced the cost of scientific analysis of EPA proposals, coordination with DPR and partners, and letter preparation).

February 10, 2020

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

VIA EMAIL: commentletters@waterboards.ca.gov

Subject: Comment Letter – Toxicity Appendices J and K

Ms. Townsend,

The Bay Area Clean Water Agencies (BACWA) appreciates the opportunity to comment on **Appendix K** to the Draft Staff Report, Including Substitute Environmental Documentation, for the Proposed Establishment of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California; and Toxicity Provisions (proposed Toxicity Provisions). 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. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health.

As we expressed in previous opportunities to comment on the proposed Toxicity Provisions (see letter dated December 21, 2018), BACWA has significant concerns regarding several aspects of the proposed Toxicity Provisions. The present letter is limited in scope to comments on Appendix K to the Draft Staff Report on the proposed Toxicity Provisions. We thank State Water Board staff for providing this comment opportunity. In addition to our comments herein, we support the alternative approach to the monitoring frequencies and timing of the three sample medians that are proposed by the Central Valley Clean Water Agencies in their respective comment letter. BACWA also supports the comments submitted by the Sacramento Regional County Sanitation District (Regional San).

Toxicity testing requires significant logistical resources and planning in order to be conducted in a timely manner. BACWA appreciates the State Water Board's staff effort to research toxicity laboratory practices and include these findings in Appendix K of the Staff Report. As concluded in Appendix K and acknowledged by staff at the November 28, 2018, State Water Board Hearing and again at the recent January 10, 2020, Public Staff Workshop, initiating three tests within a 30

day period is possible, but very difficult. This makes it for all practical purposes, infeasible on an on-going basis across the State.

Per Appendix K, "dischargers will know if they need to initiate a second MMEL compliance test between day 15 and day 27 of the calendar month. The second MMEL compliance test could be initiated somewhere between day 16 and day 28 of the calendar month, if it is required." As noted, results from the second MMEL may not be available until day 27 of the calendar month. This leaves agencies extremely vulnerable to small slippages in the timeline due to unforeseen events. Dischargers are very much reliant on the labs to be efficient and to provide the results in a timely manner. Any delays on their part can jeopardize the discharger's ability to initiate the third test within the same calendar month. And, if a result is obtained on a weekend or holiday or if other unavoidable issues are encountered at the POTW such that collection of a third sample is not obtained within a day of the receipt of results from the second MMEL compliance test, the discharger is again at risk of noncompliance with the Toxicity Provisions.

Because of the level of complexity and expertise required to perform WET tests, most agencies send their sample to contract laboratories. There are limited accredited laboratories available to perform toxicity testing; at present there are three in the San Francisco Bay Area. It is likely that at some point an agency will not be able to locate a laboratory able to accept their sample, or turn around reports to meet the schedule stipulated. Department of Fish and Wildlife Scientific Collecting Permits are required for collecting certain wild (non-cultured) bioassay test organisms. These permits have become increasingly complex to apply for and are often delayed. Additionally, there are very few wild-caught organism suppliers providing these types of test organisms for bioassay labs. An issue such as this could impact all laboratories in the State, and is a further example of the difficulties involved in potentially performing bioassay testing three times per calendar month. The proposed Toxicity Provisions should avoid penalizing an agency in this type of situation. Similar consideration must be given to the very real possibility that a test may be invalidated due to laboratory error, quality control failure, and unavailability of test organism due to seasonal nature, and permittees are not able to meet the required time limits.

BACWA supports and thanks State Water Board staff for revising the proposed Toxicity Provisions to allow replacement toxicity tests, including replacement tests in a subsequent month, when required initial testing does not meet the test acceptability criteria (TAC). However, this allowance does not go far enough to recognize the breath of circumstances that can delay a successful toxicity test. BACWA proposed that the proposed Toxicity Provisions retain the language allowing for tests to be run in a subsequent month, but broaden the reasons for granting the extension to include circumstances beyond the POTWs control in addition to tests that do not meet TAC. BACWA requests that **the Permitting Authority be given discretion to extend the allowable schedule for effluent testing if an agency can prove that they are unable to conduct their test for reasons outside of their control**, such as lack of species availability, control failure, or capacity contract laboratories. Such discretion would allow dischargers the ability to collect and analyze the needed samples without the jeopardy of receiving a violation.

BACWA also requests that the State Water Board reevaluate its median limit requirements. The proposed Toxicity Provisions, as written, expose agencies to non-compliance due to factors

outside their control in the worst case scenario, or waste of resources due to planning unnecessary testing under the best case scenario. On the issue of resources and costs associated with conducting up to three tests in a calendar month, BACWA supports the detailed comments submitted by Regional San, in particular comment 5 of their letter. For these reasons, **instead of a median monthly limit, BACWA recommends that the Toxicity Provisions implement a rolling median limit, similar to how median chronic toxicity triggers are currently implemented in Region 2 NPDES permits.**

BACWA appreciates State Water Board staff's ongoing willingness to discuss and reevaluate aspects of the Toxicity Provision during this process. Please do not hesitate to contact Lorien Fono, BACWA Executive Director, at lfono@bacwa.org to discuss next steps.

Respectfully Submitted,

Lorien Fono
Executive Director

cc: BACWA Executive Board
Debbie Webster, Central Valley Clean Water Association
Terrie Mitchell, Sacramento Regional County Sanitation District (Regional San)
Rebecca Franklin, Regional San and Sacramento Area Sewer District (SASD)

Lorien Fono

From: Thorme, Melissa <mthorme@DowneyBrand.com>
Sent: Friday, February 7, 2020 12:54 PM
To: Lorien Fono
Subject: FW: 19-15535 Southern California Alliance o, et al v. USEPA, et al "NOTICE -- Case being considered for Oral Argument"

Categories: Board Packet

Looks like oral argument on the TST case will now be heard in June or July. DOJ and I both have conflicts in August so that is off the table. Will keep you posted.

Thanks, Melissa

From: ca9_ecfnoticing@ca9.uscourts.gov <ca9_ecfnoticing@ca9.uscourts.gov>
Sent: Friday, February 7, 2020 9:32 AM
To: Thorme, Melissa <mthorme@DowneyBrand.com>
Subject: 19-15535 Southern California Alliance o, et al v. USEPA, et al "NOTICE -- Case being considered for Oral Argument"

*****NOTE TO PUBLIC ACCESS USERS*** Judicial Conference of the United States policy permits attorneys of record and parties in a case (including pro se litigants) to receive one free electronic copy of all documents filed electronically, if receipt is required by law or directed by the filer. PACER access fees apply to all other users. To avoid later charges, download a copy of each document during this first viewing.**

United States Court of Appeals for the Ninth Circuit

Notice of Docket Activity

The following transaction was entered on 02/07/2020 at 9:31:42 AM PST and filed on 02/07/2020

Case Name: Southern California Alliance o, et al v. USEPA, et al
Case Number: 19-15535

Docket Text:
This case is being considered for an upcoming oral argument calendar in San Francisco

Please review the San Francisco sitting dates for June 2020 and the 2 subsequent sitting months in that location at http://www.ca9.uscourts.gov/court_sessions. If you have an unavoidable conflict on any of the dates, please file Form 32 **within 3 business days of this notice** using the CM/ECF filing type **Response to Case Being Considered for Oral Argument**. Please follow the form's instructions carefully.

When setting your argument date, the court will try to work around unavoidable conflicts; the court is not able

to accommodate mere scheduling preferences. You will receive notice that your case has been assigned to a calendar approximately 10 weeks before the scheduled oral argument date.

If the parties wish to discuss settlement before an argument date is set, they should jointly request referral to the mediation unit by filing a letter **within 3 business days of this notice**, using CM/ECF (**Type of Document**: Correspondence to Court; **Subject**: request for mediation).[11589134]. [19-15535] (AW)

Notice will be electronically mailed to:

Ashley M. Boulton, Attorney
David M. Fox
Mr. John David Gunter, II, Trial Attorney
Leslie Marie Hill, Assistant U.S. Attorney
Chi Soo Kim, Attorney
Melissa Thorme, Attorney

DRAFT

Executive Board Special Meeting Agenda

SF Bay Regional Water Board / BACWA Executive Board Joint Meeting

Monday March 16, 2020, 10am to 12pm

SF Bay Water Board, 1515 Clay Street, St. 1400 Oakland, CA

ROLL CALL AND INTRODUCTIONS – 10:00

PUBLIC COMMENT – 10:05

DISCUSSION/OTHER BUSINESS- 10:10

Topic	Goal	Time
1. Exfiltration	• Review of NOIs issued to member agencies • Potential Regional Response	10:15
2. Nutrients	• Group Annual Report submission • Discussion of vision for third Watershed Permit • OPC 5-Year Plan Recycled Water Goals	10:55
5. CECs	• Discussion of potential State Water Board requirement to monitor PFAS	11:20
2. Basin Plan Amendments	• BACWA Update on progress on Chlorine Residual BPA	11:45
3. Enterococcus monitoring	• BACWA's update on enterococcus wet weather sampling effort	11.50
7. Toxicity	• Update on adoption	11:55

ADJOURNMENT

NOTICE OF PUBLIC AVAILABILITY OF CHANGES TO PROPOSED REGULATIONS

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM REGULATIONS

TITLE 22. SOCIAL SECURITY
DIVISION 4. ENVIRONMENTAL HEALTH
CHAPTER 19

NOTICE IS HEREBY GIVEN that the State Water Resources Control Board (State Board) has changed the text of the proposed Environmental Laboratory Accreditation Program regulations in response to comments received during the 45-day public comment period and is making the changed text available for public comment prior to adoption of the resulting regulations.

A copy of the proposed text with the new changes clearly illustrated is available for viewing on ELAP's Rulemaking File Homepage.

WRITTEN COMMENT PERIOD AND SUBMITTAL OF COMMENTS
Any person, or his or her representative, may submit written comments on the new changes to the proposed regulations. For this Notice, only comments that pertain to the new changes to the proposed regulations will be considered and included in the rulemaking record. Pursuant to Government Code section 11346.8(c), the written comment period closes in 15 days, at 5:00 p.m. on February 28, 2020. The State Board will only consider comments received at the State Board offices by that time. Submit written comments via at least one of the following:

Electronic mail (email): commentletters@waterboards.ca.gov

FAX: (916) 341-5620

Postal Mail: Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000

Hand Delivery: Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor, Sacramento, CA 95814

Persons delivering comments must check in with lobby security and have them contact Ms. Jeanine Townsend at (916) 341-5600. Also, please indicate in the subject line and/or on the cover page of submittals: "**Comments – Proposed Revised ELAP Regulations.**"

All comments, including email or fax transmissions, should include the author's name and contact information, including either email or U.S. Postal Service mailing address in order for the State Board to provide any notices that may be required in future.

Due to the limitations of the email system, emails larger than 15 megabytes (MB) may be rejected and will not be received by the State Board. Therefore, emails larger than 15 MB should be submitted under separate emails that are each less than 15 MB, or another form of delivery should be used.

The State Board requests, but does not require, that written comments sent by mail or hand- delivered be submitted in triplicate.

The State Board requests, but does not require, that if reports or articles in excess of 25 pages are submitted in conjunction with the comments, that the commenter provide a summary of the report or article and describe the reason for which the report or article is being submitted or is relevant to the proposed regulation.

Please note that under the California Public Records Act (Gov. Code, § 6250 *et seq*.), your written comments, attachments, and associated contact information (*e.g*., your address, phone, email, *etc*.) become part of the public record and can be released to the public upon request.

In the Final Statement of Reasons, staff will respond to all comments received on the record during the comment periods. The Administrative Procedures Act requires that staff respond to comments received regarding all noticed changes. Therefore, staff will only address comments received during this 15-day comment period that are related to the changes detailed in the proposed revised regulatory text.

SPECIAL ACCOMMODATION REQUEST

Consistent with California Government Code Section 7296.2, special accommodation or language needs may be provided for any of the following:

- Documents made available in an alternate format or another language;
- A disability-related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerk to the Board at (916) 341-5600 as soon as possible, but no later than February 19, 2020.

TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

SI NECESITA ARREGLOS ESPECIALES
Conforme a la Sección 7296.2, del Código del Gobierno de California, los siguientes servicios o arreglos especiales pueden ser solicitados:

- Documentos en otro idioma o en un formato alterno;
- Arreglos razonables relacionados a una discapacidad.

Para pedir estos arreglos especiales o servicios en otro idioma, puede contactar a la Secretaria de la Junta (Board) al (916) 341-5600 lo más pronto posible, pero antes del dia 19 de febrero de 2020. Los usuarios del Sistema TTY/TDD/Voz-a-Voz pueden marcar el 7-1-1 para utilizar el California Relay Service.

STATE BOARD CONTACT PERSONS
Requests for copies of the proposed regulatory text, the initial statement of reasons, subsequent modifications of the proposed regulatory text, or other inquiries concerning the proposed action may be directed to:

Jacob Oaxaca
Senior Environmental Scientist, Supervisor
State Water Resources Control Board,
Environmental Laboratory Accreditation Program
1001 I Street, 17th Floor
Sacramento, CA 95814
Telephone: (916) 323-3433
Electronic mail address: jacob.oaxaca@waterboards.ca.gov

In the event Mr. Oaxaca is not available to respond to requests or inquiries, please contact:

Andrew Hamilton
Senior Environmental Scientist, Specialist
State Water Resources Control Board,
Environmental Laboratory Accreditation Program
1001 I Street, 17th Floor
Sacramento, CA 95814
Telephone: (916) 552-9985
Electronic mail address: andrew.hamilton@waterboards.ca.gov

INTERNET ACCESS

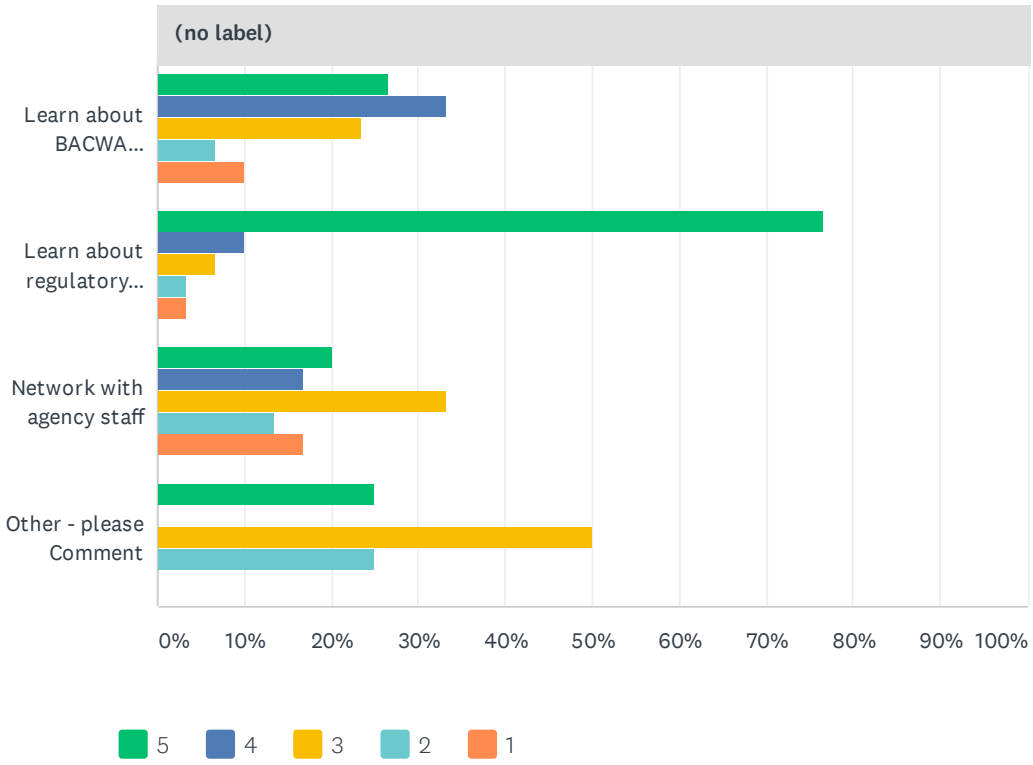
Copies of this Notice, the Notice of Proposed Rulemaking, the Initial Statement of Reasons, and the text of the proposed regulations may be found on ELAP's Rulemaking File Homepage.

February 13, 2020
Date

Jeanine Townsend
Clerk to the Board

Q1 What is your main reason for attending the annual meeting? Please rank your choices, choosing 5 as the MOST important reason and 1 as the LEAST important reason (or adding our own reason).

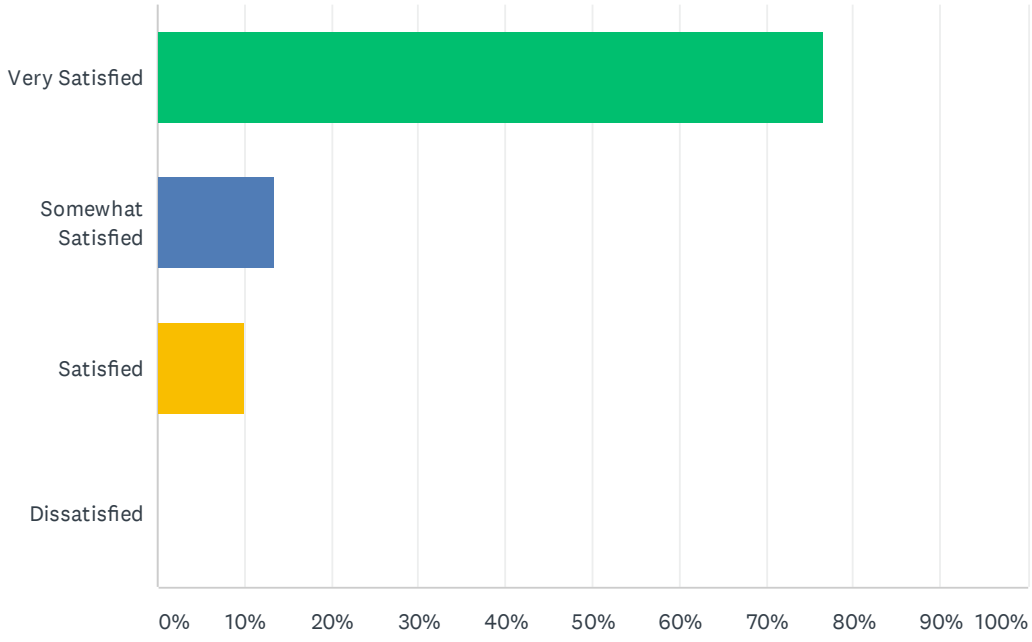
Answered: 30 Skipped: 0



(no label)						
	5	4	3	2	1	TOTAL
Learn about BACWA activities in the last year	26.67% 8	33.33% 10	23.33% 7	6.67% 2	10.00% 3	30
Learn about regulatory developments	76.67% 23	10.00% 3	6.67% 2	3.33% 1	3.33% 1	30
Network with agency staff	20.00% 6	16.67% 5	33.33% 10	13.33% 4	16.67% 5	30
Other - please Comment	25.00% 1	0.00% 0	50.00% 2	25.00% 1	0.00% 0	4

Q2 How satisfied were you overall with the presentations?

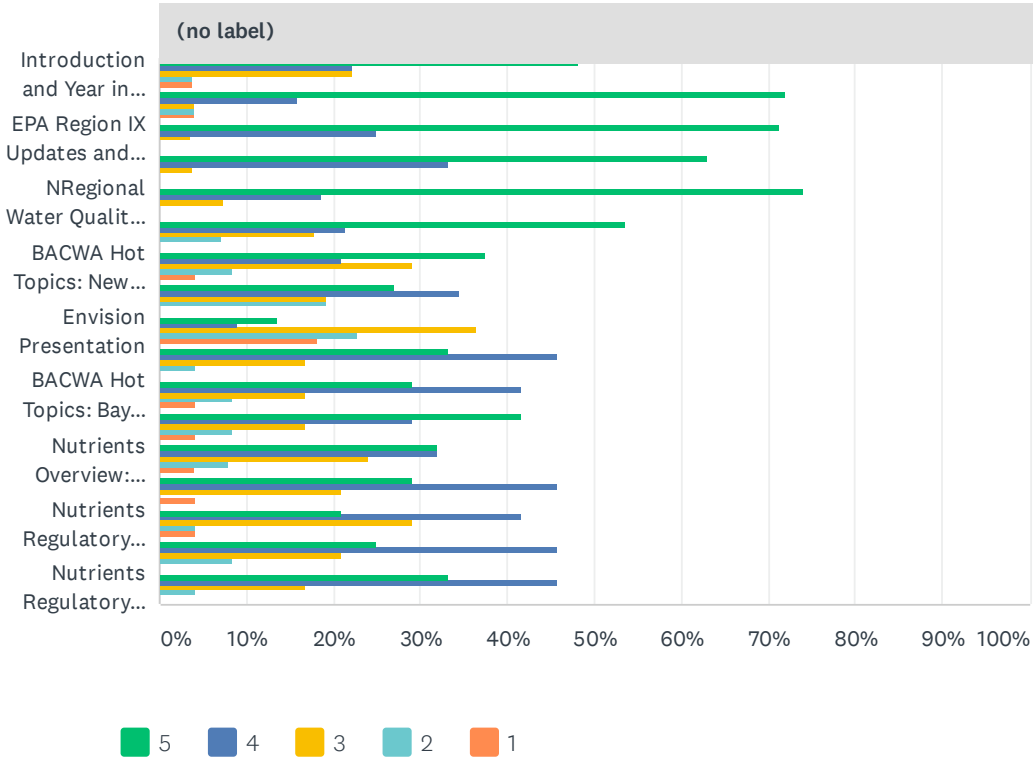
Answered: 30 Skipped: 0



ANSWER CHOICES	RESPONSES	
Very Satisfied	76.67%	23
Somewhat Satisfied	13.33%	4
Satisfied	10.00%	3
Dissatisfied	0.00%	0
TOTAL		30

Q3 What topics did you find MOST useful and/or interesting? Please rate your choices, choosing 5 as the MOST useful and/or interesting and 1 as the LEAST useful and/or interesting.

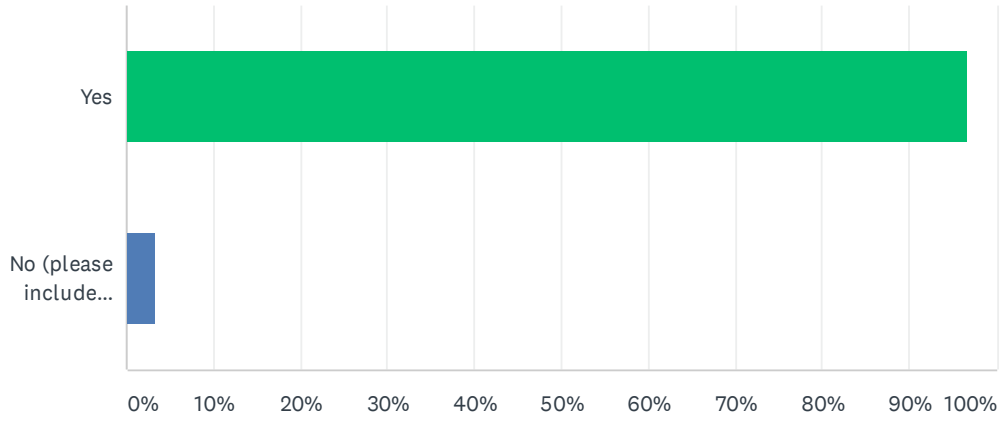
Answered: 28 Skipped: 2



(no label)						
	5	**4**	**3**	**2**	**1**	**TOTAL**
Introduction and Year in Review	48.15% 13	22.22% 6	22.22% 6	3.70% 1	3.70% 1	27
BAAQMD Regulatory Priorities	72.00% 18	16.00% 4	4.00% 1	4.00% 1	4.00% 1	25
EPA Region IX Updates and Priorities	71.43% 20	25.00% 7	3.57% 1	0.00% 0	0.00% 0	28
State Water Resources Control Board Priorities	62.96% 17	33.33% 9	3.70% 1	0.00% 0	0.00% 0	27
NRegional Water Quality Control Board Priorities	74.07% 20	18.52% 5	7.41% 2	0.00% 0	0.00% 0	27
BACWA Hot Topics: Contaminants of Emerging Concern	53.57% 15	21.43% 6	17.86% 5	7.14% 2	0.00% 0	28
BACWA Hot Topics: New ELAP Regulations	37.50% 9	20.83% 5	29.17% 7	8.33% 2	4.17% 1	24
BACWA Hot Topics: Recycled Water Hot Topics	26.92% 7	34.62% 9	19.23% 5	19.23% 5	0.00% 0	26
Envision Presentation	13.64% 3	9.09% 2	36.36% 8	22.73% 5	18.18% 4	22
BACWA Hot Topics: AIR Issues/Climate Adaptation	33.33% 8	45.83% 11	16.67% 4	4.17% 1	0.00% 0	24
BACWA Hot Topics: Bay Area Biosolids Coalition	29.17% 7	41.67% 10	16.67% 4	8.33% 2	4.17% 1	24
BACWA Hot Topics: Chlorine Basin Plan Amendment	41.67% 10	29.17% 7	16.67% 4	8.33% 2	4.17% 1	24
Nutrients Overview: Overview of 2nd Watershed Permit/Governance UPdate	32.00% 8	32.00% 8	24.00% 6	8.00% 2	4.00% 1	25
Nutrients Regulatory Update: Group Annual Report	29.17% 7	45.83% 11	20.83% 5	0.00% 0	4.17% 1	24
Nutrients Regulatory Update: Regional Recycled Water Report	20.83% 5	41.67% 10	29.17% 7	4.17% 1	4.17% 1	24
Nutrients Regulatory Update: Nature-Based Solutions Study	25.00% 6	45.83% 11	20.83% 5	8.33% 2	0.00% 0	24
Nutrients Regulatory Update: Update on Science Plan and Findings	33.33% 8	45.83% 11	16.67% 4	4.17% 1	0.00% 0	24

Q4 Did you find the overall length of the meeting to be appropriate? If not, please explain.

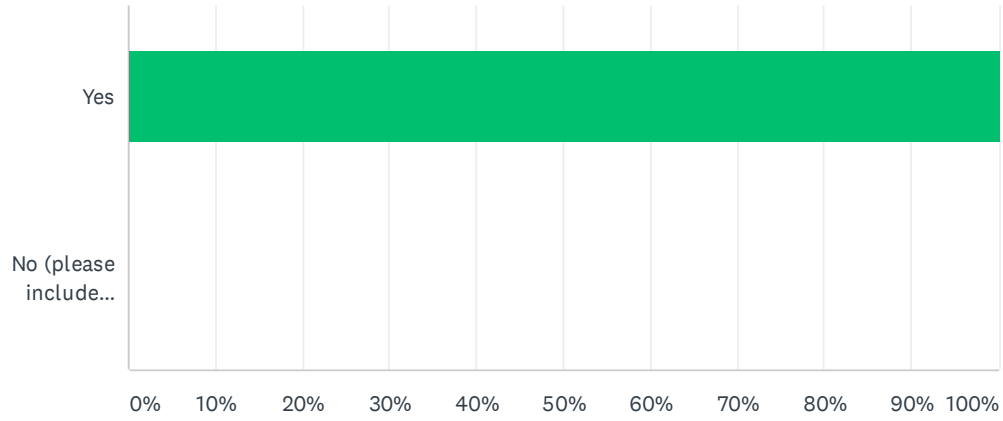
Answered: 30 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	96.67%	29
No (please include comment)	3.33%	1
TOTAL		30

Q5 Would you recommend that we continue to have the meeting at this venue (Oakland Scottish Rite Center)? Please explain and/or suggest another venue and why it would be better.

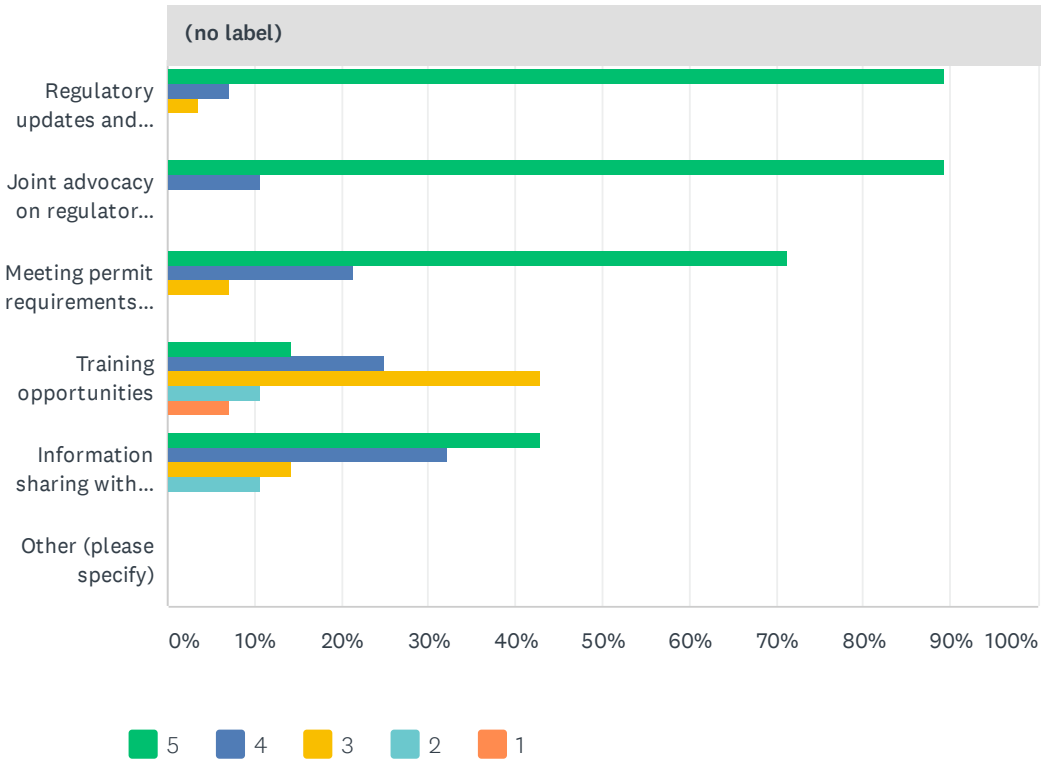
Answered: 29 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	100.00%	29
No (please include comment)	0.00%	0
TOTAL		29

Q6 What is the most important benefit that you receive from BACWA membership? Please rank your choices, choosing 5 as the MOST beneficial and 1 as the LEAST beneficial.

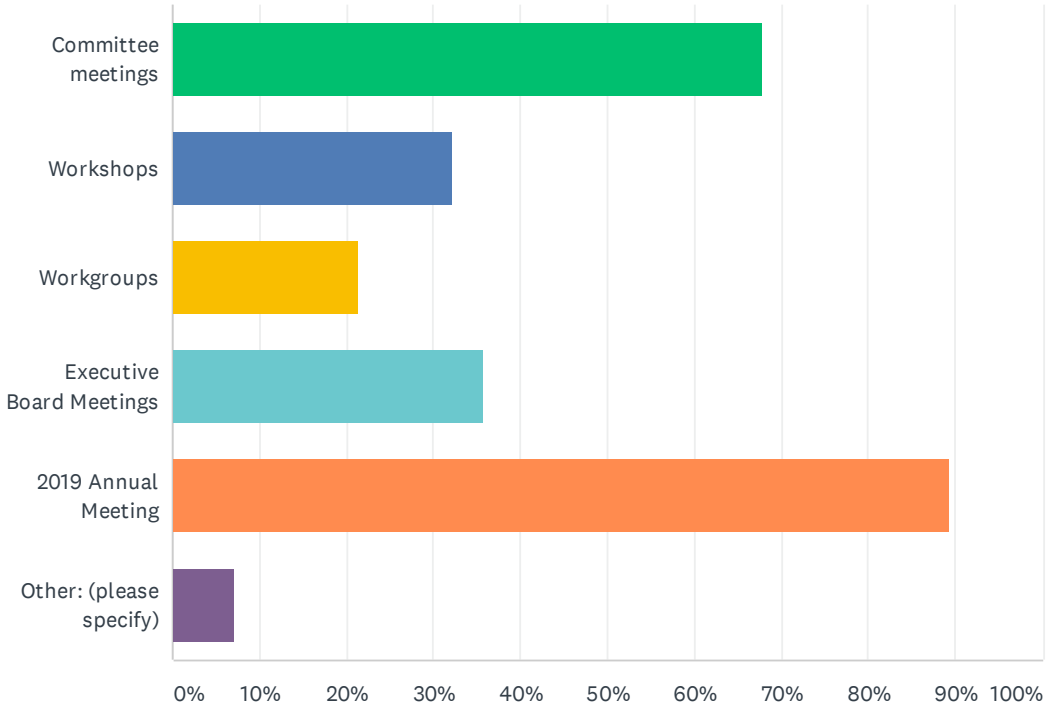
Answered: 28 Skipped: 2



(no label)						
	5	4	3	2	1	TOTAL
Regulatory updates and advocacy	89.29% 25	7.14% 2	3.57% 1	0.00% 0	0.00% 0	28
Joint advocacy on regulatory issues through BACWA rather than as individual agencies	89.29% 25	10.71% 3	0.00% 0	0.00% 0	0.00% 0	28
Meeting permit requirements through joint efforts on watershed permits vs. individual permits	71.43% 20	21.43% 6	7.14% 2	0.00% 0	0.00% 0	28
Training opportunities	14.29% 4	25.00% 7	42.86% 12	10.71% 3	7.14% 2	28
Information sharing with other agencies	42.86% 12	32.14% 9	14.29% 4	10.71% 3	0.00% 0	28
Other (please specify)	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0

Q7 What BACWA events did you attend in 2019?

Answered: 28 Skipped: 2



ANSWER CHOICES	RESPONSES	
Committee meetings	67.86%	19
Workshops	32.14%	9
Workgroups	21.43%	6
Executive Board Meetings	35.71%	10
2019 Annual Meeting	89.29%	25
Other: (please specify)	7.14%	2
Total Respondents: 28		

Q8 What could BACWA do to better serve your agency?

Answered: 8 Skipped: 22

#	RESPONSES	DATE
1	Re-establish BACWA Biosolids Committee to address all Bay Area biosolids issues not just those discussed by the BABC and establish program funding that is shared by all members.	2/10/2020 8:03 AM
2	Continue to stay on its current path.	1/25/2020 12:12 PM
3	Continue working on the Biosolids Coalition	1/23/2020 7:54 AM
4	BACWA is perfect.	1/22/2020 8:13 AM
5	I think BACWA should consider advocating for more participation from under represented organizations, to those organizations GMs. Solutions are naturally driven by participants which tend to be from larger organizations that can afford sharing employee time with BACWA.	1/22/2020 6:58 AM
6	Continue your active regional efforts as is because it works for small agencies like SASM.	1/22/2020 6:52 AM
7	Regulatory Information Assist with Staff Training and Development	1/22/2020 5:53 AM
8	all actions are appropriate and satisfactory	1/21/2020 11:18 PM

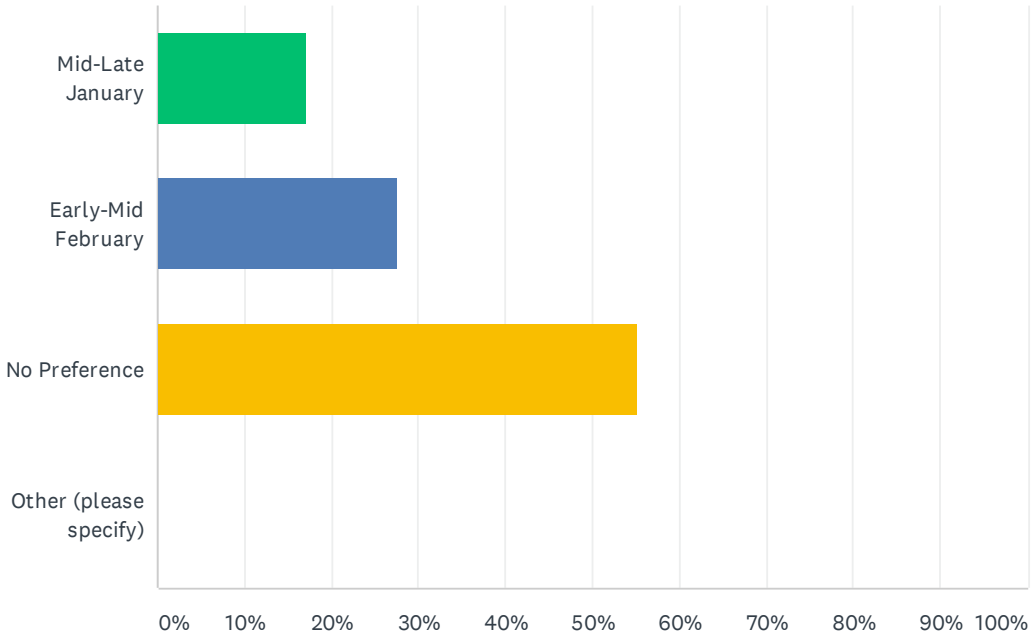
Q9 Any other suggestions for improving the meeting?

Answered: 5 Skipped: 25

#	RESPONSES	DATE
1	Potentially a quick, 15 minute, acknowledgment of the agencies in attendance in the room by a show of hands. It was a solid meeting, not much to improve.	1/25/2020 12:12 PM
2	In regards to moving the meeting, for most of us annual reports are due at the end of Feb. Staying away from Feb. is preferable.	1/24/2020 9:58 AM
3	no	1/23/2020 7:54 AM
4	More focus for communicating a systems level/integrated approach is going to be more critical as BACWA continues it efforts with other orgainzations and regional bodies.	1/23/2020 7:38 AM
5	No, but I did miss the fruit salad in the martini glasses this year!	1/22/2020 8:13 AM

Q10 BACWA is considering moving back the Annual Meeting a few weeks. What is your preference for timing?

Answered: 29 Skipped: 1



ANSWER CHOICES	RESPONSES	
Mid-Late January	17.24%	5
Early-Mid February	27.59%	8
No Preference	55.17%	16
Other (please specify)	0.00%	0
TOTAL		29

FY 2021
Proposed Budget compared with FY2020 Budget

BACWA BAY AREA CLEAN WATER AGENCIES

BACWA FY20 BUDG	Line Item Description	FY 2020 Budget	Actuals December 2019	FY 20 Projected Actuals	FY 21 Proposed Budget	FY 21 NOTES
REVENUES & FUNDING						
Dues	Principals' Contributions	$506,774	$506,775	$506,774	$516,909	**FY21:** 2% increase. 5 @ $103,382
	Associate & Affiliate Contributions	$184,111	$110,407	$184,111	$187,793	**FY21:** 2% increase. 13 Assoc: $8,364; 45 Affiliate: $1,675. One collection member cancelled in FY19
Fees	Clean Bay Collaborative	$675,000	$671,390	$675,000	$675,000	Prin: $450,000; Assoc/Affil: $225,000
	Nutrient Surcharge	$1,700,000	$1,550,565	$1,700,000	$1,700,000	See Nutrient Surcharge Spreadsheet
	Member Voluntary Nutrient Contributions	$0	$0	$0	$0	
Other Receipts	AIR Non-Member	$6,936	$0	$6,936	$7,075	2% increase (Santa Rosa)
	BAPPG Non-Members	$3,876	$2,584	$3,876	$3,954	2% increase (Sta Rosa, Sac Reg'l, Vacaville) $1,292/each
	Other	$0	$0	$0	$0	
Fund Transfer	Special Program Admin Fees (WOT)	$5,100	$0	$5,100	$5,202	**FY21:** 2% increase
	BACC Admin Fees	$0	$0	$2,000	$20,010	300 hours of AED support
	BABC Admin Fees	$0	$0	$6,000	$6,000	AED and RPM support
Interest Income	LAIF	$20,000	$28,401	$20,000	$20,000	BACWA, Legal, & CBC Funds invested in LAIF
	Higher Yield Investments	$18,000	$1,588	$18,000	$18,000	Alternative Investment Interest (Legal & CBC Funds invested in AltInv)
	Total Revenue	**$3,119,797**	**$2,871,710**	**$3,127,797**	**$3,159,943**	

BACWA FY20 BUDGET	Line Item Description	FY 2020 Budget	Actuals December 2020	FY 20 Projected Actuals	FY 21 Proposed Budget	FY 20 NOTES
EXPENSES						
Labor						
	Executive Director	$207,531	$103,766	$207,531	$194,750	ED requested 2.5%; $99.77/hour; contract based on full time same as FY 20, 2080 hrs
	Assistant Executive Director	$100,907	$22,798	$100,907	$99,938	2.9% CPI (SF Bay Metro Area Dec 2018); $63.07/hour; Reflects 1500 hours
	Regulatory Program Manager	$137,727	$64,820	$137,727	$141,170	4.5% CPI (SF Bay Metro Area Dec 2018); $100.16/hour; Reflects 1375 hours/yr - Contract TBD
	Total	**$446,165**	**$191,383**	**$446,165**	**$435,858**	
Administration						
	EBMUD Financial Services	$41,616	$8,539	$41,616	$42,448	2% increase
	Auditing Services (Maze)	$5,240	$4,716	$5,240	$5,345	New contract with Auditors through EBMUD
	Administrative Expenses	$7,803	$1,473	$7,803	$7,959	2% increase. Travel, Supplies, Parking, Mileage, Tolls, Misc.
	Insurance	$4,682	$4,696	$4,682	$4,776	2% increase
	Total	**$59,341**	**$19,424**	**$59,341**	**$60,528**	
Meetings						
	EB Meetings	$2,601	$975	$2,601	$2,653	2% increase. Catering, Venue, other expenses
	Annual Meeting	$12,000	$9,706	$13,685	$14,369	5% increase. Catering, Venue, other expenses
	Pardee	$6,242	$5,835	$6,242	$6,367	2% increase. Catering, Venue, other expenses
	Misc. Meetings	$5,202	$108	$5,202	$5,306	2% increase. Hol & Comm Chair Lunch, Staff Mtgs, Fin Comm, Summit Ptnrs, CASA
	Total	**$26,045**	**$16,624**	**$27,730**	**$28,695**	
Communication						
	Website Hosting (Computer Courage)	$600	$0	$600	$612	Paid in advance in FY19 to lock in lower rate
	File Storage (Box.net)	$750	$720	$750	$765	
	Website Development/Maintenance	$1,500	$618	$1,500	$1,530	Domains (due again in FY20), website changes
	IT Support (As Needed)	$2,600	$0	$2,600	$2,652	
	Other Commun (MS, SM, Backup, PollEv)	$1,750	$528	$1,750	$1,785	MS Exchange, Survey Monkey (incr in FY20), Carbonite, Doodle Polls, PollEv, GoToMtg

FY 2021

Proposed Budget compared with FY2020 Budget

EXPENSES						
	Total	**$7,200**	**$1,866**	**$7,200**	**$7,344**	
Legal						
	Regulatory Support	$2,653	$2,144	$2,653	$2,706	2% increase
	Executive Board Support	$2,133	$0	$2,133	$2,176	2% increase
	Total	**$4,786**	**$2,144**	**$4,786**	**$4,882**	
Committees						
	AIR	$76,000	$3,148	$76,000	$76,000	$75k consulting support, $1k misc expenses
	BAPPG	$100,000	$46,643	$100,000	$125,000	Includes CPSC @ $10,000, OWOW @ $10,000, and Pest. Reg Spt. @ $15,000.
	Biosolids Committee	$1,000	$0	$1,000	$1,000	
	Collections System	$1,000	$0	$1,000	$1,000	
	InfoShare Groups	$1,000	$1,100	$1,000	$1,750	Funds for 2 workgroups ($750 for Asset Mgmt - new in FY21; $1,000 for O&M)
	Laboratory Committee	$1,000	$0	$1,000	$1,000	
	Permits Committee	$1,300	$189	$1,300	$1,300	all meetings moved to include lunch hour for commuting purposes
	Pretreatment	$2,000	$3,402	$2,000	$1,000	
	Recycled Water Committee	$1,000	$0	$1,000	$1,000	
	Misc Committee Support	$45,000	$0	$45,000	$45,000	
	Manager's Roundtable	$1,000	$0	$1,000	$1,000	
	Total	**$230,300**	**$54,482**	**$230,300**	**$255,050**	
Collaboratives						
	Collaboratives					
	State of the Estuary (SFEP-biennial)	$0	$0	$0	$20,000	Bienniel in Odd Fiscal Years. (Paid bienniely in odd years for even year conference)
	Arleen Navarret Award	$2,500	$0	$2,500	$2,500	Bienniel in Even Fiscal Years. Increase in FY20
	FWQC (Fred Andes)	$7,500	$0	$7,500	$7,500	
	Stanford ERC (ReNUWIt)	$10,000	$0	$10,000	$10,000	
	Misc	$5,000	$1,500	$5,000	$1,500	BayCAN, NBWA
	Total	**$25,000**	**$1,500**	**$25,000**	**$41,500**	
Other						
	Unbudgeted Items					
	Other	$0	$0	$0	$0	
		$0	**$0**	**$0**	**$0**	
Tech Support						
	Technical Support					
	Nutrients					
	Watershed	$2,000,000	$0	$2,400,000	$2,800,000	Advance funding for 2nd Watershed Permit Sciece Studies
	NMS Voluntary Contributions	$0	$0	$0	$0	
	Additional work under permit	$100,000	$37,799	$100,000	$100,000	Includes HDR PO for $225k spread out over FY20-24.
	Regional Study on Nature Based Systems	$500,000	$0	$150,000	$200,000	New Line item in FY20
	Regional Recycling Evaluation	$0	$0	$50,000	$60,000	
	Nutrient Workshop(s)	$0	$0	$0	$0	Pilot Studies/Plant Review/Innovative Technologies
	General Tech Support	$52,020	$9,658	$52,020	$53,060	2% increase.
	CEC Investigations	$0	$0	$0	$100,000	PFAS Study
	Risk Reduction	$20,000	$12,500	$30,000	$7,500	$50,000 over 5 years (FY19-FY23) 2 Contracts for $25,000 each over FY19, 20, & 21
	Total	**$2,672,020**	**$59,957**	**$2,782,020**	**$3,320,560**	
	TOTAL EXPENSES	**$3,470,857**	**$347,379**	**$3,582,542**	**$4,154,417**	
	NET INCOME BEFORE TRANSFERS	**-$351,060**		**-$454,745**	**-$994,474**	
	TRANSFERS FROM RESERVES	**$351,060**		**$454,745**	**$994,474**	aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge

FY 2021

Proposed Budget compared with FY2020 Budget

EXPENSES						
	NET INCOME AFTER TRANSFERS	**$0**		**$0**	**$0**	
	TOTAL OPERATING BUDGET	**$798,837**		**$800,522**	**$833,856**	
	OPERATING RESERVE	**$199,709**		**$200,131**	**$208,464**	

Nutrient Surcharge; CBC reserve at $1,000,000

BACWA Agency	Subembayment	TIN Loads 2016/17	2017/18	2018/19	Average of Oct 2016 - Sept 2019	% (based on TN) FY20	% (based on TIN) FY21	FY 20 Nutrient Surcharge	FY 21 Nutrient Surcharge	Percentage Change FY20 to FY21
Basis for Allocation								**TN (July 2015 June 2018)**	**TIN (Oct 2016-Sept 2019)**	
Amount Needed Science Funding								**$1,700,000**	**$1,700,000**	
CCCSD	Suisun Bay	4,000	3,840	3,790	3877	7.25%	7.20%	$123,273	$122,471	-0.7%
EBDA	South Bay	8,320	8,700	8,570	8530	16.09%	15.85%	$273,461	$269,479	-1.5%
EBMUD	Central Bay	9,910	10,700	9,340	9983	18.59%	18.55%	$316,111	$315,393	-0.2%
San Jose	Lower South Bay	5,790	4,920	5,500	5403	9.97%	10.04%	$169,500	$170,702	0.7%
SFPUC Southeast	South Bay	10,300	8,860	8,850	9337	18.12%	17.35%	$308,089	$294,964	-4.3%
American Canyon	San Pablo Bay	41.4	36.8	37.3	39	0.09%	0.07%	$1,579	$1,216	-22.9%
Benicia	San Pablo Bay	243	251	222	239	0.41%	0.44%	$6,963	$7,540	8.3%
Burlingame	South Bay	366	359	466	397	0.70%	0.74%	$11,919	$12,542	5.2%
CMSA	Central Bay	1,180	986	1,120	1095	1.86%	2.04%	$31,640	$34,604	9.4%
Crockett (Port Costa)	San Pablo Bay	2.06	1.99	0.705	2	0.00%	0.00%	$53	$50	-5.4%
Delta Diablo	Suisun Bay	1,450	1,520	1,500	1490	2.59%	2.77%	$44,058	$47,072	6.8%
FSSD	Suisun Bay	916	1,320	1,130	1122	1.68%	2.09%	$28,583	$35,446	24.0%

Las Gallinas(b)	San Pablo Bay	138	135	153	142	0.23%	0.26%	$3,876	$4,486	15.7%
MSD 5 (Tiburon & Paradise Cove)	Central Bay	47.35	57.61	51.5	52	0.12%	0.10%	$2,003	$1,648	-17.7%
Millbrae	South Bay	294	261	286	280	0.53%	0.52%	$8,991	$8,856	-1.5%
Mt. View	Suisun Bay	142	125	160	142	0.23%	0.26%	$3,846	$4,497	16.9%
Napa SD	San Pablo Bay	259	161	309	243	0.45%	0.45%	$7,633	$7,677	0.6%
Novato SD	San Pablo Bay	197	130	198	175	0.33%	0.33%	$5,685	$5,529	-2.7%
Palo Alto	Lower South Bay	2,560	2,180	2,310	2350	4.48%	4.37%	$76,208	$74,241	-2.6%
Petaluma	San Pablo Bay	16.3	4.87	24.2	15	0.07%	0.03%	$1,149	$478	-58.4%
Pinole	San Pablo Bay	320	317	227	288	0.61%	0.54%	$10,390	$9,098	-12.4%
Rodeo SD	San Pablo Bay	45.4	32.6	38.3	39	0.07%	0.07%	$1,179	$1,225	3.9%
SFO Airport	South Bay	226	139	107	157	0.27%	0.29%	$4,536	$4,970	9.6%
San Mateo	South Bay	1,350	1,430	1,530	1437	2.73%	2.67%	$46,386	$45,387	-2.2%
Sausalito-Marin City SD	Central Bay	136	137	134	136	0.26%	0.25%	$4,496	$4,286	-4.7%
Sewerage Agency of SM	Central Bay	164	187	211	187	0.40%	0.35%	$6,724	$5,918	-12.0%
Sonoma Co Water Ag	San Pablo Bay	82	0	29.9	37	0.07%	0.07%	$1,259	$1,178	-6.4%
SVCW	South Bay	2,460	2,690	2,640	2597	4.28%	4.83%	$72,841	$82,034	12.6%
South SF	South Bay	1,070	1,060	1,310	1147	2.07%	2.13%	$35,127	$36,225	3.1%
Sunnyvale	Lower South Bay	952	878	964	931	1.44%	1.73%	$24,467	$29,423	20.3%
Treasure Island	Central Bay	16.3	12	13.9	14	0.03%	0.03%	$589	$444	-24.6%

Vallejo Sanitation & FCD	San Pablo Bay	906	931	928	922	2.07%	1.71%	$35,137	$29,117	-17.1%
West County Agency	Central Bay	1,150	873	997	1007	1.90%	1.87%	$32,249	$31,803	-1.4%
		55050	**53236**	**53148**	**53811**					
Principals Only		**38320**	**37020**	**36050**	**37130**	70.03%	69.00%	$1,190,434	$1,173,009	-1.5%
Total w/o principals		**16730**	**16216**	**17098**	**16681**	29.97%	31.00%	$509,566	$526,991	3.4%
Total						**100.00%**		**$1,700,000**	**$1,700,000**	

* Surcharge for FY22-FY24 based on TN data from July 2015-June 2018. Actual surcharge is expected to vary s

		5 Year Plan - Baseline Adjusted to Eliminate Excess Reserves (CBC @ $1,000,000)								
										3rd WS PERMIT
			2019 Actuals	**2020 (adopted)**	**2020 (projected)**	**2021 (proposed)**	**2022 (proposed)**	**2023 (proposed)**	**2024 (proposed)**	**2025 proposed)**
REVENUES										
	Dues	Principals' Contributions	$496,835	$506,774	$506,774	$516,909	$527,248	$537,793	$548,548	$559,519
		Assoc. & Aff. Contributions	$183,035	$184,111	$184,111	$187,793	$191,549	$195,380	$199,288	$203,273
	Fees	Clean Bay Collaborative Fee	$674,250	$675,000	$675,000	$675,000	$675,000	$675,000	$675,000	$675,000
		Nutrient Surcharge	$799,998	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$750,000	$625,000
		Member Vol. Nutrient Contributions	$0	$0	$0	$0	$0	$0	$0	$0
	Other Receipts	Non-BACWA AIR	$6,800	$6,936	$6,936	$7,075	$7,216	$7,361	$7,508	$7,658
		Non-BACWA BAPPG Fee	$3,801	$3,876	$3,876	$3,954	$4,033	$4,113	$4,196	$4,279
		Other	$55,000	$0	$0	$0	$0	$0	$0	$0
	Fund Transfer	Special Program Admin Fees (WOT)	$5,000	$5,100	$5,100	$5,202	$5,306	$5,412	$5,520	$5,631
	Investment Income	LAIF	$50,991	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
		Higher Yield Investments	$13,001	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000
TOTAL REVENUES		**Total**	**$2,288,711**	**$3,119,797**	**$3,119,797**	**$3,133,933**	**$3,148,352**	**$3,163,059**	**$2,228,060**	**$2,118,361**
EXPENSES										
	Labor		$387,482	$446,165	$446,165	$441,493	$454,738	$468,380	$482,431	$496,904
	Administration		$38,447	$59,341	$59,341	$60,528	$61,738	$62,973	$64,233	$65,517
	Meetings		$21,796	$26,045	$26,045	$26,566	$27,097	$27,639	$28,192	$28,756
	Communication		$4,085	$7,200	$7,200	$7,344	$7,491	$7,641	$7,794	$7,949
	Legal		$7,951	$4,786	$4,786	$4,882	$4,979	$5,079	$5,181	$5,284
	Committees		$148,643	$230,300	$230,300	$255,300	$260,406	$265,614	$270,926	$276,345
	Collaboratives		$62,471	$25,000	$25,000	$41,500	$22,330	$42,777	$23,632	$44,105
	Other		$85,000	$0	$0	$0	$0	$0	$0	$0
	Technical Support	Nutrients								
		Permit Reqm't for Science Funding	$880,000	$2,000,000	$2,000,000	$2,200,000	$2,200,000	$2,200,000	$2,200,000	$1,000,000
		NMS Advance on Future Funding	$200,000	$0	$400,000	$600,000	$400,000	($200,000)	($1,200,000)	$0
		NMS Voluntary Contributions	$200,000	$0	$0	$0	$0	$0	$0	$0
		Additional Work Under Permit	$39,410	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
		Optimization / Upgrade Studies	$25,652	$0	$0	$0	$0	$0	$0	$0
		Nature Based Solutions Study	$0	$500,000	$150,000	$200,000	$150,000	$0	$0	$0
		Regional Recycling Report	$0	$0	$50,000	$60,000	$40,000	$0	$0	$0
		Member Voluntary Contributions	$0	$0	$0	$0	$0	$0	$0	$0
		Nutrient Workshops	$0	$0	$0	$0	$0	$0	$0	$0
		General Tech Support	$47,131	$52,020	$52,020	$91,060	$92,881	$94,739	$96,634	$98,566
		Risk Reduction	$12,500	$20,000	$30,000	$7,500	$0	$12,500	$30,000	$7,500
	Total Technical Support		$1,404,693	$2,672,020	$2,782,020	$3,258,560	$2,982,881	$2,207,239	$1,226,634	$1,206,066
TOTAL EXPENSES			**$2,160,568**	**$3,470,857**	**$3,580,857**	**$4,096,172**	**$3,821,661**	**$3,087,341**	**$2,109,022**	**$2,130,927**
NET INCOME BEFORE TRANSFERS			**$128,143**	**($351,060)**	**($461,060)**	**($962,240)**	**($673,309)**	**$75,717**	**$119,038**	**($12,566)**
TRANSFERS TO(+)/FROM(-) RESERVES			**$128,143**		**($461,060)**	**($962,240)**	**($673,309)**	**$75,717**	**$119,038**	**($12,566)**
RESERVES	Operating Target	$200,000								
	Legal Target	$300,000								
	CBC Target	$1,000,000								
	Target Reserves	**$1,500,000**								
	Total Reserves at End of FY 19	**$3,412,096**								
	Amt. Above Target End of FY	**$1,912,096**	**$1,912,096**		**$1,451,036**	**$488,797**	**($184,513)**	**($108,796)**	**$10,242**	**($2,324)**

Draft BAPPG Budget FY 20-21

Project	Budget 19/20	Budget 20/21
Policy, Regulatory and Professional Training Support (Hughes)	$16,000	$16,000
Media Consultant (SGA)	$30,000	$30,000
Our Water Our World Program	$10,000	$10,000
Pesticide Regulatory Support (TDC)	$30,000	$130,000
California Product Stewardship Council	$5,000	$7,500
National Stewardship Action Council	$5,000	$2,500
Website Consultant	$600	$600
Unplanned Issues	$3,400	$3,400
Total BAPPG Budget	**$100,000**	**$200,000**

BAY AREA CLEAN WATER AGENCIES
SUCCESSION PLANNING
Fiscal Year 2020

A. BACWA Principal Representatives

Agency	Representatives	Title & Roles
CCCSD	Lori Schectel	BACWA Chair, CASA State Legislative Committee, Nutrient Governance Steering Committee Alternate, Summit Partners
	Roger Bailey (Alternate)	
	Jean-Marc Petit (Alternate)	
EBDA	Jacqueline Zipkin Jason Warner, Oro Loma (Alternate)	BACWA Executive Board Rep, ReNUWIt Industrial Advisory Committee Member
EBMUD	Eileen White	BACWA Executive Board Rep, Nutrient Management Strategy Governance Steering Committee, Bay Area Regional Reliability Project, SF Estuary Partnership
	Maura Bonnarens (Alternate)	AWT Certification Committee
	Nirmela Arsem	RMP Microplastics Liaison
SFPUC	Amy Chastain	BACWA Executive Board Rep,
	Greg Norby (Alternate)	
	Jennie Pang (Alternate)	
	Ryan Jackson (Alternate)	
	Bryan Henderson (Alternate)	
San Jose	Amit Mutsuddy	BACWA Executive Board Rep, Joint SFEI/ASC Board
	Eric Dunlavey (Alternate)	RMP Steering Comm; Nutrient Management Strategy Comm;

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

B. Other BACWA Representations

Group/Organization	Current Representative	Succession Planning
RMP Technical Committee	Mary Lou Esparza, CCCSD	
	Yuyun Shang, EBMUD	
	Samanth Engelage, Palo Alto (Alternate)	
RMP Steering Committee	Karin North, Palo Alto;	
	Leah Walker, Petaluma;	
	Eric Dunlavey, San Jose	
Summit Partners	Dave Williams;	
	Lori Schectel, CCCSD	
Joint SFEI/ASC Board	Eileen White, EBMUD	Karin North, Palo Alto, First Board Alternate; Amit Mutsuddy, San Jose, Second Board Alternate
		Amy Chastain, SFPUC, Alternate
Nutrient Management Strategy Governance Steering Committee	Eric Dunlavey, San Jose	
	Eileen White, EBMUD	
	Jackie Zipkin, EBDA	
	Lori Schectel, Alternate	
NMS Planning Subgroup	Eric Dunlavey, San Jose	
NMS Technical Workgroup	Eric Dunlavey, San Jose	
SWRCB Nutrient SAG	**Dave Williams**	
NACWA Taskforce on Dental Amalgam	Tim Potter, CCCSD	
BAIRWMP	Cheryl Munoz, SFPUC;	
	Linda Hu, EBMUD;	
	Dave Williams, BACWA	
NACWA Emerging Contaminants	Karin North, Palo Alto;	
	Melody LaBella, CCCSD	
CASA State Legislative Committee	Lori Schectel, CCCSD	

CASA Regulatory Workgroup	Lorien Fono, BACWA	
ReNUWIt	Jackie Zipkin, EBDA	
	Karin North, Palo Alto	
ReNUWIt One Water	Jackie Zipkin, EBDA Eric Hansen, SVCW	
RMP Microplastics Liaison	Artem Dyachenko, EBMUD	
Bay Area Regional Reliability Project	Eileen White, EBMUD	
WateReuse Working Group	Cheryl Munoz, SFPUC	
SF Estuary Partnership	Eileen White, EBMUD	
	David Williams, BACWA	
CPSC Policy Education Advisory Committee	Colleen Henry, CCCSD	
California Ocean Protection Council	Lorien Fono, BACWA	
Countywide Water Reuse Master Plan	Karin North, Palo Alto	
	Pedro Hernandez, San Jose	
CHARG - Coastal Hazards Adaptation Resiliancy Group	Jackie Zipkin, EBDA	

Changes to BACWA Representation requires Executive Board Approval.

C. BACWA Committees

Committee	Chair	Vice/Co-Chair	Comments	Succession Planning
AIR	Nohemy Revilla, SFPUC, Co-Chair	Randy Schmidt, CCCSD, Co-Chair	CASA Climate Change Group Represen	Nohemy Revilla; Randy Schmidt
BAPPG	Autumn Cleave, SFPUC, and Robert Wilson, Petaluma (Co-chairs)	Jaylyn Babitch, (San Jose) V-Chair of Budget; Joe Neugebauer (WCWD) V-Chair of Reporting		Autumn Cleave, Chair; Simret Yigzaw, V-Chair of Budget; Joe Neugebauer (WCWD) V-Chair of Reporting
BAPPG Pesticide Subcommittee	Karin North, Palo Alto	Robert Wilson, Petaluma; Autumn Cleave, SFPUC		Karin North, Robert Wilson, Autumn Cleave
Biosolids	Co-Chair	Co-Chair	Committee Dormant due to biosolids activities being carried out by BABC.	Committee Dormant until further notice
Collection Systems	Andrew Damron, Napa San, Chair	Steve Sauter, CCCSD, Vice Chair		
InfoShare Ops/Maint	Joaquin Gonzales, Delta Diablo, Co-Chair	Kevin Dickison, EBMUD, Co-Chair		Juaquin Gonzales, Kevin Dickison, Co-Chairs
InfoShare Asset Mgmt	Co-Chair	Co-Chair	Both Dana Lawson, CCCSD, and Aaron Johnson, DSRSD, stepped down form Co-Chair positions. Committee on hiatus for now	Dana Lawson, Aaron Johnson, Co-Chairs
Laboratory	Jason Mitchell, EBMUD, Chair	Dan Jackson, Union San, Vice-cahir		Nicole Van Aken
Permits	Samantha Engelage, City of Palo Alto, Chair	Mary Lou Esparza, CCCSD V-Chair		Jennie Pang, SFPUC
Pretreatment	Tim Potter, CCCSD, Co-Chair	Michael Dunning, Union San, Co-Chair		Tim Potter, Michael Dunning, Co-Chairs
Recycled Water	Stefanie Olsen, DSRSD, Co-Chair	Justin Waples, CCCSD, Co-Chair		

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

NORTH BAY WATERSHED ASSOCIATION

Bel Marin Keys Community Services District

Central Marin Sanitation Agency

City of American Canyon

City of Novato

City of Petaluma

City of San Rafael

City of Sonoma

County of Marin

County of Napa

County of Sonoma

Las Gallinas Valley Sanitary District

Marin County Stormwater Pollution Prevention Program

Marin Municipal Water District

Napa County Flood Control and Water Conservation District

Napa Sanitation District

North Marin Water District

Novato Sanitary District

Ross Valley Sanitary District

Sonoma Water

Solano County Water Agency

Sonoma Valley County Sanitation District

Associate Members:

The Bay Institute
Tomales Bay Watershed Council

Group Members:
City of Mill Valley
Sewerage Agency of Southern Marin

November 5, 2019

Dear Friend of the North Bay,

I am writing today to invite you to become a sponsor of the North Bay Watershed Association's 2020 Conference:

2020 Vision: *One Region, One Water, One Future*
Friday, April 3, 2020 at the Sheraton Petaluma, 745 Baywood Drive, Petaluma, from 9:00 a.m. to 3:30 p.m.

Invited Keynotes Speakers (partial):

Jared Blumenfeld, Secretary for California EPA *confirmed*
Congressman Jared Huffman
Congressman Mike Thompson
Kate Jackson, Senior VP, Jackson Family Wines

The need for smart regional planning and cooperative action has become ever more urgent. The North Bay Watershed Association 2020 conference will bring together key participants from around the state and the North Bay to focus on ways to improve water management and watershed health in the face of increasing threats. Speakers and panelists will discuss how we can bring new vision and energy to our efforts in water planning and watershed restoration to better mitigate the escalating effects of growth pressures and a changing climate.

Your financial support will help promote this regional cooperation and the sharing of resources and information and help all of us create a more sustainable future for the North Bay.

Thank you for considering being a of sponsor of
2020 Vision: *One Region, One Water, One Future*

If you have questions, please contact Frances Knapczyk, at (707) 690-3124, or by email at Frances@naparcd.org. Please see Sponsor Benefits sheet for how we plan to acknowledge your generous support.

Sincerely,

Executive Director
North Bay Watershed Association

Recycled Water Committee Meeting on: 1/21/20
Executive Board Meeting Date: 2/21/20
Committee Chair: Stefanie Olson, Justin Waples

Committee Request for Board Action: none

Detailed notes from meetings are posted online.

18 attendees (including 9 on phone) representing 7 member agencies

Final FY20 Appropriations are as follows:

- $1.64 B for Clean Water SRF (vs. $1.4 B in FY19);
- $1.1 B for Safe Drinking Water (vs. $864 M in FY19);
- $43.6 M for Title XVI;
- $20 M for WIIN Act recycled water;
- $55 M for WaterSMART;
- $134 M for water storage;
- $33M for CalFED; and
- $60M for WIFIA.

On December 19, 2019, USBR released a funding opportunity announcement for Title XVI projects (BOR-DO-20-F008). Applications are due February 19, 2020. "Reclamation expects to select approximately six to ten projects for funding."

Transition to State General Order

Regional Water Board staff are developing the draft Notice of Applicability letter to transition the Order 96-011 enrollees with Title 22 Engineering Reports approved after January 1, 2001. The Notice will address all the applicable permittees/enrollees and will include a table that indicates the recycled water treatment level and facility disinfection type. The Monitoring and Reporting Program will be included with the Notice.

The Regional Board will have a draft letter for internal review in January and plans on distributing the draft to State Water Board for review by the end of January 2020. The Regional Water Board will contact BACWA Recycled Water Committee members before finalizing. State Water Board requested that the facility-specific ultraviolet disinfection requirements and applicable DDW conditions are addressed in the Notice.

The Division of Drinking Water (DDW) will be reviewing the Title 22 Engineering Reports developed prior to January 1, 2001. The Regional Water Board previously identified that the City of Livermore and the Sewerage Agency of Southern Marin Recycled Water Programs Engineering Reports were approved prior to 2001. The Regional Water Board will submit the files for both facilities to DDW for review within one to two weeks. If DDW determines that an updated Engineering Report is not needed, then the permittees can be included in the transition from the regional WRR Order No. 96-011 to the State Board's WRR Order WQ 2016-006-DDW by April 8, 2020. If DDW does request an updated Title 22 Engineering Report, a subsequent Notice will be issued to transition the remaining recycled water programs.

SWRCB's Order No. WQ 2019-0037-Exec: monitoring and reporting

State Water Board is currently testing the Geotracker database reporting function in preparation for the volumetric reporting requirement per the Order No. 2019-0037-EXEC Amending Monitoring and Reporting Programs for Waste Discharge Requirements, National Pollutant Discharge Elimination System Permits, Water Reclamation Requirements, Master Recycling Permits, and General Waste Discharge Requirements. There will be a database connection between the California Integrated Water Quality System (CIWQS) and Geotracker but the type of information accessible from CIWQS has not been finalized. The first Geotracker annual report submittal date is April 30, 2020. The Geotracker reporting interface is a fillable form such that the data can be entered directly.

A separate reporting module will be available in Geotracker for constituents of emerging concern (CEC) monitoring from groundwater recharge and reservoir augmentation projects. State Board staff expressed interest in speaking with BACWA Recycled Water Committee members about conducting a pilot test of the Geotracker upload function. BACWA will discuss this with the permits committee, which includes staff responsible for reporting.

EPA's Draft National Water Reuse Action Plan Bahman Sheik gave an overview of the proposed action 2.2.16, which would address interagency collaboration and agreements. The action proponents were asking for committee support for the project, and perhaps support a local workshop. It was suggested that this could potentially be addressed by a smaller group discussion and offline discussion.
Next Meeting – Wednesday March 18, 2020, 10:30 am to 12:30 pm, EBMUD Small Training Room

Collection Systems Committee Report to BACWA Board

Collection Systems Committee Meeting on: 01/30/20
Executive Board Meeting Date: 02/21/20
Committee Chairs: Andrew Damron and Steve Sauter

Committee Request for Board Action: None

37 attendees, representing 23 member agencies.

Wastewater Exfiltration – SCAP Presentation on San Diego Investigative Order

Steve Jepsen from SCAP offered an excellent background on exfiltration from collection systems and a presentation on a Region 9 Order that requires dischargers to identify and quantify the sources and transport pathways of human fecal material into the San Diego River watershed. In brief, the presentation takeaways are:

- Exfiltration is a difficult and costly concept to prove/disprove. If proven, it could make a case for the SSS WDR to be an NPDES discharge permit instead (and expose agencies to more citizen lawsuits).
- Our Regional Water Board has not moved in this direction, yet, but they are watching what the San Diego RWB is doing.
- NGOs are paying attention and are also interested in this topic; see next item below.

'Exfiltration' of Collection Systems/ Baykeeper NOIs

Baykeeper sent Notices of Intent to file suit against the City of Sunnyvale and the City of Mountain View. Among other issues, the NOIs allege that exfiltration from the agencies' collection systems are causing bacteria contamination and impairing local waterways. At this point, not much is known as to Baykeeper's desired outcome from these potential lawsuits. Sunnyvale and MV are looking into how best to respond and will keep the group informed. Baykeeper requested CCTV data for Palo Alto in Dec 2019 but has not followed up since and no other agencies have been contacted yet. A conversation between BACWA and the RWB will likely need to take place on this topic.

On a related note, Central San received an NOI to file suit from RiverWatch. Central San was under a 6-year Settlement Agreement with RiverWatch which ended on 1/16/2020. The new NOI was received 01/22/2020. Under the Settlement Agreement, Central San had paid RiverWatch $50,000 and conducted several repair/replacement projects, esp. in areas adjacent to creeks. Central San is proud of their recent record (SSO decreases of 60-65% over 5 years). Their system is 1,500+ miles and the lawsuit alleges overflows of just over 6,000 gallons.

SSS WDR Update (Paul Causey)

The adoption date for the revised SSS WDR has been pushed back to 2021. Possible draft document for stakeholders review to be released in the summer, public draft in fall, public hearings/ adoption in early 2021. Other updates include:

- The State Water Board has a new manager in the SSO office – Steve Chung. Steve is new to collection systems. Few developments have been shared by the Board as the new manager is brought up to speed.
- Last CASA/State Water Board meeting was in Nov 2019 on metrics. SWB staff are developing metrics for well-performing agencies; it is unlikely that the WDR will require performance standards, but it may include them to help define 'well-performing' agencies and place fewer requirements on such agencies.
- CASA is hoping to schedule a meeting with the SWB to propose revised requirements for SSMPs. CASA has asked for SSMPs updates every 8 years (instead of 5 years) or when 'significant changes' take place (need definition for 'significant changes') and for SSMP audits every 3 years (instead of 2 years). The meeting would also discuss SWB proposed new SSMP requirements for system resilience and asset management.
- Definition of 'infrastructure failure' requested by the State. The Committee discussed what constitutes 'infrastructure failure' – a crack? a joint offset? a sinkhole? Does it depend on whether or not there is an aquifer underneath? Paul asked that member agencies send him suggestions for a proper definition.
- The State was told that they are also looking to define 'exfiltration' and 'non-federal waters'. NGOs keep pushing for NPDES permits instead of WDRs (main reason being that it's easier to sue under an NPDES permit). Issues like exfiltration bring the prospect of NPDES permits closer to reality; CASA and BACWA will keep fighting this.

Announcements and Upcoming Trainings

- TCP training is coming up 2/19 at Central San. Details here
- WEF Collection Systems Conference is June 2-5 in El Paso, TX. Details here.
- CWEA Annual Conference is Mar 31 – Apr 3 in Reno, NV. Details here.

Next Collection System Committee Meeting

Our next committee meeting will be held on April 23, 2020.

Meeting Date: February 5, 2020
Executive Board Meeting Date: February 21, 2020
BAPPG Chair: Autumn Cleave, Robert Wilson

Committee Notes are available online.
20 attendees representing 14 member agencies

Regional Water Board Report (Debbie Phan)

- P2 Reports are due 2/29. Debbie presented on her expectations for the reports.
- RWB prefers that, when faced with Mandatory Min Penalties, agencies pay into Option 1: contribution to RMP SEP Fund, rather than Option 2: State Cleanup and Abatement Fund.
- The permit language re: copper requirements is flexible enough to where it allows for the copper outreach on Baywise.org to fulfil the permit requirement. No need to contact additional outreach to plumbers.
- RWB staff working on creating a map for collection systems/POTW service areas in the Bay Area. Debbie requested GPS shape files from agencies.

Updates on Committee Activity

- Stephanie Hughes working on Triclosan memo (success story) to add to Baywise.org.
- Robert Wilson reported on the radio FOG ad campaign from 11/19 – 12/30. Two ads, 15-sec and 30-sec, ran for a total 63 times in the lead up to the holidays. Estimated 346,000 listeners were reached. The ads directed listeners to baywise.org for more info.
- Flea and tick campaign is starting soon and will go into May.
- OWOW: Bedbugs fact sheet complete and translated (English and Spanish); will be added to website and included on the next print run. Gophers, Moles and Voles fact sheet was edited and photo selections were made. Designer to incorporate changes and send for final review.
- Committee is supporting Kelly Moran's request that the BACWA Board increase funding for pesticide work.
- BACWA submitted comments on EPA recent proposal for Pyrethroids and Pyrethrins Ecological Risk Mitigation for 23 Chemicals (due 2/12).
- Member agencies can put in orders for PFAS-free, compostable (PLA lids) FOG cups with the City of South San Francisco (Christina Tai).

Presentation on Wipes Legislation by Jessica Gauger, Director of Legislative Advocacy at CASA

Jessica presented on CASA's latest legislative efforts on proper labeling of wipes. The full presentation is available here. Presentation highlights below:

- CA Assembly Bill 1672 is in negotiation. Intent is to mandate "Do Not Flush" labeling on wipes meant to be disposed in the trash. Bill needs to move through committees and pass by August 2020. The issue of what defines "flushable products" will likely be tackled in future legislation because manufacturers are fighting very hard against having to meet international flushable standards (disintegration rate of 95%).
- There is pending legislation in WA (HB2565), Australia, Canada. There is also a 'single-use plastics' legislation in Congress; it designates wipes as single use plastics and requires labeling. Bill is unlikely to pass, but advances the conversation to the national level.
- NACWA Cost of Wipes Report: est. $47 million annually spent by local agencies in California for O&M costs relating to wipes management. Conservative estimate: doesn't account for capital improvements, public outreach, or fines & penalties.
- CASA due to release report on a Dispersibility Field Study, evaluating the dispersibility of 10 brands of "flushable" wipes in a live sewer setting.
- 'Wipes Clog Pipes' Campaign materials available at https://casaweb.org/wipes/ CASA Wipes Toolkit coming in Spring 2020.

Next BAPPG General Meeting: April 1, 2020

Laboratory committee meeting on: February 11, 2020
Executive Board Meeting Date: February 21, 2020
Committee Chair : Jason Mitchell (EBMUD)

Committee Request for Board Action: none

25 attendees representing 20 member agencies

Presentation on How Field Sampling Can Impact Laboratory Results
By Cory Lancaster and Ryujiro Tsuchihashi (Jacobs)
Cory and Ryujiro presented on impacts that sampling can have on outcomes in the lab and in turn, on informing a plant's operation procedures. Lab procedures are very rigorous, sampling procedures not so much. In-plant sampling like influent, WAS, etc., is variable based on time of day, flow, placement of sample intake, etc. Takeaway message – multiple samples needed for certainty in influent and WAS results, but not always practical. Presenters encourage multiple concurrent samples are run once or twice a year.

ELAP Updates
TNI adoption is on track for 3/17 State Water Board Mtg. ELAP indicated that they may give some consideration to a couple of comments from concerned dischargers and that a revised version would be available in the next few days. It would have a quick 15-day comment period as they want to stay on track for adoption on 3/17 and implementation on 7/1. SWB member Tam Doduc has said that she would like to meet with CA QMS proponents before the adoption hearing so there is a slight chance adoption would be pushed to the April meeting, but not likely.
Christine Sotelo (ELAP) said she would come back to a future Committee meeting to discuss implementation once the regs are adopted.

Toxicity Provisions Update
State Water Board staff conducted a lab survey to better understand the feasibility of initiating 3 chronic tests in one calendar month and, in Dec 2019, released their findings as Appendix K to the staff report. A presentation was also provided at a January SWB workshop. BACWA comments on Appendix K were submitted on 2/10/2020. Comments were limited in scope to the issues presented in Appendix K; BACWA's previous comment letter on the Toxicity Provisions as a whole, is available here.

Chlorine Residual Basin Plan Amendment
Proposed Basin Plan chlorine objectives to be based on EPA criteria (0.013 mg/L) as 1-hr average; effluent limits to be based on the objective and include full dilution. Current 0.0 mg/L instantaneous maximum limit will be removed from BP. The dilution allowance benefits deep-water dischargers in particular; but the 1-hr average and 0.01 mg/L will have benefits for shallow-water dischargers as well. Outstanding issue: the RWB would prefer an RL of 0.05 mg/L be included in the BP, whereas the POTW community feels that 0.1 mg/L is more realistic. An MDL study may be needed; shallow-water dischargers are encouraged to participate and provide inputThere is new RWB staff, Tong Yin, working on this issue; the Committee will invite Tong to the next meeting to discuss the BP amendments and issues around the ML.

Next meeting: April 14, 2020

Permits Committee –
Report to BACWA Board

Permits Committee Meeting on: 2/11/2020
Executive Board Meeting Date: 2/21/2020
Committee Chair: Samantha Engelage

Committee Request for Board Action: None

24 attendees (including 3 on phone), representing 18 member agencies.

Nutrients

a. Group Annual Report submitted to Water Board; HDR presented on it at Annual Meeting. Will invite HDR to future meeting for discussion on potential statistical approaches for understanding nutrient trends.
b. Coalition comment letter on Ocean Protection Council draft 5-year Plan in December 2019; revised plan expected mid-February. Updates to follow.

Upcoming Permits

February: *Sunnyvale* – permit includes TSS trigger for turbidity limits. It's a helpful approach for the City; it should result in reduction of polymer use**.**
San Jose – Reduced acute toxicity testing (quarterly instead of monthly). Other small changes: enterococcus and recycled water language that aligns with recent changes in Basin Plan and in Recycled Water Policy.
EBMUD and satellites – no issues to report
March: *Fairfield-Suisun* – happy with permit. Worked with RWB to clarify monitoring requirements.

Payments for Mandatory Minimum Penalties

At the Feb BAPPG meeting, Debbie Phan (RWB) noted that, when faced with MMPs, RWB prefers that agencies choose payment Option 1: contribution to RMP SEP Fund, rather than Option 2: State Cleanup and Abatement Fund.

Chlorine Residual Basin Plan Amendment

Proposed Basin Plan chlorine objectives to be based on EPA criteria (0.013 mg/L) as 1-hr average; permit limits to be based on the objective and include full dilution. Current 0.0 mg/L instantaneous maximum limit will be removed from BP. The RWB would prefer an RL of 0.05 mg/L be included in the BP, whereas the POTW community feels that 0.1 mg/L is more realistic. There is new RWB staff, Tong Yin, working on this issue; BACWA will invite them to next Lab Committee meeting to discuss the BP amendments and issues around the ML.

Toxicity Provisions Update

a. State Water Board staff conducted a lab survey to better understand the feasibility of initiating 3 chronic tests in one calendar month and, in Dec 2019, released their findings as Appendix K to the staff report. A presentation was also provided at a January SWB workshop. BACWA comments on Appendix K were submitted on 2/10/2020. Comments were limited in scope to the issues presented in Appendix K; BACWA's previous comment letter on the Toxicity Provisions as a whole, is available here.
b. RWB staff emailed the group the proposed language on how TST/Toxicity Provisions may be implemented in Region 2 permits. The Committee discussed the language, with many pointing out that it is at times confusing, esp. around the issue of 'surveillance monitoring.' Input on suggested edits/ questions is solicited from member agencies by February 28, 2020. Please send to the Committee Chair Samantha Engelage. RWB staff will be asked to join April Permits Meeting to discuss initial feedback further.

CECs

a. **PFAS –** State Water Board is expected to issue 13267 letter to POTWs in May 2020. At this point, it is unclear if all POTWs would be included; those who will be included will need to conduct both effluent and biosolids testing. Analytical method uncertain at this point. There is a possibility that the RMP would fund this effort; Tom Mumley to propose this approach to the SWB. Members may be interested in this 'Clean Water Utility's Guide to Considering Source Identification, Pretreatment, and Sampling Protocols for PFAS' recently made available by NACWA.
b. BACWA is working to finalize **CEC White Paper** – laying out drivers of how to select participants in special CEC studies (based on flow, location, level of treatment, etc.). Otherwise these studies rely on the same volunteer participants year after year and the data may not necessarily be representative.

'Exfiltration' of Collection Systems/ Baykeeper NOIs

Baykeeper sent Notices of Intent to file suit against the City of Sunnyvale and the City of Mountain View. Among other issues, the NOIs allege that exfiltration from the agencies' collection systems are causing bacteria contamination and impairing local waterways. At this point, not much is known as to Baykeeper's desired outcome from these potential lawsuits. They don't usually push for monetary settlements (like RiverWatch); they are a more thoughtful group. Sunnyvale and MV are looking into how best to respond and will keep the group informed. Baykeeper requested CCTV data for Palo Alto in Dec 2019 but has not followed up since and no other agencies

have been contacted yet. A conversation between BACWA and the RWB will likely need to take place on this topic.

ELAP
TNI adoption is on track for 3/17 Board Mtg. ELAP indicated that they may give some consideration to a couple of comments from concerned dischargers and that a revised version would be available in the next few days. It would have a quick 15-day comment period as they want to stay on track for adoption on 3/17 and implementation on 7/1. SWB member Tam Doduc has said that she would like to meet with CA QMS proponents before the adoption hearing so there is a slight chance adoption would be pushed to the April meeting, but not likely.
Christine Sotelo (ELAP) noted she would come to the BACWA Lab Committee meeting to discuss implementation once the regs are adopted.

Announcements

a. RWB has 2 new Board members: Alexis Strauss and Andrew Gunther
b. Regional Water Board looking for volunteers to test-drive recycled water volumetric reporting in Geotracker. EBMUD volunteered. Delta Diablo will likely participate as well.
c. BACWA Annual Members Meeting Jan 10, 2020 presentations posted here
d. Regulatory Issues Matrix has been recently been updated
e. 2019 NPDES Compliance letter submitted
f. BACWA member news section in Bulletin – contact Alina

Next BACWA Permits Committee Meeting: April 14.

Executive Director's December 2019 Report

NUTRIENTS:

Completed a variety of tasks and activities associated with BACWA's interests on nutrients and collaborating with the Water Board including:
-Coordinated with the NMS Science Manager on presentations, meetings, and key issues on nutrients.
-Coordinated with SFEI on submitting the Scoping and Evaluation Plan for the Nature Based Solution Study required by the Watershed permit.
-Attended the 22nd Meeting of the NMS Steering Committee and provided minutes of the meeting.
-Attended a Workshop hosted by Puget Sound POTWs to share BACWA's experience in the collaborating with the Water Board on the Nutrient Management Strategy.
-Coordinated with HDR consultant team on submitting the Scoping and Evaluation Plan for the Regional Recycled Water Report required under the 2nd Watershed Permit.
-Coordinated with HDR in planning for the next Group Annual Report

BACWA BOARD MEETING AND CONFERENCES:

-Worked with staff in preparing for the December monthly Board Meeting.
-Conducted the monthly agenda review with the Chair of BACWA
-Held the December Executive Board meeting.
-Continued to track all action items to completion.
-Held a Special Board Meeting including a Closed Session to interview candidates for the BACWA Executive Director position.

ASC/SFEI:

-As the Chair of the Governance Committee, coordinated with the SFEI Executive Director on committee activities.

COLLECTION SYSTEM COMMITTEE:

-Coordinated with the RPM on planning for the next Collection System Committee meeting.
-Coordinated with BACWA staff on the collaborative effort amongst CASA, SCAP and BACWA on continuing to inform the SWRCB on issues with the proposed SSS WRD.

FINANCE:

-Reviewed the monthly BACWA financial reports with the AED.
-Worked with the AED to track status of revenues received from the membership for payment of the annual invoices.
-Coordinated with the consultant on the internal audit report
-Coordinated with BACWA partners on disposition of the remaining funds in the IRWM account.

PERMIT COMMITTEE:

-Attended the bi-monthly Permit Committee meeting which included the Holiday Pot luck.

-Coordinated with partners in the SCAP lawsuit on challenging the validity of use on the TST in permits
-Coordinated with CASA and SCAP on commenting on the upcoming PFAS monitoring program
-Coordinated with the consultant on completing the chlorine residual Basin Plan Amendment (BPA)

AIR COMMITTEE:

-Attended the quarterly AIR Committee meeting which included a tour of the City of Santa Rosa resource recovery facilities.

LAB COMMITTEE:

-Coordinated with the leadership of the Committee to submit a comment letter to the SWRCB on the proposed regulations.

BAPPG COMMITTEE:

-Coordinated with the Chair of the Pesticide Subgroup to plan for additional funding for needed upcoming regulatory reviews.
-Worked with the RPM on the next steps for finalizing the CEC White Paper.

COLLABORATIONS:

-Coordinated with CASA Regulatory Program Manager and Executive Director on regulatory issues of mutual concern.
-Continued serving as contract administrator for a research effort with UC Merced.
-Participated in a conference call with CASA and the SWRCB staff to discuss the next steps on PFAS monitoring

WOT:

-Worked with the Executive Committee to plan the direction of the BACWWE program.

BACC:

-Coordinated with DSRSD on the transfer of the Bay Area Chemical Consortium activities to BACWA.

MANAGER'S ROUNDTABLE

-Planned for the January quarterly Bay Area Manager's Roundtable Meeting.

ADMINISTRATION:

-Planned for and conducted the monthly BACWA staff meeting to prepare for the Board Meeting and to coordinate and prioritize activities.
-Signed off on invoices, reviewed correspondence, prepared for upcoming Board meetings, responded to inquiries on BACWA efforts, oversaw updating of web page and provided general direction to BACWA staff.
-Worked with the RPM in the preparation of the monthly BACWA Bulletin.
-Coordinated with the RPM to plan activities and review duties, schedules, and priorities.
-Developed and responded to numerous emails and phone calls as part of the conduct of BACWA business on a day-to-day basis.
-Negotiated a contract with a recruiter to fill the Assistant Executive Director positions due to the pending resignation of the current AED.

MISCELLANEOUS MEETINGS/CALLS:

-BACWA Chair and Committee Chairs on items that arose during the month
-Water Board staff on coordinating the nutrient activities
-Other miscellaneous calls and inquiries regarding BACWA activities
-Participated in coordination calls with the consultants working on the reports required under the 2nd Watershed Permit.
-Responded to Board members requests for information

Executive Director's January 2020 Report

NUTRIENTS:

Completed a variety of tasks and activities associated with BACWA's interests on nutrients and collaborating with the Water Board including:
-Coordinated with the NMS Science Manager on presentations, meetings, and key issues on nutrients.
-Attended the 43rd Meeting of the NMS Planning Subcommittee and provided minutes of the meeting.
-Attended the East Bay Leadership Council Water Task Force meeting to give a presentation on BACWA's experience in the collaborating with the Water Board on the Nutrient Management Strategy and negotiating the Watershed Permits.
-Coordinated with HDR in planning for the next Group Annual Report
-Attended the quarterly meeting of the Nature Based Solutions Study Contract Management Group.

BACWA BOARD MEETING AND CONFERENCES:

-Worked with staff in preparing for the BACWA Annual Membership Meeting including a pre-meeting walk through of the venue and preparation of scripts for the Moderators at the meeting.
-Conducted the review of the Annual Meeting agenda with the Chair of BACWA
-Held the Annual Membership Meeting.
-Plan for and conducted the bi-monthly Joint Meeting with the Water Board staff.
-Continued to track all action items to completion.

ASC/SFEI:

-As the Chair of the Governance Committee, coordinated with the SFEI Executive Director on committee activities.
-Participated in the quarterly meeting of the ASC/SFEI Board of Directors

COLLECTION SYSTEM COMMITTEE:

-Coordinated with the RPM on planning for the next Collection System Committee meeting.
-Coordinated with BACWA staff on the collaborative effort amongst CASA, SCAP and BACWA on continuing to inform the SWRCB on issues with the proposed SSS WRD.
-Attended the bi-monthly Collection Committee meeting.

FINANCE:

-Reviewed the monthly BACWA financial reports with the AED.
-Worked with the AED to track status of revenues received from the membership for payment of the annual invoices.
-Coordinated with the consultant on the internal audit report including providing key documents needed for the audit.
-Plan for and held the annual BACWA Finance Committee meeting to review the FY 21 Budget and 5 Year Plan.

PERMIT COMMITTEE:

-Coordinated with partners in the SCAP lawsuit on challenging the validity of use on the TST in permits
-Coordinated with the consultant on completing the chlorine residual Basin Plan Amendment (BPA)

BAPPG COMMITTEE:

-Coordinated with the Chair of the Pesticide Subgroup to propose additional funding for needed upcoming regulatory reviews for the FY 21 budget.
-Worked with the RPM on the next steps for finalizing the CEC White Paper.

COLLABORATIONS:

-Coordinated with CASA Regulatory Program Manager and Executive Director on regulatory issues of mutual concern.
-Continued serving as contract administrator for a research effort with UC Merced.
-Attended the CASA Winter Meeting (BACWA did not fund the trip) and presented the out-going Executive Director with a plaque and Resolution honoring her service to the industry and collaboration with BACWA.

WOT:

-Worked with the Executive Committee to plan the direction of the BACWWE program.
-Met with the Chair of the Executive Committee and the BACWA Regulatory Program Manager to discuss the transition of BACWA support with the new Executive Director taking over in February

BACC:

-Coordinated with DSRSD on the transfer of the Bay Area Chemical Consortium activities to BACWA.

MANAGER'S ROUNDTABLE

-Planned for and conducted the January quarterly Bay Area Manager's Roundtable Meeting.

ADMINISTRATION:

-Planned for and conducted the monthly BACWA staff meeting to prepare for the Board Meeting and to coordinate and prioritize activities.
-Met with Regulatory Program manager to discuss the approach for updating the BACWA Strategic Plan.
-Signed off on invoices, reviewed correspondence, prepared for upcoming Board meetings, responded to inquiries on BACWA efforts, oversaw updating of web page and provided general direction to BACWA staff.
-Worked with the RPM in the preparation of the monthly BACWA Bulletin.
-Coordinated with the RPM to plan activities and review duties, schedules, and priorities.
-Developed and responded to numerous emails and phone calls as part of the conduct of BACWA business on a day-to-day basis.
-Monitored the progress on a contract with a recruiter to fill the Assistant Executive Director positions due to the pending resignation of the current AED.

MISCELLANEOUS MEETINGS/CALLS:

-BACWA Chair and Committee Chairs on items that arose during the month
-Water Board staff on coordinating the nutrient activities
-Other miscellaneous calls and inquiries regarding BACWA activities
-Participated in coordination calls with the consultants working on the reports required under the 2nd Watershed Permit.
-Responded to Board members requests for information

BACWA ACTION ITEMS

Number	Subject	Task	Responsibiity	Deadline	Status
	Action Items from December 20, 2019 BACWA Executive Board Meeting				
2019.12.46	Risk reduction	Reach out to cities with public health clinics to work with CIEA	RPM	2/29/2020	
2019.12.45	AED Recruitment	Begin immediately - use K&A for recruitment	ED	12/31/2020	completed
2019.12.44	Set up Outlook Board Calendar for 2020	Schedule and send Outlook invitations	AED	12/31/2020	completed
2019.12.43	Recruit interim RPM support	Support until new RPM selected	ED/RPM	1/27/2020	completed
2019.12.42	Order mugs and badge ribbons	Annual Meeting supplies	AED	12/27/2019	completed
2019.12.41	Moderator activity reminders/scripts	More than one week ahead of Annual Meeting	ED	1/3/2019	completed
2019.12.40	CECs - augment POTW evaluation budget	Go to Board in February for next year budget	ED	2/13/2020	completed
2019.12.39	Update CEC White Paper Data		RPM	2/29/2020	
2019.12.38	PFAS mid-February order	Review before it goes out	ED/RPM	5/30/2020	
2019.12.37	One Water Workshop Invitations	Invite agencies for lunch & discussion - CUWA, BAWAC, BayKeeper, BAASMA, etc.	ED/RPM	1/31/2020	completed
2019.12.36	Send Check to SFEI		ED	2/28/2020	
2019.12.35	Scoping & Evaluation Plans Comments	Expected by meeting with Regional Board	ED/RPM	1/8/2020	completed
2019.12.34	Increase BAPPG Funding for added letters	Come back in February for Budget	ED	2/13/2020	completed
	Action Items Remaining from Previous BACWA Executive Board Meetings				
2019.8.12	BAAQMD Permit Backlog	Set up separate meeting to discuss with Air District management	RPM/ED	11/30/2019	pending
2019.7.05	Sewer Rate Survey	Post as Google Sheet, and publicize update	RPM	8/31/2019	pending
2018.4-93	Website Policy	Add reference to regulatory requirements for Agency websites	ED	4/30/2019	pending

FY20: *42 of 46 Action Items completed*
FY19: *109 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 Board

December 2019

NUTRIENTS: Reviewed invoices.

BACWA BULLETIN: Drafted and distributed December Bulletin.

COLLABORATIONS: Participated in CASA RWG meeting at EBMUD.

CECs: Solicited input from members on RMP CECs proposals. Met with RWB staff on CECs. Participated in PFAS call with State Water Board staff.

CHLORINE RESIDUAL: Worked with consultant to collect information on chlorine and SBS use.

COMMITTEE SUPPORT:
BABC – Attended meeting and drafted notes.
BAPPG – Attended meeting and drafted Board Report.
Biosolids – Completed and submitted Solano County Generators Report.
Collection Systems – Communicated with speaker for 1/30 Collection Systems Committee meeting.
Laboratory – Worked with committee to develop BACWA comments on ELAP regulations. Attended and planned committee meeting and drafted Board report.
Permits – Drafted agenda and attended meeting.
Recycled Water – Drafted meeting notes. Drafted comments on EPA's Draft National Water Reuse Action Plan.
Executive Board – Worked to plan Executive Board meeting and prepare packet. Attended meeting Reviewed and edited EB minutes and action items. Updated agenda for 1/8 joint Meeting with Regional Water Board. Planned Annual meeting.

ADMINISTRATION/STAFF MEETING – Met with BACWA staff to plan Executive Board meeting and Annual meeting, and discuss BACWA operations. Updated website, and managed committee Google Groups. Worked with ED to develop and implement recruitment strategy for AED. Developed Interim RPM request for proposal.

MEETINGS ATTENDED:
BAPPG (12/4), BABC meeting (12/9), PFAS coordination Call with CASA (12/10), Lab Committee (12/11), Staff Meeting (12/12), CASA RWG (12/13), ELAP Coordination Call (12/16), PFAS Call with SWB (12/16), Permits Committee meeting (12/17), CECs monitoring meeting with RWB staff (12/19), Executive Board Meeting (12/20), AED Recruitment conference call (12/24).

Regulatory Program Manager's Report to the Board

January 2020

NUTRIENTS: Attended PSC meeting, attended NBS meeting, attended Assessment Framework meeting. Reviewed Group Annual Report, and submitted final Report to Regional Water Board.

BACWA BULLETIN: Drafted and distributed January Bulletin.

COLLABORATIONS: Participated in CASA RWG meeting conference call. Met with BACWWE chair to plan next steps for program. Met with AED to discuss status of BACC, and met with BACC administrator to discuss transferring program to BACWA.

NPDES COMPLIANCE LETTER: Worked with RMP staff and BAPPG to draft and submit NPDES Compliance letter.

CECs: Solicited input from members on RMP CECs proposals.

CHLORINE RESIDUAL: Worked with consultant to collect information on chlorine and SBS use.

COMMITTEE SUPPORT:
BABC – Attended meeting and drafted notes.
BAPPG – Finalized and submitted pesticide comment letter.
Collection Systems – Drafted agenda and attended meeting. Reviewed NOIs issued to member agencies by BayKeeper.
Managers Roundtable – Developed regulatory slides and attended meeting.
Recycled Water – Discussed action on EPA's Draft National Water Reuse Action Plan. Attended meeting and drafted notes.
Executive Board – Worked to plan Annual Meeting and prepare materials. Worked with SRC staff on room set up and AV arrangement. Attended 1/8 joint Meeting with Regional Water Board. Updated Regulatory Issues summary. Planned and attended Special Joint meeting Conference Call to approve Interim RPM Contract.

ADMINISTRATION/STAFF MEETING – Met with BACWA staff to plan Executive Board meeting and Annual meeting, and discuss BACWA operations. Managed committee Google Groups. Worked on Strategic Planning outline with ED. Worked on recruitments for interim RMP and AED. Drafted contract for Interim RPM.

MEETINGS ATTENDED:
SRC walkthrough (1/6), PSC meeting (1/7), Joint meeting with RWB (1/8), SRC AV test (1/9), Annual Meeting (1/10), BABC (1/13), BAPPG Steering Committee (1/14), BACC meeting with AED (1/14) Strategic Planning meeting (1/15), CASA RWG (1/16), BACC Transition Meeting (1/16), NBS Meeting (1/17), BACWA Finance Committee (1/17), Staff meeting (1/20), Recycled Water Committee (1/21), Assessment Framework meeting (1/21), Special Executive Board Meeting Conference Call (1/27) Collection Systems Committee (1/30), Managers Roundtable (1/31).

MEETING NOTES

Prepared for: BACWA
Meeting: Bay RMP Technical Review Committee (TRC) Meeting in December 2019
Date: December 27, 2019
Notes Prepared by: Mary Lou Esparza and Yun Shang

Presentation on micro-particles in bivalves

- Liz Miller presented the RMP-funded study on bivalve accumulation of microparticles
- Resident bivalves, freshwater and saltwater clams, and transplanted mussels (used in the Nutrient Management Strategy) were used for the study
- Study used to determine if bivalves are acceptable for bio-magnification matrix and if a correlation could be found between microparticle and persistent organic pollutants. Results indicated that:
    - SF Bay bivales contain microplastics, at levels comparable to those worldwide
    - Poor correlation between PAHs and microparticles measured in the bivalves
    - Predominantly accumulate microfibers – selectively reject sphere-shaped particles. This does not mirror the water column findings from 5 Gyres
    - Recently published study revealed that bivalves selectively reject plastic spheres
- Study indicates bivalves are not good bioindicators for microparticles.

Formation of sub-committee to potentially redesign the Status & Trends (S&T) monitoring portion of the RMP

- S&T accounts for 32% of the RMP budget
- Subcommittee formed with one representative from each sector playing into RMP as well as regulators
- Members are: Chris Sommers (storm water), Richard Looker (RB), Bridgette DeShields (dredgers), Eric Dunlavey (POTW), Luisa Valiela (EPA) and industrial waste representative
- The subcommittee will meet 2 times prior to the Jan. 26th RMP Steering Committee Meeting and will present ideas to the Steering Committee on Jan. 26th
- The subcommittee will:
    - Take a fresh look at what is being monitored and why
    - Remove or reduce monitoring of matrices and analytes that do not inform water Board decisions
    - Generate ideas of how to onboard/off-ramp emerging contaminants
- Recovered funds would be used to fund CECs or other analytes that may be information limited

Data exploration challenge – get the word out
(https://www.sfei.org/events/datachallenge#sthash.TWySq3c5.dpbs)

- Second year of the Challenge
- Two groups targeted: high school and college students
- Sufficient time given for preparation
- This challenge is to invite outside persons to look at the vast dataset available through CD3. Someone may find correlation that can then be investigated to determine cause.

Jim McGrath, Vice-Chair of the Region 2 Water Board present for part of the meeting

- His visit was related to E. coli and enterococci contamination at Berkeley's Aquatic Park, which is speculated to be related to people dumping RV septic waste into storm drains
- Informing himself on who holds data for microbiological indicators in surface water and if it is of sufficient quantity and quality to allow reviewers to state if there is a human health hazard or not. If it is not of sufficient quantity and quality, is the RMP the right place to ask for help? What RMP should do for storm water monitoring?
- Water Board needs to know how much trash and their impact to the WQ
- There was some conversation about storm water permitting and the inability to treat it economically.
- Jay Davis suggested taking the question to the RMP Steering Committee on Jan. 26th

Agenda for next meeting

- PFAS update
- NMS scope and monitoring ongoing
- Open to suggestions

Abstract of a related paper

ENVIRONMENTAL Science & Technology

Article

Cite This: *Environ. Sci. Technol.* 2019, 53, 8776−8784

pubs.acs.org/est

Selective Ingestion and Egestion of Plastic Particles by the Blue Mussel (*Mytilus edulis*) and Eastern Oyster (*Crassostrea virginica*): Implications for Using Bivalves as Bioindicators of Microplastic Pollution

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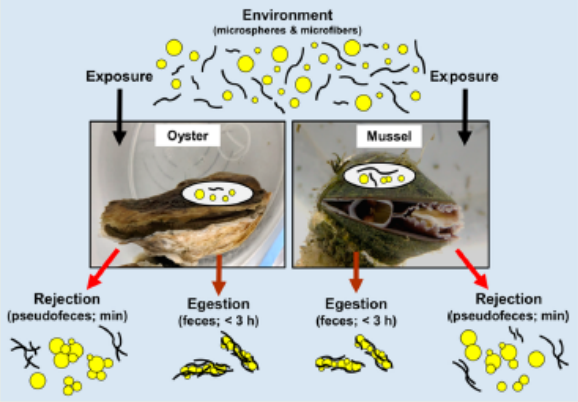
Supporting Information

ABSTRACT: Microplastics (MP; 1 μm to 1 mm) of various shapes and compositions are ingested by numerous marine animals. Recently, proposals have been made to adopt bivalve molluscs as bioindicators of MP pollution. To serve as indicators of MP pollution, however, the proposed organisms should ingest, without bias, the majority of plastic particles to which they are exposed. To test this premise, eastern oysters, *Crassostrea virginica*, and blue mussels, *Mytilus edulis*, were offered variously sized polystyrene microspheres (diameters 19−1000 μm) and nylon microfibers (lengths 75−1075 × diameter 30 μm), and the proportion of each rejected in pseudofeces and egested in feces was determined. For both species, the proportion of microspheres rejected increased from ca. 10−30% for the smallest spheres to 98% for the largest spheres. A higher proportion of the largest microsphere was rejected compared with the longest microfiber, but similar proportions of microfibers were ingested regardless of length. Differential egestion of MP also occurred. As a result of particle selection, the number and types of MP found in the bivalve gut will depend upon the physical characteristics of the particles. Thus, bivalves will be poor bioindicators of MP pollution in the environment, and it is advised that other marine species be explored.



Lorien Fono

From: Regulatory <regulatory-bounces@lists.casaweb.org> on behalf of Jared Voskuhl via Regulatory <regulatory@lists.casaweb.org>
Sent: Monday, February 3, 2020 10:36 AM
To: regulatory@lists.casaweb.org
Cc: Jared Voskuhl
Subject: [Regulatory] CASA RWG February Update
Attachments: ATT00001.txt

Categories: Board Packet

Good Morning,

Below are updates and associated materials for water and land issues from January and pending in the month ahead. Our next Regulatory Workgroup meeting will be held by teleconference on Thursday, Thursday 20, and CASA's DC Policy Forum is February 24 – 26, 2020.Please let us know if you have any questions about this information.

Thank you,
The CASA RWG Team

Water

The Governor's Water Portfolio is Released for Comment

The Governor's Water Resilience Portfolio was released on Friday, January 4. Comments on it are due this Friday, February 7. If you have feedback or questions, please reach out to Jared Voskuhl, who is coordinating CASA's comment letter with Jessica Gauger.

Toxicity Appendices Released

On January 9, the State Water Board (SWB) held a workshop on draft Appendix J and draft Appendix K, which were released over the holidays. Written comments on these new materials are due on Monday, February 10. CASA is planning on submitting a very brief comment letter on the Appendix, primarily focused on the use of the term "false positive", which is the focus of the Appendix, as distinguished from a "false indication of toxicity", which has been our real concern. Later this spring, the SWB is planning to release another draft of the toxicity provisions, with adoption planned for this summer. Please contact Adam Link if you have questions about these developments.

Biostimulatory and Biointegrity Policies Check-In

CASA's nutrients subgroup will meet on Wednesday, February 19 to discuss developments with the biostimulatory and biointegrity policies, including the documents developed by Larry Walker Associates for CASQA and CASA, staffing changes at the SWB, and an ASCI publication from SCCWRP. Please reach out to Adam Link if you have any questions in advance of the call.

PFAS Phase 3 Investigation Update

This spring, the SWB will issue its General Order for Phase 3 of its PFAS investigation, and it will require POTWs to monitor and test their influent, effluent, and biosolids. In anticipation for what to expect, you may review their orders for Landfills and Chrome Platers. A coalition comprised of BACWA, CVCWA, SCAP, and CASA will meet with the SWB's investigative team before the Order is finalized to review and provide feedback for its implementation. Please reach out to Greg Kester for biosolids related questions and Jared Voskuhl for water related ones.

Ocean Protection Council's February 26 Meeting and Adoption of their Strategic Plan for 2020- 2025

The OPC officially noticed its meeting on Wednesday, February 26, and their Strategic Plan for 2020-25 is agendized for possible adoption. Meeting materials, including the revised plan, will be released here on Friday, February 14, and comments upon it must be submitted by Monday, February 24. CASA previously commented on the November 2019 version of the Plan regarding concerns over the language to eliminate ocean discharges by a date certain and the Plan's attempt to tie that action to addressing ocean acidification. Please e-mail Jared Voskuhl with questions or comments on the OPC's updated materials.

ELAP Rulemaking Update

On Friday, January 17 SWB Members Doduc and Maguire met with proponents of the CA QMS alternative for a state accreditation system. The Board is slated to adopt the proposed regulations on March 17, 2020. Written comments on the regulations will not be accepted at the adoption hearing, only oral testimony, but concerns with the proposed regulations can still be submitted directly to individual Board Members in advance of their decision and vote to adopt the draft regulations. Upon adoption by the Board, the regulatory package will be sent to the Office of Administrative Law, thereby initiating a 45-day public comment period when additional written comments may be submitted pertaining to whether the regulations are consistent with the Administrative Procedures Act. Please reach out to Jared Voskuhl if you have any questions.

Land Disposal Program WDR for Disaster-Related Wastes Set for Adoption on February 18, 2020

The SWB has Noticed its adoption of the general waste discharge requirements for disaster-related wastes on Wednesday, February 18. A revised general order will be released here, in advance of the hearing. CASA submitted technical comments related to discharges to wastewater systems, most of which are likely to be addressed. Please contact Jared Voskuhl with questions.

Reminder to File 2019 Volumetric Wastewater and Recycled Water Data by April 2020

In the months after the SWB adopted their recycled water policy in December 2018, they notified over 900 permittees about changes to monitoring and reporting programs for waste discharge requirements, national pollutant discharge elimination system permits, water reclamation requirements, master recycling permits, and general waste discharge requirements, to require annual reporting of wastewater and recycled water volume. Accordingly, last year's data will be due by April 2020, as summarized in the SWB Executive Director's January report.

Land

SB 1383 Update

CalRecycle submitted the regulatory package to implement SB 1383 to the Office of Administrative Law (OAL) on Tuesday, January 21st. The OAL has 30 days to approve it and it will then be adopted thereafter. In addition, CalRecycle invites stakeholders to review and provide feedback on a draft report submitted by R3 Consulting Group as part of a study. The purpose of the study was to conduct research and analysis regarding the cost impacts of SB 1383 to local jurisdictions, which are tasked with enforcing most of the provisions of the law. The report provides options and recommendations for funding mechanisms that can be used by jurisdictions to implement the collection requirements and support the development of organics recycling infrastructure. The results of this study will be incorporated into a CalRecycle analysis required by Section 42653 of SB 1383. The draft report can be downloaded here.

SWB and General Order

The SWB legal team has reviewed suggested changes to the General Order (GO) as proposed by SWB staff from recommendations provided by CASA. As of December, key SWB staff still had not received the legal review. With SB 1383 potentially eliminating county ordinances in favor of the GO, this Order will take on additional importance for biosolids management. There is the possibility the proposed changes to the GO would not require it be opened, but there are also indications that the SWB could seek to revisit the regulation in a more thorough manner.

EPA Annual Reporting Due February 19

Wednesday, Feb 12, 2020 10:00 am – 11:00 am PST
Registration for the webinar is available here: https://register.gotowebinar.com/rt/7410260173771312395

Additional information on reporting is as follows: You can file and access your annual biosolids report, NETEPABIO, through EPA's Central Data Exchange (CDX) at https://cdx.epa.gov/. If you are not yet in the CDX system, you should contact EPA's help desk at (877) 227-8965 and they can walk you through getting registered and into the system. Guidance on getting into the CDX system is also available at https://epanet.zendesk.com/hc. If you've forgotten your CDX Password and/or User ID, please follow the instruction provided athttps://epanet.zendesk.com/hc/en-us/articles/360001298788-CDX-password-userID-reset-help.

EPA assessments

The EPA is planning to complete a biosolids land application risk screening tool and a revised risk assessment model by the end of 2020. Each will have a public comment period before adoption. The screening tool will utilize a deterministic model framework, while the full model will account for random variation and utilize a probabilistic framework.

Central Valley (CV) Salts and Irrigated Lands Program

Permittees have two options for complying with new CV Salts regulations. They must either meet groundwater requirements of 700 µS/cm (0.7 dS/m), or they can participate in the Prioritization and Optimization (P&O) study. While participating in the P&O study, participants would pay a fee and be required to meet their existing permit requirements, but will be able to defer more stringent permitting requirements which could be put in place after the completion of phase 1 of the P&O study. More information is available here.

LCFS Fuel Standard

At least three California wastewater agencies are in the process of developing a Tier 2 application for the LCFS Credit which requires a site-specific analysis to develop the carbon intensity (CI) of transportation fuel they would produce. The air board has been responsive with this process, which goes through CARB and not the local air districts. CARB has also agreed to work with the wastewater sector to develop guidance to utilize both the simplified model for wastewater treatment anaerobic digestion and the food waste digestion model when co-digesting. The guidance will be intended to provide a more appropriate CI which will include the benefit of diverting food waste from landfills and co-digesting it.

EPA RIN

CASA continues to work with USEPA on credits assigned for fuel produced from co-digestion. This effort will be reinvigorated in the new year.

SCAP Biosolids Trend Survey

SCAP released their biosolids trend survey. Contact Greg Kester for a copy if you are not a member of SCAP and would like a copy.