Executive Board Meeting - AGENDA

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BACWA BAY AREA CLEAN WATER AGENCIES

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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 February 21, 2020 BACWA Executive Board Meeting Minutes			3-9
2 January 2020 Treasurer's Reports			10-19
APPROVALS AND AUTHORIZATIONS		**9:06 AM**	
3 Authorization: EDAR for Maze & Associates Internal Audit			20
4 Authorization: EDAR for correction to contract for K&A for ED recruitment			21-23
POLICY/STRATEGIC			
5 Discussion: Nutrients		**9:20 AM**	
a. Regulatory			
i. GAR data vs. planning targets			
ii. Ocean Protection Council's 5-Year Plan adoption debrief	Link to OPC Strategic Plan pdf		24-46
b. Technical Work			
i. Letter to USGS on ship-based monitoring			
ii. Coastal Impacts Study Plan			
c. Governance Structure			
i. Planning Committee Meeting #45 Debrief			
6 Discussion: Exfiltration - Potential Regional Strategy			
7 Discussion: EPA Reuse Action Plan BACWA involvement			47-50
8 Discussion: Update on SWRCB's Plans for PFAS and Impact on Wastewater Facilities	Link to BACWA PFAS resource page		
9 Discussion: Statewide collaboration on monitoring per AB617			51
10 Information: 13267 letter on vulnerability assessments			
BREAK		**10:30**	
11 Discussion: Update on Chlorine Residual Basin Plan Amendment			
12 Discussion: BACWA Strategic Plan Update			52
13 Discussion: Revised ELAP Regulations - March 17 Adoption hearing debrief	Link to State Water Board ELAP page		
14 Discussion: Engagement with Summit Partners on Pesticides			53-59
15 Discussion: Invitation to speak to BAWAC about recycled water drivers			
OPERATIONAL		**11:40 AM**	
16 Discussion: Draft FY21 BACWA budget			60-65
17 Discussion: COVID-19 Contingency Planning for BACWA			66-70
18 Discussion: ASC and designation of JPA signatory designee	Link to JEPA		
19 Discussion: Update on RPM Recruitment			
20 Discussion: FWQC membership			71
REPORTS		**12:15 PM**	
21 Committee Reports			
22 Member Highlights			
23 Executive Director Report			72-74
24 Regulatory Program Manager Report			75
25 Other BACWA Representative Reports			76-80
a. RMP Technical Committee	Mary Lou Esparza, Yuyun Shang, Samantha Engelage		

b. RMP Steering Committee	Karin North; Leah Walker; Eric Dunlavey		
c. Summit Partners	Lorien Fono; Lori Schectel		
d. ASC/SFEI	Lorien Fono; Eileen White		
e. Nutrient Governance Steering Committee	Eric Dunlavey; Eileen White; Lori Schectel		
e.i Nutrient Planning Subgroup	Eric Dunlavey		
e.ii NMS Technical Workgroup	Eric Dunlavey		
f. SWRCB Nutrient SAG	Lorien Fono		
g. NACWA Taskforce on Dental Amalgam	Tim Potter		
h. BAIRWMP	Cheryl Munoz; Linda Hu; Lorien Fono		
i. NACWA Emerging Contaminants	Karin North; Melody LaBella		
j. CASA State Legislative Committee	Lori Schectel		
k. CASA Regulatory Workgroup	Lorien Fono		
l. ReNUWIt	Jackie Zipkin; Karin North		
m. ReNUWIt One Water	Jackie Zipkin, Eric Hansen		
n. RMP Microplastics Liaison	Artem Dyachenko		
o. Bay Area Regional Reliability Project	Eileen White		
p. WateReuse Working Group	Cheryl Munoz		
q. San Francisco Estuary Partnership	Eileen White; Lorien Fono		
r. CPSC Policy Education Advisory Committee	Colleen Henry		
s. California Ocean Protection Council	Lorien Fono		
t. Countywide Water Reuse Master Plan	Karin North, Pedro Hernandez		
u. CHARG - Coastal Hazards Adampation Resiliancy Group	Jackie Zipkin		
26 **SUGGESTIONS FOR FUTURE AGENDA ITEMS**		**12:27 PM**	
NEXT MEETING		**12:28 PM**	
The next regular meeting of the Board is scheduled for April 17, 2020 from 9:00 am to 12:30 pm at SFPUC, 13th Floor, Hetch Hetchy Room, 525 Golden Gate Ave, San Francisco, CA.			
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**
Lorien Fono	BACWA
Alina Constantinescu	LWA/ BACWA
Tom Hall	EOA
Amanda Roa	Delta Diablo
Dave Richardson	Woodard & Curran
Kelly Moran	TDC Environmental
Jennifer Teerlink	CA Dept of Pesticides Regulation

The Board members expressed congratulations to Lorien Fono, for her new role as ED.

PUBLIC COMMENT - none

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER – Kelly Moran's and Jennifer Teerlink's presentation (item 15) will be taken up around 10:30a.

CONSENT CALENDAR

1. December 20, 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 Eileen White and seconded by Amit Mutsuddy. The motion was approved unanimously.*

2. January 8, 2020 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. January 27, 2020 BACWA Special executive Board Meeting Minutes – The approved minutes will be posted on the BACWA website.

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

4. February 3, 2020 BACWA Special executive Board Meeting Minutes – The approved minutes will be posted on the BACWA website.
Consent Calendar item 4: *A motion to approve was made by Lori Schectel and seconded by Eileen White. The motion was approved unanimously.*

5. December 2019 Treasurer's Reports – No comments on this item.
Consent Calendar item 5: *A motion to approve was made by Lori Schectel and seconded by Eileen White. The motion was approved unanimously.*

APPROVALS & AUTHORIZATIONS

6. Approval: Assistant Executive Director Contract. Discussion: There was a large pool of applicants for the position, and 5 candidates interviewed. New AED is starting first week of March.
Item 6: *A motion to approve was made by Lori Shectel and seconded by Amy Chastain. The motion was approved unanimously.*

7. Approval: Payment to SFEI of $2.4M for support of scientific studies. Discussion: The commitment for the second Watershed Permit is for $11M total. Rather than making annual $2.2M payments, the bulk of the funds will be made available sooner to accelerate the rate of scientific studies used to inform management decisions prior to the third watershed permit. For FY20, BACWA has provided a total of $2.6M; for FY21 BACWA will providedin $2.8M, etc. The full schedule is available in the meeting packet.
Item 7: *A motion to approve was made by Eileen White and seconded by Amy Chastain. The motion was approved unanimously.*

8. Approval: Contract amendment with TDC Environmental for additional $25K. ED Comment: The funds are coming from the miscellaneous committee budget.
Item 8: *A motion to approve was made by Amy Chastain and seconded by Jackie Zipkin. The motion was approved unanimously.*

9. Chair Authorization - AED recruitment contract with Koff was approved by the Chair.

OTHER BUSINESS-POLICY/STRATEGIC

Note: Action Items highlighted in green.

Agenda **Item 10 –** Discussion: Nutrients

a. Regulatory

i. Group Annual Report – Trend Analysis. GAR proposed 3 statistical tools for trend analysis because recent trends are not obvious and linear regression is not sufficient. It was proposed that HDR come to a Permits Committee meeting to present the options.
ii. Ocean Protection Council 5-Year Plan – On 2/14, OPC released an updated 5-yr plan. Lorien is planning to attend the adoption hearing on 2/26. Lorien will reach out to Regional Water Board executive staff and the NMS Science Manager to attend and support Region 2's current approach to evaluating the impacts effluent discharges to the Ocean and basing management decisions on the science. Lorien will follow-up and transmit proposed oral comments to the Board prior to the meeting.
iii. NBS Meeting Debrief 1/17/20 – Meeting attendees discussed putting out the request for information to the membership and updates on various projects in the Bay Area.

b. Technical Work
i. Debrief of Assessment Framework 2.0 Workshop: Among the items discussed was that the science is intended to support future regulatory actions. But anything that doesn't cause directly constitute impairment (like low DO in itself), cannot be used for establishing a 303(d) listing. As such, instead of WQOs, the group is considering establishing triggers so some measures such as increased monitoring are taken before impairment occurs. DO Expert Panel will likely be formed. The ED will reach out to the Water Board and ask for clarification on the AF 2.0.
ii. Nutrient Workshop WRF: A workshop is planned by WRF at the end of March to educate a nation-wide audience on Bay Area nutrient developments. Originally envisioned as a small workshop, but appears that professionals from around the Bay Area are encouraged to attend. The current proposed venue may be limiting attendance. The ED will follow-up with HDR/WRF on possible relocation or different format (it was also suggested to setup a webinar option).

c. Governance Structure
i. NMS Planning Committee Meeting #43 Debrief – The Committee revisited its governance and Charter language. The ED to further review and see if it needs any updates so that it is reflective of current practices.
ii. NMS Planning Committee #44 Debrief – The Committee is hoping to find out by end of March on the fate of the ship-based monitoring program. NMS wrote a letter of support to USGS on the matter.
iii. NMS Steering Committee #22 Debrief – The Committee discussed the FY20 Program Plan and Assessment Framework 2.0.

Agenda **Item 11** – Discussion: Exfiltration 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. Amit noted that in 2016 San Jose settled with BayKeeper on a similar matter (10-yr agreement). SJ has agreed to expand its green Infrastructure program,

accelerate collection system repairs, etc. Central San had a River Watch agreement which expired in January this year, but subsequently received a new NOI.

This issue was also discussed at the recent BACWA Collection Systems meeting and at the Managers meeting. At Managers meeting, the Managers said they would like to meet with the Water Board on the issue. The next BACWA/Regional Water Board meeting is setup for March 16. The ED will invite GMs to this meeting; The ED also planning to speak with the Baykeeper ED beforehand and get a better understanding as to what Baykeeper is hoping to achieve. A lot of resources could be spent on this, but first we need to ensure that infrastructure projects would make a difference. A Board member pointed out that the Bacteria TMDL (affecting San Mateo/SFPUC) presumes exfiltration. All pipes within a ¼ mile of a beach need to be CCTV-ed, assessed, and fixed.

Agenda **Item 15 -** Discussion: Pesticide update from DPR and TDC Environmental. Presentations to be posted to BACWA website.
Jennifer Teerlink, DPR described an ogoing pesticides monitoring program run by DPR. Phase I: 25+ participating plants in CA. Three rounds of sampling complete for influent/effluent with one more round remaining this FY. Biosolids event is forthcoming. Phase II: source sampling. Nurseries, laundromats for farm workers' uniforms, discharges from pet grooming/ board operations.
Kelly Moran, TDC Environmental – EPA seems to be going backwards on pesticide regulation. BACWA efforts have been successful in causing them to consider the down-the-drain pathway of pesticides to surface water. The focus for the future of pesticides is on prevention and thorough analysis before a chemical is approved to come onto the market. This effort is not being funded next year by CASQA, and therefore a budget increase is being requested from BACWA.

Agenda **Item 12 –** Discussion: EPA Water Reuse Action Plan, an effort championed by Dave Smith (EPA Region 9). BACWA commented that funding shortfall and intrajurisdictional agreements are biggest impediments. New action proposed: study and report on interagency agreements on recycled water. BACWA is listed as a potential collaborator (maybe host a workshop and the RW Committee could plan). ED will engage with BAWAC to discuss areas where our interests are aligned.

Agenda **Item 13 –** Discussion: Update on SWRCB's Plans for PFAS and Impact on Wastewater Facilities. ED participating in related call on Monday 2/24 with State Water Board staff. State Water Board is pushing for quarterly influent, effluent, and biosolids sampling for all POTWs > 1MGD. EBMUD participating in a WERF study with 28 other agencies in the nation. EBMUD will share data with this group when it becomes available. USD also has done effluent sampling on PFAS.

Agenda **Item 14 -** Discussion: CECs Update. BACWA members, Water Board staff and RMP staff met on 2/14 to discuss a potential PFAS Regional Study in lieu of mandated sampling and

reporting. RMP staff will develop a proposal to show State Water Board staff.

Agenda **Item 16 –** Discussion: Update on Chlorine Residual Basin Plan Amendment – Tom Hall updated the group on his efforts to establish a higher ML (0.1 mg/L, instead of RWB-proposed 0.05 mg/L). There is a new RWB staff person, Tong Yin, working on this project; BACWA will invite them to next Lab Committee meeting to discuss the BP amendments and issues around the ML.

Agenda **Item 17 –** Discussion: BACWA Strategic Plan Update. Lorien proposed an afternoon workshop (after April Exec Board mtg) dedicated to updating BACWA's Strategic Plan. The Executive Board was supportive of the idea.

Agenda **Item 18 -** Discussion: Toxicity Update and Appendix K comment letter. 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. BACWA comments on Appendix K were submitted on 2/10/2020 (letter available on website).

Agenda **Item 19 -** Discussion: Agenda for joint meeting with Regional Water Board. The meeting is scheduled for Monday 3/16. ED will invite Managers as opportunity to discuss Exfiltration NOIs. Other items for the agenda: Enterococcus objectives, BP Amendment, CECs Update.

Agenda **Item 20 -** Revised ELAP Regulations - Notice for public comment. Small revisions to the proposed regulations were made on 2/14; BACWA Lab Committee reviewed but decided against commenting. TNI-based regulations are expected to be adopted at the March State Water Board meeting. They would become effective July 1, 2020.

OTHER BUSINESS-OPERATIONAL

Agenda **Item 21 –** Discussion: 2021 Annual Meeting Confirmation for Scottish Rite Center (Oakland). Group discussed preferred meeting date and settled on February 19, 2021.

Agenda **Item 22** - Discussion: 2020 Annual Meeting Survey. Group discussed feedback from the Annual Meeting. Some repeated comments: agenda too tight, no time for questions. Also: BACWA should put more effort in engaging smaller agencies. ED noted that this latter comment would be good item to pick up at the upcoming meeting on Strategic Planning. Lorien can help connect with GMs that are not usually engaging with the group.

Agenda **Item 23** - Discussion: Draft FY21 BACWA Budget. ED highlighted a few items of interest: Nutrient Surcharge Calculation – invoices are usually sent late August; more funding may be needed for TDC Environmental in the future; long-term budget may be affected if Watershed Permit is extended by another year (for 6 years total). Need to understand how much the 6th year payment would be. ED to engage with the science manager on this topic.

Agenda **Item 24** - Discussion: Update on Regulatory Program Manager recruitment. RPM recruitment to be started after AED is on board.

Agenda **Item 25** - Discussion: Succession Planning Update. Lorien to take Dave's place on Nutrient committees, etc. Maybe use the RPM once in a while. Leah Walker (Petaluma) is retiring – Robert Wilson (Petaluma) stepping in for Nutrient Management Strategy Committee.

Agenda **Item 26** – Discussion: North Bay Watershed Association Conference sponsorship. Group supported a $1500 sponsorship again this year.

REPORTS

Agenda **Item 27** – Committee Reports – None

Agenda **Item 28** – Member Highlights – San Jose NPDES permit passed on consent. Will Burrell is their case worker. SFPUC NPDES permits – still under discussion with both EPA and Regional Water Board.

Agenda **Item 29** – Executive Director Report – Included in the packet

Agenda **Item 30** – Regulatory Program Manager Report – Included in the packet.

Agenda **Item 31 - 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 – 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 – 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 – No report.
m. ReNUWIT OneWater - Jackie Zipkin, Eric Hansen.
    - Planning annual meeting for early June. Hertzberg as keynote speaker (interesting choice – author of bills of interest to BACWA). Trying to raise $150K for next year;

potentially asking for $30K from BACWA.

- AQPI - Update from Jackie Zipkin: Effort is moving forward. Radar stations in East Bay, Marin, Santa Clara, etc. are installed. NOAA scientists are excited about obtaining these 'microclimate' data. NOAA looking for feedback from data users; plan to form a subgroup of WW users to get an idea of how they would use the data. Jackie will report back.

n. RMP Microplastics Liaison: Artem Dyachenko – No report.
o. Bay Area Regional Reliability Project: Eileen White– No report.
p. WateReuse Working Group: Cheryl Munoz – No report.
q. San Francisco Estuary Partnership – Eileen White – No report.
r. CPSC Policy Education Advisory Committee – Doug Dattawalker – No report.
s. California Ocean Protection Council – Lorien Fono – No report.
t. Countywide Water Reuse Master Plan - Karin North; Pedro Hernandez – No report.
u. CHARG – Coastal Hazards Adaptation Resiliency Group – Jackie Zipkin

Agenda **Item 32 - SUGGESTIONS FOR FUTURE AGENDA ITEMS**. None.

ANNOUNCEMENTS: The next regular meeting of the Board is scheduled for March 20, 2020 from 9:00 am to 12:30 pm at EBMUD HQ. Training Room, 375 11th Street, Oakland, CA.

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

The meeting adjourned at 1:28 pm and was followed by lunch.

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

March 5th, 2020

MEMO TO: Bay Area Clean Water Agencies Executive Board
MEMO FROM: Damien Charléty, Treasurer, East Bay Municipal Utility District
SUBJECT: Seventh 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 January 31, 2020** (seven 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)

MONTHLY FINANCIAL SUMMARY REPORT

January 2020

Fund Balances

In FY20 BACWA has three operating funds (BACWA, Legal, and CBC) and two pass-through funds for which BACWA provides only contract administration services (WOT & Prop 84).

BACWA Fund: This fund provides the resources for BACWA staff, its committees, and other administrative needs. The ending fund balance on January 31, 2020 was $1,573,155 which is significantly higher than the target reserve of $199,709 which is intended to cover 3 months of normal operating expenses based on the BACWA FY20 budget. $363,851 of the ending fund balance is shown on the BACWA Fund & Investments Balance Report January 31, 2020 as obligated to meet ongoing operating line item expenses for BAPPG Committee Support, Legal services, IT services, Board meeting expenses, accounting services and BACWA staff support. This leaves actual unobligated excess funds of $1,009,595 (i.e., actual fund balance of $1,209,304 less target reserves) as of January 31, 2020. As the details of the costs of the various regulatory requirements included in the 2nd Nutrient Watershed Permit become better defined, these excess funds may be transferred to the CBC fund and used to offset potential Nutrient Surcharge increases to the BACWA members.

CBC Fund: This fund provides the resources for completing special investigations as well as meeting regulatory requirements. The ending fund balance on January 31, 2020 was $4,268,830, which is significantly higher than the target reserve of $1,000,000. $705,319 of the ending balance is obligated to meet line item expenses for completion of the Group Annual Report contract, the Chlorine Residual BPA work, completion of the NBS Study and for technical support. This leaves an actual unobligated excess fund balance of $2,563,511 (i.e., actual fund balance of $3,563,511 less target reserves) as of January 31, 2020. Total Disbursements for FY20 from the CBC Fund include the funding the Nutrient scientific investigations as required by the Nutrient Watershed Permit in the amount of $2.4M (i.e., $2.6M less the $200k advanced payment made in FY19). As the strategy to fund compliance with the 2nd Nutrient Watershed Permit becomes better defined, any excess CBC funds could be used to offset potential Nutrient Surcharge increases to the BACWA members.

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

Budget To Actual

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

Revenues as of January 31, 2020 (58% of the FY) are at 97.11%.

Overall Expenses as of January 31, 2020 (58% of the FY) are at 11.3%.

Line items Pretreatment, InfoShare Groups, Annual Meeting are 10% over budget. There was also an unbudgeted expense of $14,000 for Koff & Associates to fund the ED recruitment effort.

NOTE: One Alternative Investment in the amount of $300,000 purchased in December 2018 was called in January 2019. It will be replaced, but LAIF rates continue to be higher than Alternative Investments since the yield curve is negative out to 7 years.

FY 2020
BACWA BUDGET to ACTUAL

BACWA BAY AREA CLEAN WATER AGENCIES

BACWA FY20 BUDGET	Line Item Description	FY 2020 Budget	Actuals January 2020	Actual % of Budget January 2020	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	1,695,565	100%	-$4,435	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	$41,413	207%	$21,413	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**	**$3,029,722**	**97.11%**	**-$90,075**	

BACWA FY20 BUDGET	Line Item Description	FY 2020 Budget	Actuals January 2020	Actual % of Budget January 2020	Variance	NOTES
EXPENSES						
Labor						
	Executive Director	$207,531	$121,060	58%	-$86,471	ED requested 2.9%; $99.77/hour; contract based on full time same as FY 19, 2080 hrs
	Assistant Executive Director	$100,907	$22,797	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**	**$208,677**	**47%**	**-$237,488**	
Administration						
	EBMUD Financial Services	$41,616	$8,539	21%	-$33,077	2% increase
	Auditing Services (Maze)	$5,240	$5,240	100%	$0	New contract with Auditors through EBMUD
	Administrative Expenses	$7,803	$2,469	32%	-$5,334	2% increase. Travel, Supplies, Parking, Mileage, Tolls, Misc.
	Insurance	$4,682	$4,696	100%	$14	2% increase
	Total	**$59,341**	**$20,944**	**35%**	**-$38,397**	
Meetings						
	EB Meetings	$2,601	$974	37%	-$1,627	2% increase. Catering, Venue, other expenses
	Annual Meeting	$12,000	$13,374	111%	$1,374	2% increase. Catering, Venue, other expenses
	Pardee	$6,242	$5,835	93%	-$407	2% increase. Catering, Venue, other expenses
	Misc. Meetings	$5,202	$206	4%	-$4,996	2% increase. Hol & Comm Chair Lunch, Staff Mtgs, Fin Comm, Summit Ptnrs, CASA, NACWA Tech WS, Low Flow WS
	Total	**$26,045**	**$20,389**	**78%**	**-$5,656**	
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	$584	33%	-$1,166	MS Exchange, Survey Monkey (incr in FY20), Carbonite, Doodle Polls, PollEv, GoToMtg
	Total	**$7,200**	**$1,922**	**27%**	**-$5,278**	
Legal						

FY 2020
BACWA BUDGET to ACTUAL

EXPENSES						
	Regulatory Support	$2,653	$2,653	100%	$0	2% increase
	Executive Board Support	$2,133	$0	0%	-$2,133	2% increase
	Total	**$4,786**	**$2,653**	**55%**	**-$2,133**	
Committees						
	AIR	$76,000	$9,940	13%	-$66,060	$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	$638	1%	-$44,362	
	Manager's Roundtable	$1,000	$185	19%	-$815	
	Total	**$230,300**	**$62,097**	**27%**	**-$168,203**	
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	$14,000	0%	$14,000	Koff & Associates
		$0	**$14,000**	**0%**	**$14,000**	
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	$9,659	19%	-$42,361	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**	**$59,958**	**2%**	**-$2,612,063**	
	TOTAL EXPENSES	**$3,470,857**	**$392,139**	**11.30%**	**-$3,078,718**	
	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 January 31, 2020

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	702,154	314,381	1,573,155	363,851	1,209,304
804	LEGAL RSRV	300,000	-	-	300,000	-	300,000
805	CBC	1,926,714	2,402,073	59,957	4,268,830	705,319	3,563,511
	SUBTOTAL 1	*3,412,096*	*3,104,227*	*374,338*	*6,141,985*	*1,069,170*	*5,072,815*
802	BABC	-	283,305	22,833	260,472	-	260,472
806	BACC	-	-	*1,265*	(1,265)	-	(1,265)
810	WOT	322,375	-	39,417	282,958	-	282,958
	SUBTOTAL 2	*322,375*	*283,305*	*63,515*	*542,165*	-	*542,165*
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**	**3,387,532**	**434,994**	**6,848,599**	**1,069,170**	**5,779,429**

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	702,154	314,381	1,573,155	21,576	1,594,731	1,594,731	-	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	2,402,073	59,957	4,268,830	-	4,268,830	2,306,230	1,962,600	87%	-		priority # 2 for allocation
	SUBTOTAL 1	3,412,096	3,104,227	374,338	6,141,985	21,576	6,163,561	3,900,961	2,262,600	100%	-		
802	BABC	-	283,305	22,833	260,472	-	260,472	260,472	-	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	63,515	542,165	-	542,165	542,165	-	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**	**3,387,532**	**434,994**	**6,848,599**	**21,576**	**6,870,175**	**4,607,575**	**2,262,600**	**-**			
						verification	-	0	-		-		

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

Reconciliation to Trial Balance - accrual basis

Per Report above:		
General		3,104,227
WOT		283,305
PROP		-
subtotal		**3,387,532**
Billings-Pending Receipts		
4686	Mem Contrib	20,110
4687	Transfer	-
4690	Assoc Contrib	5,025
4696	Other	12,663
4731	State Grant	-
4732	Grant Retention	-
subtotal		**37,798**
Trial Balance Revenue Accounts		
4411	Interest	(43,000)
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		**(3,425,330)**
Difference		**0**

STB	1493	2,262,600	
STB	1505	4,607,575	
		6,870,175	-
STB	2135	(21,576)	
		6,848,599	-

BACWA Revenue Report as of January 31, 2020

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	-	-	1,692	-	-	6,294	6,294	13,706
800	Bay Area Clean Water Agencies	1011133	BDO Assoc.&Affiliate Contr	184,111	-	-	-	-	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	-	-	-	-	-	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**	**-**	**-**	**1,692**	**1,588**	**694,272**	**6,294**	**702,154**	**42,643**
805	WQA-CBC	1011099	BDO Member Contributions	675,000	-	-	-	-	671,390	-	671,390	3,610
805	WQA-CBC	1011108	BDO Other Receipts	1,700,000	-	145,000	-	-	1,695,565	-	1,695,565	4,435
805	WQA-CBC	1011117	BDO- Interest Income from LAIF	-	-	-	11,321	-	-	35,118	35,118	(35,118)
805	WQA-CBC	1014528	BDO-Voluntary Nutrient Contrib	-	-	-	-	-	-	-	-	-
	WQA CBC TOTAL			**2,375,000**	**-**	**145,000**	**11,321**	**-**	**2,366,955**	**35,118**	**2,402,073**	**(27,073)**
	TOTAL			**3,119,797**	**-**	**145,000**	**13,012**	**1,587**	**3,061,227**	**41,413**	**3,104,227**	**15,570**

	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	-	-	-	-	-	170,000	-	170,000	(170,000)
802	BABC	1011109	BDO Fund Transfers	-	-	-	-	113,305	-	-	113,305	(113,305)
	BABC TOTAL			**-**	**-**	**-**	**-**	**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**	**-**	**145,000**	**13,012**	**114,892**	**3,231,227**	**41,413**	**3,387,532**	**(267,735)**

BACWA Expense Detail Report for January 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	(17,294)	17,294	-	-	86,471	121,060	-	-	207,531	-
AS-Assistant Executive Directo	1011124	100,907	-	-	-	-	58,245	22,797	-	-	81,042	19,865
AS-Regulatory Program Manager	1011149	137,727	-	-	-	-	83,090	64,820	-	(11,885)	136,025	1,702
ADMINISTRATION												
AS-EBMUD Financial Services	1011125	41,616	-	-	-	-	33,077	8,539	-	-	41,616	-
AS-Audit Services	1014512	5,240	4,716	524	-	-	5,240	5,240	-	(5,240)	5,240	-
BDO Other Receipts	1011108	-	-	-	11,000	-	-	-	14,000	-	14,000	(14,000)
AS-BACWA Admin Expense	1011118	7,803	-	-	457	-	-	-	2,469	(167)	2,302	5,501
AS-Insurance	1011126	4,682	-	-	-	-	-	-	4,696	-	4,696	(14)
MEETINGS												
GBS-Meeting Support-Annual	1014514	12,000	-	-	3,668	-	-	-	13,374	-	13,374	(1,374)
GBS-Meeting Support-Exec Bd	1014513	2,601	-	-	-	-	1,936	665	309	-	2,910	(309)
GBS-Meeting Support-Misc	1014516	5,202	-	-	98	-	-	-	206	-	206	4,996
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	-	-	56	-	-	-	584	-	584	1,166
CAR-BACWA IT Support	1014519	2,600	-	-	-	-	2,600	-	-	-	2,600	-
CAR-BACWA Website Dev/Maint	1011116	600	-	-	-	-	-	-	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	-	-	-	-	509	2,144	-	-	2,653	-
COMMITTEES												
AIR-Air Issues&Regulation Grp	1014253	76,000	(6,792)	6,792	-	-	65,628	9,372	568	-	75,568	432
BC-BAPPG	1011147	100,000	-	-	-	-	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	-	-	-	-	-	-	1,100	-	1,100	(100)
BC-Laboratory Committee	1011103	1,000	-	-	-	-	-	-	-	-	-	1,000
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	-	-	186	-	-	-	185	-	185	815
BC-Miscellaneous Committee Sup	1011104	45,000	-	-	638	-	-	-	638	-	638	44,362
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**	(19,370)	24,610	16,103	-	**363,851**	**255,715**	**75,958**	**(17,292)**	**678,232**	120,605
TECH SUPPORT												
WQA-CE Addl Work Under Permit	1014254	100,000	-	-	-	-	182,202	37,798	-	-	220,000	(120,000)
WQA-CE-Technical Support	1011127	52,020	-	-	-	-	23,117	8,999	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**	**-**	**-**	**-**	**-**	**705,319**	**46,797**	**13,160**	**-**	**765,276**	**1,906,744**
GRAND TOTAL		**3,470,857**	**(19,370)**	**24,610**	**16,103**	**-**	**1,069,170**	**302,512**	**89,118**	**(17,292)**	**1,443,508**	**2,027,349**
BABC												
AS-Assistant Executive Directo	1011124	-	-	-	-	-	-	275	-	-	275	(275)
BDO Contract Expenses	1011143	-	-	-	-	-	-	-	6,182	-	6,182	(6,182)
AS-Regulatory Program Manager	1011149	-	-	-	-	-	-	1,703	23	-	1,726	(1,726)
	1015374	-	-	-	14,650	-	-	-	14,650	-	14,650	(14,650)
BABC TOTAL		**-**	**-**	**-**	**14,650**	**-**	**-**	**1,978**	**20,855**	**-**	**22,833**	**(22,833)**
BACC												
Administrative Support	1011142	-	-	-	-	-	-	1,183	82	-	1,265	(1,265)
BACC TOTAL		**-**	**-**	**-**	**-**	**-**	**-**	**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)
		-	**-**	**-**	17	**-**	**-**	**-**	**39,417**	**-**	**39,417**	**(39,417)**
GRAND TOTAL (BDO, CBC, BABC, BACC, WOT)		**3,470,857**	**(19,370)**	**24,610**	**30,753**	**-**	**1,069,170**	**305,673**	**149,472**	**(17,292)**	**1,507,023**	**1,963,834**

BACWA Expense Detail Report for January 2019

DEPTID	DEPARTMENT	EXPENSE TYPE	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
811	Prop84BayAreaIntegRegnlWtrMgmt	BDO Fund Transfers	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Administrative Support	-	-	-	-	-	-	-	-	(2,859)	(2,859)	2,859
811	Prop84BayAreaIntegRegnlWtrMgmt	BDO Contract Expenses	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Regional Green Infrastructure	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Hacienda Ave Green St Improvem	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Sears Point Wtlnd & Wtrshd Res	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Bay Friendly Landscape TP	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Weather Based Irrigation Cntrl	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	High Efficiency Toilet & UR	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	High Efficiency Toilet & UI	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	High Efficiency Clothes Washrs	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Napa Co. Rainwater HP	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Conservation Program Admin	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Flood Infrastructure Mapping T	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Stormwater Improvements & PBP	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Richmond Shoreline & San PFP	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Pescadero Integrated FRAH	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Restoration Guidance, San FC	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	SF Estuary Steelhead MP	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Stream Restoration in North BD	-	-	-	-	-	-	-	-	-	-	-
811	Prop84BayAreaIntegRegnlWtrMgmt	Watershed Program Admnstrtn	-	-	-	-	-	-	-	-	-	-	-
	PRP84 TOTAL		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(2,859)**	**(2,859)**	**2,859**

BACWA Revenue Report as of January 31, 2020

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 EXECUTIVE DIRECTOR AUTHORIZATION REQUEST

FILE NO.: 20-35

TITLE: Request for Executive Director to approve contract with Maze & Associates not to exceed $5,000 to perform audit of BACWA internal controls.

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

RECOMMENDED ACTION

Approve contract and payment to Maze & Associates for work done to perform audit of BACWA's internal controls.

SUMMARY

As part of the staffing transition at BACWA, the Executive Board requested that an audit be performed on its internal controls. The Executive Director solicited a proposal from Maze & Associates that was date June 18, 2019, and included in the July 19, 2019 Executive Board Meeting Packet. The proposal included a fee estimate of $4,000 to $5,000. The Executive Board agreed that the work should be performed.

The contract was signed on July 2, 2019 by Maze & Associates and returned to BACWA. The Executive Director gave a verbal authorization to Maze and Associates to begin work, but did not develop an Executive Director Authorization, or complete a signed contract. This Authorization approves work already done by Maze after July 2, 2019, and authorizes payment for tasks performed per the July 2019 proposal.

FISCAL IMPACT

This project will be paid for under the Auditing Services line item in the approved Fiscal Year 2020 budget and workplan.

ALTERNATIVES

1. Do not approve contract and payment authorization. This alternative is not recommended since this work was intended to allow BACWA to improve its internal controls of authorizations and payments.

Attachments: Contract, signed by Maze & Associates

Approved: Lorien Fono Date: 2/28/2020

Lorien Fono
BACWA Executive Director

BACWA EXECUTIVE DIRECTOR AUTHORIZATION REQUEST

FILE NO.: 20-36

TITLE: Request for Executive Director to approve contract amendment with K&A Recruiting to correct error in original contract.

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

RECOMMENDED ACTION

Approve contract amendment with K&A Recruiting in an amount not to exceed $20,000.

SUMMARY

In 2019, BACWA requested letter proposals were requested from two very well qualified local recruiters who have extensive experience working with public agencies to assist with Executive Director Recruitment. In reviewing the proposals, the one with the highest value of costs and services provided is K&A Recruiting. K&A also successfully conduced the last recruitment for Executive Services more than seven years ago. The contract was negotiated using the K&A proposal as a basis for negotiations. The proposal specified that the level of effort was estimated at $15,000, with up to an additional $5,000 in expenses.

On October 1, 2019, BACWA's Executive Board approved a request for a contract not to exceed $20,000, as described by K&A's proposal. On October 3, 2019, BACWA and K&A executed a contract for $15,000, a discrepancy which was a clerical error. This action would approve an amendment of the original contract to bring it in line with the $20,000 not to exceed cost of the original contract and Board approval.

FISCAL IMPACT

The need for Executive Director recruiting services in FY 20 was not included in the FY 20 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 additional $5,000 unanticipated expense.

ALTERNATIVES

No Alternatives are considered.

Attachments: Contract, signed by K&A.
Contract amendment # 1

Approved: Lorien Fono Date: 3/13/2020

Lorien Fono
BACWA Executive Director

Amend 1 K&A

AMENDMENT NO. 1
TO AGREEMENT BETWEEN
BAY AREA CLEAN WATER AGENCIES and
Koff and Associates, Inc
FOR
BACWA Executive Director Recruitment Support

This Amendment No. 1 is made this 13th of March, in the City of Oakand and County of Alameda, State of California, to that certain agreement of October 3, 2019, by and between Off and Associates, Inc. and Bay Area Clean Water Agencies, (BACWA) (the "Agreement") in consideration of the covenants hereinafter set forth.

1. BACWA and Koff and Associates, Inc agree to a new contract amount of $20,000.00 for Executive Director Recruitment 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 March 13, 2020

Lorien Fono
BACWA Executive Director

By _____ Date _____

Richard O'Donnell
Koff & Associates, Inc.

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 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 Executive Director. The Scope of Services is provided in Attachment A. Attachment B 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 $15,000. 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 in accordance with Attachment C. Invoices will be paid within thirty (30) days of receipt by the BACWA AED.

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

Approved:

By David R. Williams
David R. Williams
Executive Director

Date 10/03/19

BACWA EIN: 94-3389334

By Richard O'Donnell
Richard O'Donnell
Koff & Associates

Date 10/03/19

EIN/TIN: 61-1493064

Group Annual Report TIN data vs. planning targets

	Planning target, kg/d	2019 load, kg/d	Percent Buffer
Central Bay	14,014	12,301	14%
Lower South Bay	9,830	7,327	34%
San Pablo Bay	1,797	1,483	21%
South Bay	28,370	22,146	28%
Suisun Bay	7,340	5,897	24%

SANITATION DISTRICTS OF LOS ANGELES COUNTY

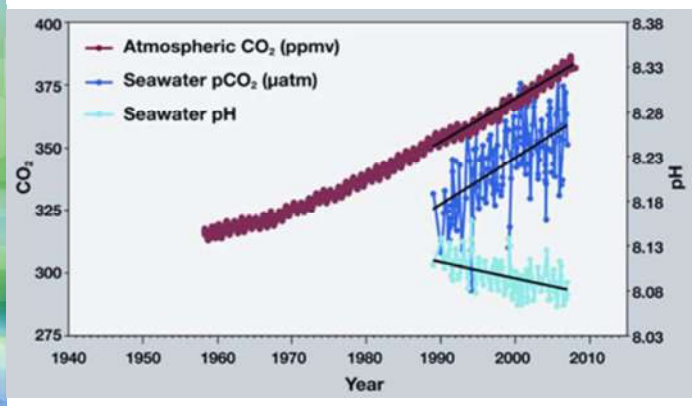
Not Gill-ty?
A Dive into the Issues:
OAH and POTW Discharge

Shelly Walther
Environmental Scientist
Los Angeles County Sanitation Districts
CASA Regulatory Workgroup
Annual Planning Retreat
March 11, 2020

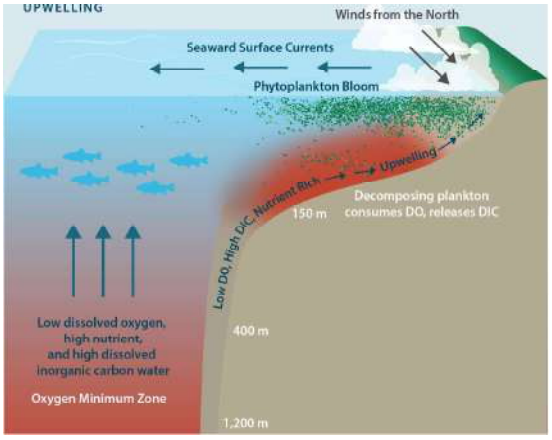
What is OAH?

- Ocean Acidification
  - Decreased pH in the ocean
- Hypoxia
  - Deoxygenation of portions of the ocean

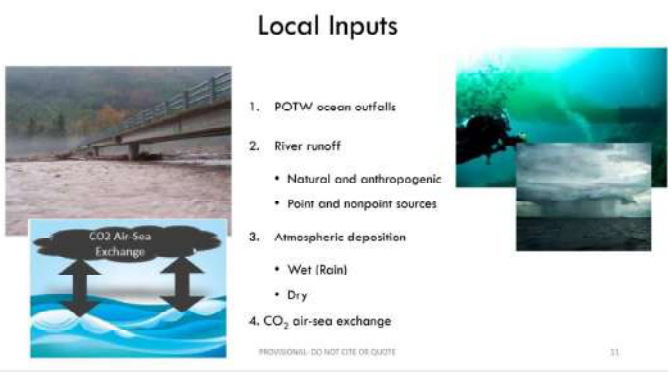
Ocean Acidification has Increased with Increasing CO_2



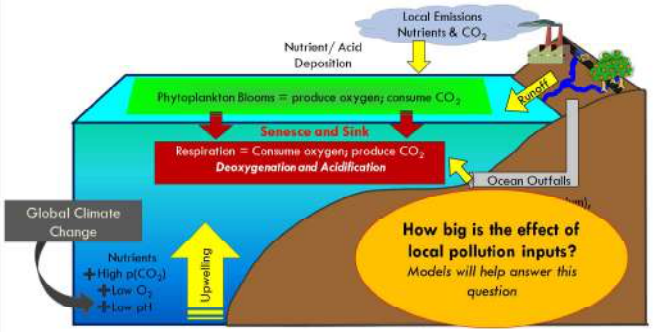
How Ocean Processes Affect OAH



Anthropogenic Inputs Can Exacerbate OAH



Anthropogenic Inputs and OAH

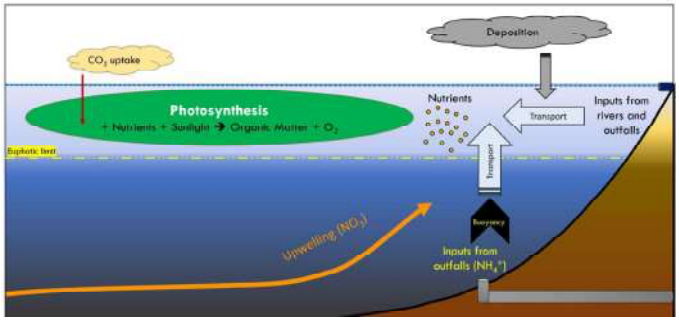


Nutrients and OAH

- Excess nutrients into a water body = Eutrophication
- Eutrophic waters typically have hypoxic zones at certain periods of time
- Example: “Dead Zones” in the Gulf of Mexico

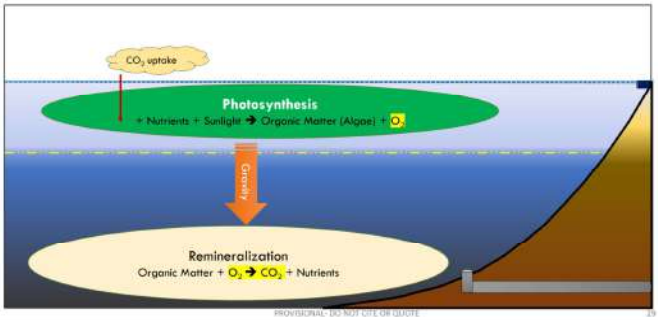
Nutrients and OAH

Atmospheric and Land-Based Nitrogen Increases Algal Blooms



Hypoxia Occurs at Depth

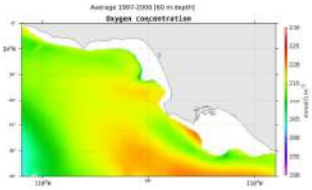
Photosynthesis produces Oxygen in the euphotic zone
Respiration Consumes Oxygen and Produces CO_2 at depth



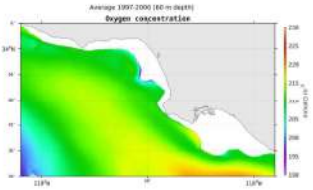
Hypoxia: ROMS-BEC Results

Organic Matter Sink Decay at **Depth**
Respiration Consumes Oxygen

No inputs

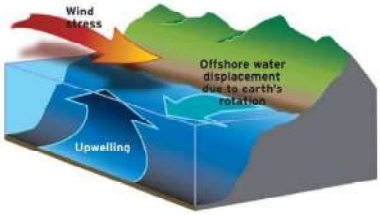


With local inputs

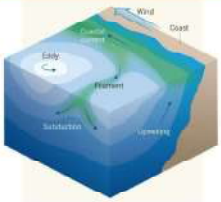


Regional Ocean Modeling System: ROMS

ROMS : Reproducing upwelling and coastal circulation



ROMS : Reproducing Eddies and filaments



Regional Ocean Modeling System: ROMS

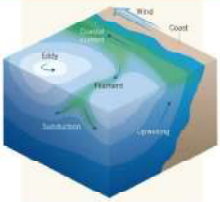
ROMS : Reproducing upwelling and coastal circulation

Increasing resolution from 1km→ 300m

Increases the vertical flux of nutrients by 1 order of magnitude

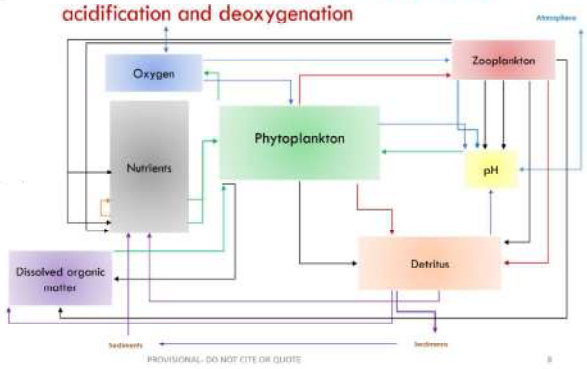
We need to model at 300 m resolution to get the comparison between sources of ocean versus anthropogenic nutrient right

ROMS : Reproducing Eddies and filaments

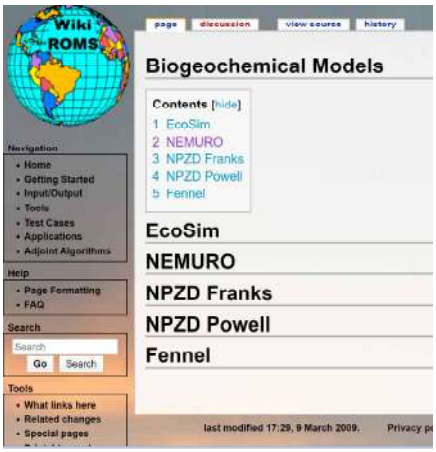


Biogeochemical Model: BEC

5th: Organic matter production and loss: Driver of respiration, acidification and deoxygenation



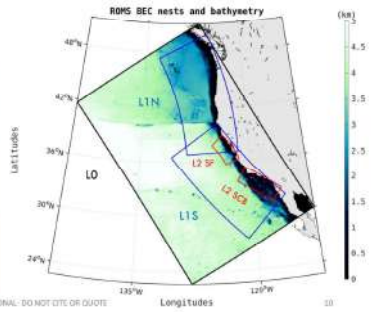
BEC: Not the Only Biogeochemical Model



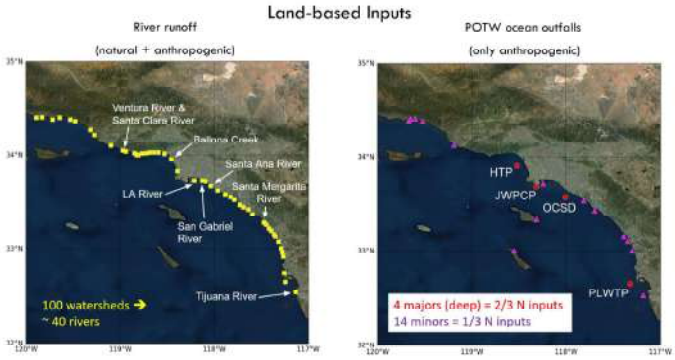
POTW Add-on: Focus on Model Spatial Resolution

Nesting: The 1 km resolution model provides ocean boundary conditions for the 300m resolution model

Simulation	Resolution	Time of simulation
L0 US West coast	4 km	1994-2013
L1 North	1 km	1997-2007, extension to 2016
L1 South	1 km	1997-2007, extension to 2016
L2 San Francisco / Monterey	300 m	1997-2000 (this fall) with and without terrestrial and atmospheric inputs
~~L2 Southern California Bight~~	~~300 m~~	~~1997-2000, extension to~~ 2016 with and without terrestrial and atmospheric inputs



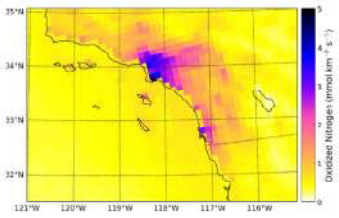
POTWs Modeled in ROMS-BEC



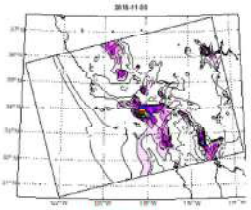
Not Included: $C0_2$ Dome over LA

Atmospheric Inputs Have Both Natural and Anthropogenic Contributions

e.g. NO_3^- air deposition (EPA CMAQ model)



Local Atmospheric Dome of CO_2 Over Los Angeles (Feng et al. model)

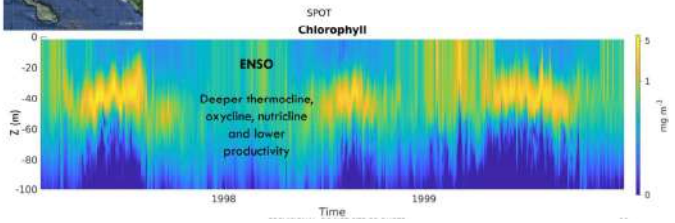


Not included in today's simulation

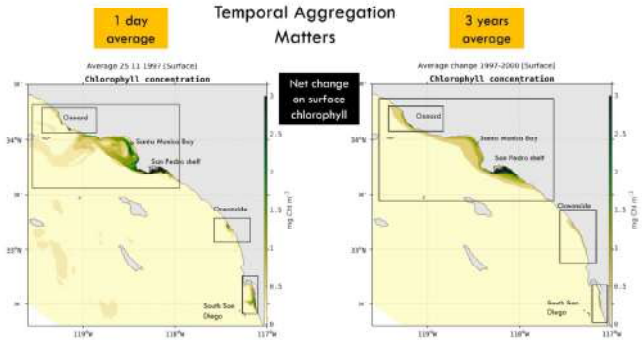
Algal Blooms are Highly Variable

Seasonality and multiannual variability of Algal Blooms

Multiannual variability is a factor to consider
El-Nino (ENSO) increases variability

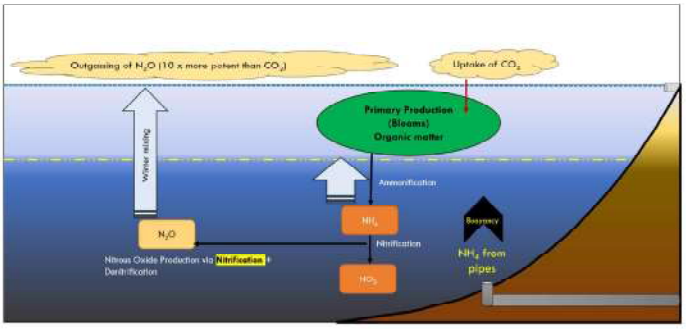


Diurnal Nutrient Cycles are Not Captured in the Model



Future Study

Effects on N Cycle and Greenhouse gas

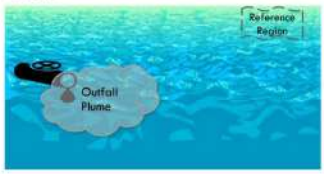


Are POTW Nutrients Causing Impacts? Start with the COP

NUMERIC OBJECTIVES:

DO shall not be depressed >10 % from that which occurs naturally, as a result of discharge of oxygen demanding waste.

pH shall not be changed > than 0.2 units from that which occurs naturally.



NARRATIVE OBJECTIVES:

Nutrient materials* shall not cause objectionable aquatic growths or degrade* indigenous biota.

Biological characteristics: Marine communities, including vertebrate, invertebrate, algae and plant species, shall not be degraded.*

* = defined in Appendix

Learned in the morning that fate and effects of effluent are manifested far afield of plume

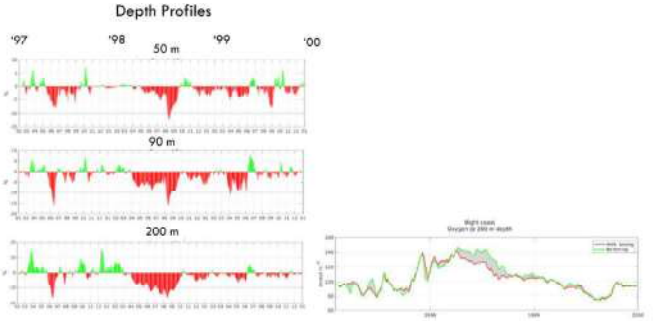
- Spatial reference approach can't apply
- Will use scenarios to back out effects

Model Results: No Impacts Due to Acidification

At Bight Coast scale, pH values < 0.2 do not occur at any depth

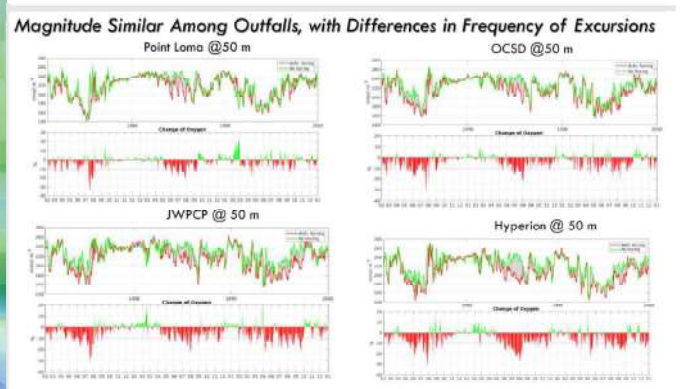
Model Results: Dissolved Oxygen Exceedances…Sometimes

Bight Coast, Some Periods Are Exceeding DO of -10%



Model Results: Dissolved Oxygen Exceedances…In Some Areas

Magnitude Similar Among Outfalls, with Differences in Frequency of Excursions



SCCWRP CTAG Model Interpretation Subcommittee

So, This First Evaluation Tells Us that Some Excursions of DO WQO Are Apparent, Suggesting Additional Work is Needed

But….If We Go With This Approach, You Have Many Decisions to Be Made To Determine Whether Anthropogenic N Is Having a Significant "Impact"

- Spatial and temporal data aggregation - what is the right statistic?
- Scale of assessment
  - What depth range ?
  - Over one year? One month?
  - Over the outfall? Subregion? Somewhere in between?
- Individual effect of each source, or cumulative impact?

How the SWRCB Intends to Use ROMS-BEC

ROMS-BEC Model as a Decision Support Tool

MECHANISTIC TOOL, CAN USE WITH DIFFERENT SCENARIO ANALYSES TO….

- Predict "alternative" future condition
  - Future with climate change
- Predict the effect of management actions
  - Nutrient management
  - Water recycling (wastewater volume reduction)
- Attribute the relative effects of individual sources and/or pathways

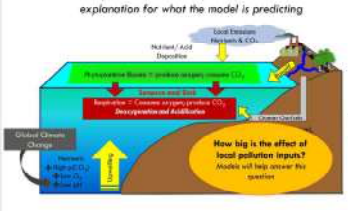
RAW MODEL OUTPUT IS A 4-DIMENSIONAL DATA STREAM, SO WE CAN USE DIFFERENT APPROACHES TO POST-PROCESSING OUTPUT TO….

- Apply different thresholds
  - Identify which habitats/species are the most sensitive
  - Help you decide which one you want to use
- Help you decide on appropriate scales of assessment
- Help you decide on appropriate ways to aggregate the data
  - Spatial and temporal aggregation
  - Statistics

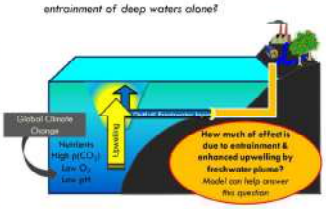
DO Dynamics: Entrainment and More

More Than Just a Question of Statistics: We Need To Further Investigate What's Driving DO Dynamics in Water Column

We presented this conceptual model as an explanation for what the model is predicting



What is the contribution of freshwater entrainment of deep waters alone?



Issues re: ROMS-BEC

- Model is expensive to run
- Focus on spatial and temporal resoution rather than accuracy of biogeochemistry
  - It's imperative to get the ocean chemistry right.
  - Must get the plankton and their interactions right.

Issues re: ROMS-BEC

- BEC was designed to capture High Nitrate, Low Chlorophyll (HNLC) conditions in the Southern Ocean, subarctic and equatorial Pacific.
- HNLC systems are iron-limited
- End result: BEC over-predicts algal blooms and hypoxic conditions

Issues re: ROMS-BEC

- So far, no differentiation of various nutrient/CO_2 sources: aerial CO_2, aerial $N0_3$, Nutrients from POTWs, Stormwater, etc.

The Process Matters

- Model Results before sensitivity testing: SCB – 1997-2000
- Narrative: “There is a problem” before the results were in
- 2019: start validation
- Model pitched as a “decision support tool” for managers

The Process Matters

- Before testing complete, potential solutions to the were pitched
  - Discharge cessation
  - Grow kelp
  - Grow eelgrass
    - Problem is these require cool water and nutrients to grow, esp kelp.

The Process Matters

- Identify new problems to tackle as if they're already an issue
  - N20 outgassing from production of N20 from nitrification and denitrification

Muddying the Waters: The Solutions Precede the Science

- Narrative: water recycling will reduce nutrient loading which will reduce OAH
- The future is unknown
  - Temperature
  - Ocean currents, mixing, storms
  - Kelp needs
  - Effect of using current data, or projected data vs 1997-2000
  - Long-term trends > 3 years

Issues re: the Process

- None of the ROMS-BEC with Anthropogenic Inputs / High Resolution Add-On has been published
- It is all the "latest research" …
- Let's take it on tour!
  - 3 OAH Webinars this week

Implications for Future Regulation

- OPC Strategic Plan 2020-2025
- SWRCB
- Jon Bishop:
  - ready to use the model to assess effluent limitations. No need to do any further work.
  - Doesn't understand why so much concern about validation. Sees it as a stall tactic.
- Regional Boards: Sending Letters for Zero Discharge Requirements

Best-Case Scenario

- Regulation would be based on
  1. Environmentally effective actions
  2. Sound science to support action
  3. Consideration of economic feasibility of actions

Discussion Topics

- How does the status of the model and process inform our next steps?
- How can (good) science be elevated?
- How can the Process Be Overcome and Eventually Improved?

San Francisco Bay Regional Water Quality Control Board

February 11, 2020

Dr. Deborah Stoliker
Deputy Director
Earth System Processes Division, Water Mission Area
U.S. Geological Survey
345 Middlefield Road
Menlo Park, CA 94025

Dear Dr. Stoliker:

I am writing in my roles as chair of both the San Francisco Bay (SF Bay) Nutrient Management Strategy (NMS) and SFB Regional Monitoring Program (RMP) Steering Committees to express our desire to continue or create a new technical assistance agreement (TAA) for water quality monitoring with the United States Geological Survey (USGS) SF Bay Water Quality Research Program. However, for that to occur, I respectfully request a commitment by USGS by March 31, 2020, to continue the current TAA or create a new one for at least one year and ideally multiple years.

As you know, the NMS and RMP are regulatorily-mandated science programs to inform management decisions by the SF Bay Regional Water Quality Control Board and stakeholders related to protecting the Bay's water quality. The USGS SF Bay Water Quality Research Program has been an important long-term scientific partner of the NMS and RMP. Over the past several years, our funding commitments to the USGS SF Bay Water Quality Research Program have increased from $115,000/yr to $250,000-350,000/yr. In addition, in 2016 the NMS contributed $200,000 towards the purchase and retrofit of the USGS Program's new research vessel, the R/V *Peterson*.

During 2018-2019, there was considerable uncertainty within USGS about the fate of the USGS SFB Water Quality Research Program. Fortunately, based on considerable effort from you and others at USGS, a one-year extension (through September 2020) of the existing TAA with USGS was approved in August 2019. Unfortunately, we now all find ourselves in a similar situation as last year, uncertain about how essential monitoring work will continue beyond the TAA extension end-date. The continued uncertainty is impacting our programs' ability to implement multi-year monitoring plans.

The NMS and RMP Steering Committees have a strong desire to continue our partnership with USGS. They have directed NMS and RMP staff to work with USGS to explore potential options for continued partnering beyond September 2020. However, out of necessity the Steering Committees also directed staff to begin developing contingency plans, including initiating discussions with other collaborators in the region about other options for continuing monitoring work. If an agreement with USGS cannot be reached by March 31, 2020, the NMS and RMP must begin pursuit and commitment to other regional partnerships to continue SFB monitoring. Our hope is that we can continue partnering with the USGS SFB Water Quality Research Program on this important work.

Please feel free to contact me at thomas.mumley@waterboards.ca.gov or 510 622-2395 if I can provide additional information or assistance.

Sincerely,

Thomas Mumley
Assistant Executive Officer

P34 Investigating the Effects of San Francisco Bay's Nutrient Exports to the Central CA Shelf

Project Summary

San Francisco Bay (SFB) is a nutrient-enriched estuary that receives large anthropogenic nutrient loads from multiple sources (Figure 1A). The Bay Area's 37 publicly owned treatment works (POTWs), which treat wastewater from the region's 7.4mill people, discharge ~50,000 kg d^{-1} dissolved inorganic nitrogen (DIN) to SFB (Figure 1A). The POTW loads account for the vast majority of dry season DIN inputs, and are fairly constant year-round (±15%); however, recent analysis indicates POTW loads have increased substantially over the past decade (Figure 1B; SFEI, in prep). The Sacramento and San Joaquin Rivers carry water from California's Central Valley, delivering 90% of SFB's freshwater inputs to northern SFB along with large, seasonally-varying DIN loads (Figure 1A). Although SFB's waters are highly enriched in DIN, the system has not historically experienced eutrophication problems typical of other nutrient-enriched estuaries. Observations over the past decade have identified substantial interannual shifts in the SFB's response, or sensitivity, to nutrients (Cloern et al. 2007; SFEI, 2017). In response, regulators and stakeholders launched the SFB Nutrient Management Strategy (NMS) Science Program to carry out expanded monitoring and targeted investigations to inform management decisions related to SFB's 'carrying-capacity' for nutrients.

SFB's resistance to elevated nutrients stems from several factors (e.g., high turbidity, strong tidal mixing) that cap phytoplankton primary productivity and reduce DIN utilization within the system. While those factors tend to increase SFB's internal DIN carrying-capacity, they necessarily translate into greater DIN exports to the coastal ocean. Early coupled biogeochemical- hydrodynamic model simulations suggest that, while substantial fractions of SFB's DIN loads are 'lost' internally (denitrification), SFB serves as a large DIN point source to the coastal ocean via efflux through the Golden Gate (Figure 1C). Despite the large magnitude of these DIN loads, we currently know very little about their potential effects on ecological conditions along the coast.

This project will apply coupled atmospheric-physical-biogeochemical ocean models to investigate how SFB-derived DIN influences ecosystem conditions along the Central California Shelf (CCS). Work will focus on two sets of questions, the first emphasizing physical processes and the second addressing biogeochemical or ecological responses.

1. What geographic zones of the CCS are influenced by outflow from SFB? What factors regulate the SFB plume's trajectory, areal extent, and duration of influence?
2. What are the ecosystem structure resulting from natural coastal processes (e.g., upwelling, alongshore coastal transport, vertical mixing)? In impacted zones, what is the magnitude of the perturbation resulting from the outflow and SFB-sourced DIN? Over meaningful temporal averages (e.g., monthly or seasonal), what are the quantitative changes to primary production, phytoplankton concentrations, and community structure resulting from the outflow? What quantitative effects do these have on dissolved oxygen and acidity?

We will pursue this work through collaborating with an on-going (year 5) multi-institution project (UCLA, SCCWRP, UW, NOAA) that is applying coupled physical/biogeochemical models for the California Current system to predict the effects of ocean acidification and hypoxia (OAH) along the CA coast. That project, led by investigators at UCLA and SCCWRP and funded by the CA Ocean Protection Council and NOAA, has a specific emphasis on quantifying degree to which regional anthropogenic nutrient inputs influence OAH, via their influence on phytoplankton productivity. As a result, while the NMS and UCLA-SCCWRP projects differ somewhat in their specific goals or focus, the state-of-the-art models they are developing are ideal for addressing the NMS' management questions along the CCS.

In addition, the UCLA-SCCWRP project, which focused initially on the Southern California Bight, plans to begin shifting their geographic focus to CCS in 2019. The NMS-funded project is thus well timed (start late-2018/early-2019) to make meaningful contributions to the broader UCLA-SCCWRP project.

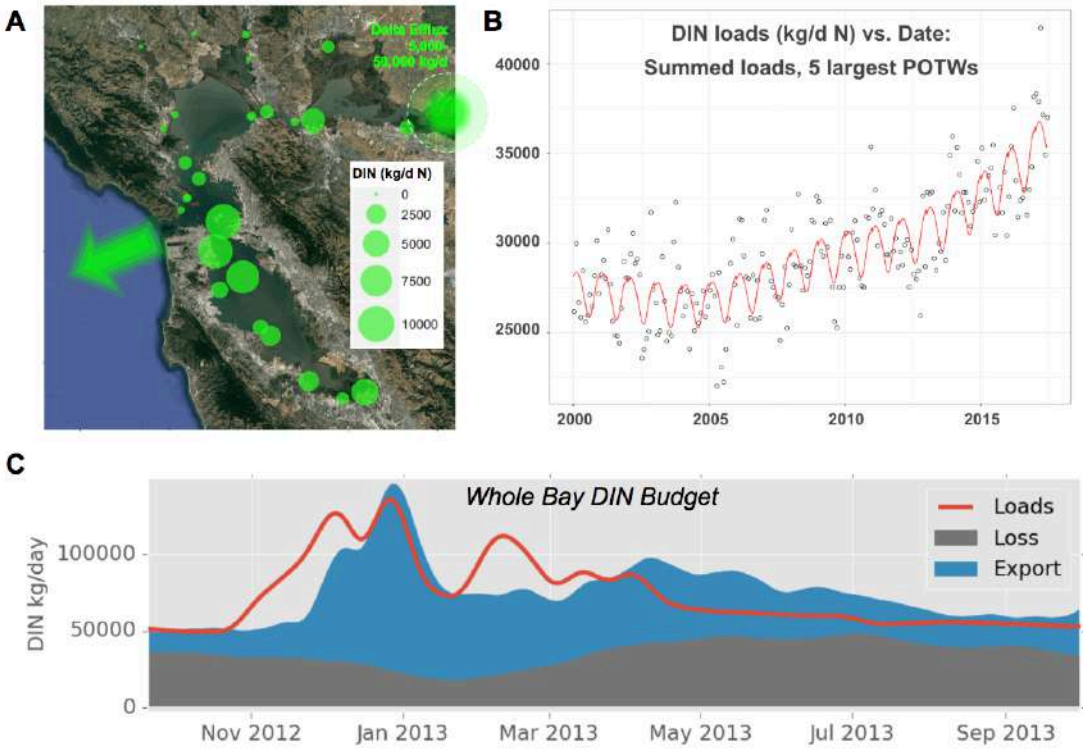


Figure 1 A. Locations and magnitudes (area of symbols) of major DIN loads to SFB. Delta efflux loads (northeast) vary seasonally (5,000-50,000 kg/d), as do predicted Exports to the coast (see C). **B.** Summed DIN loads from SFB's five largest POTWs vs time; ~40% increase, Jan 2005-Jun 2017. **C**. DIN Budget for SFB, WY2013, using the NMS v1.0 biogeochemical model. Instantaneous differences between the curves for Loads and Loss+Export indicate changes in DIN internal storage (i.e., changes in concentration).

Project Team(s), NMS funded project:

Lead PIs: Christopher A. Edwards (UCSC), James C. McWilliams (UCLA)
Co-Investigators: Faycal Kessouri (SCCWRP), Martha Sutula (SCCWRP), David Senn (SFEI)

Note: The project team for the UCLA-SCCWRP project includes other PIs, as discussed below.

Work Flow, Milestones, and Deliverables

Time-Frame: We envision Phase 1 being a 3-yr study, with funding currently being sought for Year 1.
Deliverables: Progress report at end of Year 1, and Technical Reports at ends of Years 2 and 3 (written as draft manuscripts, if relevant)

Year 1: Contribute to development and set-up of physical model for CCS, physical model validation
Year 2: Focus on CCS biogeochemistry and productivity, quantifying contributions
Year 3: Refine physics, biogeochem/productivity, application to OAH endpoints.

Budget: $183,000 for Year 1
Includes salary support for 1 Postdoc, 1 graduate student, 1 month summer salary support for C Edwards, $20,000 for travel (postdoc splitting time between UCLA and UCSC), and $4000 for equipment; and assuming an indirect rate of 10%

Expanded Project Description:

Project A (OPC, NOAA) Co-Principal Investigators: James C. McWilliams and Daniele Bianchi (UCLA), Faycal Kessouri, Martha Sutula (SCCWRP), Curtis Deutsch (UW), Richard Feely (NOAA PMEL)

Project B Team (NMS Funded): Lead PIs: Christopher A. Edwards (UCSC), James C. McWilliams (UCLA); Co-Investigators: Faycal Kessouri (SCCWRP), Martha Sutula (SCCWRP), David Senn (SFEI)

Goals & Scientific Questions: This project will apply coupled atmospheric-physical-biogeochemical ocean models to investigate the relative impact of natural versus anthropogenic forcing on nutrient mass balance, primary productivity, acidification and hypoxia on the Central California Shelf with historical hindcasts over multi-year simulations. Our work is driven by four key questions:

1. What is the uncertainty in model predictions of Central Coast physics, biogeochemistry, and lower ecosystem responses?
2. What is the effect of terrestrial and atmospheric sources of nutrients, organic matter and acidity on central coast shelf nutrient mass balance, productivity, carbonate chemistry, and oxygen and what is the spatial and temporal footprint of this impact over seasons and interannual climate cycles?
3. What is the geographic zone of the coast that is influenced by outflow from the San Francisco Bay estuary? Does the zone extend beyond Half Moon Bay and the Gulf of the Farallones? Under what conditions does it impact the region north (or south) of the Golden Gate? What is the fraction of time different regions are impacted?
4. What are the contributions of regional DIN sources (SFB exports, other freshwater exports, atmospheric), relative to ocean forcings, on nutrient mass balance, productivity, carbonate chemistry, and oxygen along the Central California shelf?

Background. The Central California Coast Shelf (CCS) of the California Current Ecosystem (CCE) is one of the most productive in the world, providing significant economic, cultural and recreational services to large populations living along the coast (Halpern et al., 2008). Climate change related effects are predicted to shift and intensify natural gradients and variability related to ocean acidification (OA), warming, and deoxygenation (Bakun et al. 2010; Turi et al., 2016; Gruber et al., 2012). In the CCS and Southern California Bight, mean declines in DO of 20-24% below the mixed layer from 1984–2006, and a 65-80 m shoaling of the hypoxic zone on the shelf have been documented (Bograd et al. 2008, McClatchie et al. 2010, Booth et al. 2014). The CCS is also experiencing some of the highest rates of acidification on the West Coast (Feely et al. 2008), at levels that are already impacting marine calcifying organisms (Bednarsek et al. in prep). These trends and fluctuations are projected to accelerate over the next decades (Gruber, 2016; Turi et al., 2016, Garcia-Reyes et al., 2016; Hauri et al., 2013). Local drivers have the potential to exacerbate OA and hypoxia (Duarte et al. 2013). One area of concern is CCS, where the discharges of primary or secondary treated wastewater from a population of 15 million people in San Francisco Bay (SFB) and agricultural discharges from the Salinas River Valley and the Bay-Delta represent an outwelling of anthropogenic nutrients to the coast. The West Coast Ocean Acidification and Hypoxia (OAH) Expert Panel recently urged the investigation of the degree to which anthropogenic inputs are currently influencing OAH along the California Coast, how their relative effect will change over time, and their influence on regional OAH hotspots of vulnerability (Chan et al. 2016) and been the focus of legislative directives aimed at crafting California's response to climate change (Legislative Assembly Bill 2139).

This investigation is the focus of a currently funded California Ocean Protection Council (OPC) and NOAA NOS/NCOS-funded project (Integrated Modeling of OAH to Support Ecosystem Prediction and Environmental Management in the California Current System; McWilliams and Deutsch, Lead PIs). The goal of this funded study, currently in its 6th year and with an interdisciplinary team of 15 scientists, is to model the physics, biogeochemistry, and lower trophic response to perturbations from climate

change, natural climate cycles, and anthropogenic carbon and nutrient inputs along the U.S. Pacific Coast. At the backbone of this effort is the Regional Ocean Model System (ROMs) with biogeochemical elements (BEC, Moore et al. 2002), a state-of-the-art modeling system is currently being used to investigate the relative influences of climate change, natural variability and local anthropogenic forcing on OAH trends, with direct applications to marine resource and local pollution management. ROMs has been successfully used for more than a decade for many locations including the CCS, and among our team are its principal creators and developers; BEC simulates the time-dependent global biogeochemical cycles of carbon (C), oxygen (O_2), phosphorus (P), nitrogen (N), and iron (Fe), driven by 3 functional groups of phytoplankton and 1 zooplankton. Phytoplankton groups include N-fixing diazotrophs, small phytoplankton, and diatoms. The ecosystem is linked to an ocean biogeochemistry module based on an expanded version of the OCMIP biotic model (Doney et al. 2004), with prognostic variables for carbon, alkalinity, iron, and DO. The model has been expanded the model to include explicit sinking particles, and a detailed nitrogen cycle (dissolved organic nitrogen, nitrate, nitrite and ammonium) for our work on oxygen minimum zones (e.g. (Deutsch et al. 2011, Deutsch et al. 2014. Validation of the U.S. West Coast 4-km domain indicates that the model reasonably captures broad patterns of dissolved nutrients, carbonate system, and oxygen in the CCE, as well as upwelling-driven phytoplankton blooms (Renault et al. 2016).

The model is further downscaled to 1-km nests for California and Oregon/Washington, then further downscaled a 300 m nest for specific investigations in the the Southern California Bight (SCB) and the CCS, areas of focus because of management interest in local pollution impact assessments (Howard et al, 2014, SFB NMS, SFB Regional Water Quality Control Board). Simulations are now being conducted within the SCB, where a stakeholder advisory group (SAG), including municipal dischargers, environmental non-profits, and water quality regulators, are actively engaged in a process to evaluate science supporting evidence for needed reductions of atmospheric and terrestrial point and non-point source loads to SCB coastal waters, based on impacts to OAH. Biological endpoints based on OA and hypoxia impacts to CCE marine organisms are proposed to interpret chemical model output (e.g. Bednarsek et al. in prep, Howard et al, in prep). During stakeholder meetings, dischargers have stressed that model validation and quantifying uncertainty in modeled predictions is a critical line of inquiry, as it impacts the degree to which we can make conclusions about local pollution impact.

NOAA- and OPC-funded ROMs-BEC simulations of the CCS will begin in spring 2019. These simulations are the starting point of a proposed collaboration between UCLA, UCSC, SCCWRP, and SFEI to further investigate impact of Central Coast and SFB outwelling on CCS nutrient budgets, productivity, and OAH. These investigations are timely, for two reasons. First, an existing SFB stakeholder workgroup, united under the SFB Nutrient Management Strategy (NMS, SFB NMS, SFB Regional Water Quality Control Board), have been supporting science to investigate the impact of anthropogenic nutrients on the SFB ecosystem. NMS-funded science has included an ongoing project to develop a coupled physical-biogeochemical and lower ecosystem model of SFB. A key component of this modeling project is to determine biogeochemical fluxes across the Golden Gate, because of their potential to decrease impact of anthropogenic nutrient loading on SFB, but at the same time, enhance productivity and exacerbate OAH in the coastal ocean. Modeling studies of the CCS need SFB model output to quantify fluxes to the coastal ocean, but also can provide key boundary conditions to force the SCB Delf3D physical and biogeochemical model.

Second, UCSC research programs in nested, coupled physical/biogeochemical modeling that examine fundamental dynamics of the CCE, including the CCS as a focal region. An example of this is a recently completed study by Fiechter et al. (2018, Figure 1), that examined how regional variations in alongshore wind stress and horizontal circulation patterns increase shelf nutrient supply between capes contribute meaningfully to primary productivity and ecosystem variability. The California OPC (Sutula et al. 2014) and the West Coast OAH Expert Panel (Chan et al. 2016) promotes a model ensemble approach, in which two or more models predict similar outcomes (e.g. nutrient transport, primary productivity, etc.) in order to better examine sources of model uncertainty in supporting

management actions. The use of UCSC and UCLA/UW approaches to coupled physical/biogeochemical modeling can provide improved insights the range of forcing mechanisms and processes that drive local currents at many scales and can help to constrain uncertainty.

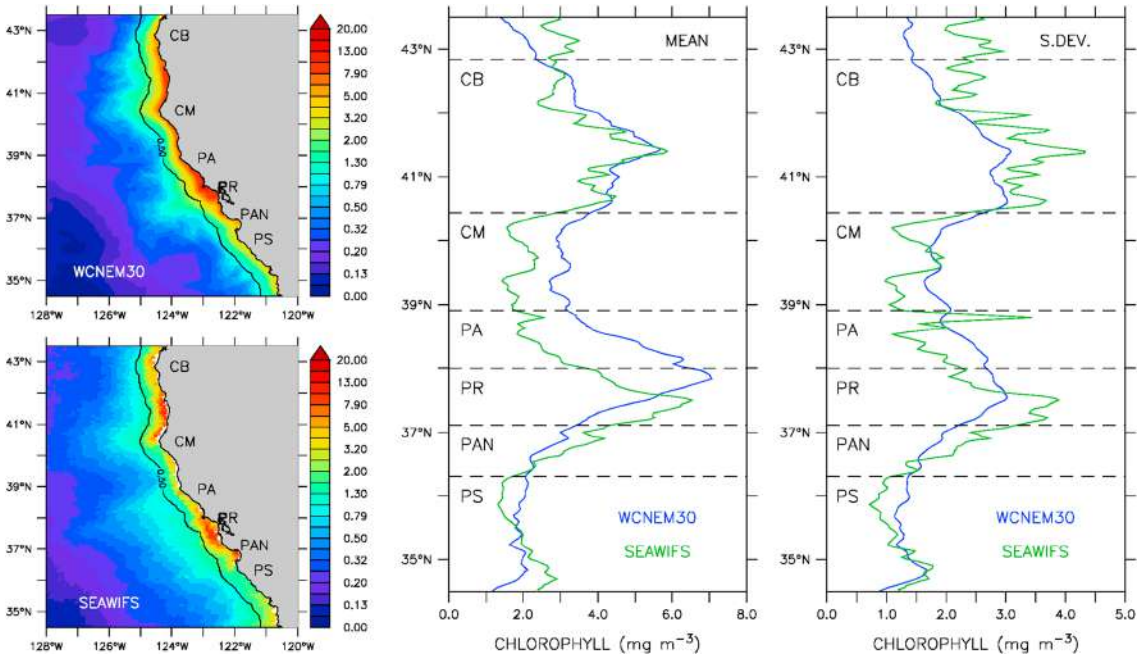


Figure 1: Left: Simulated (WCNEM30) and observed (SEAWIFS) surface chlorophyll concentrations (mg/m^3) during May-July for 1998-2010. The left panel shows a 13-year May-July mean surface chlorophyll concentration from the model at a roughly 3 km resolution and from a satellite estimate of surface chlorophyll. The middle and right panels present the mean and standard deviation of surface chlorophyll (averaged within roughly 50km of the coast) as a function of latitude for both model and data. Both the model and data reveal significant alongshore changes in phytoplankton concentration associated with well-known geographic features in the coastline. From Fiechter et al. (2017).

Proposed Work:

We propose a model ensemble study to understand the evolution and fate of terrestrial outflow, including pollution sources, along the CCS and its subsequent BGC impacts. The study would use ROMS in a nested configuration. The modeled area will be a broad swath of the central California coast, including Monterey Bay and San Francisco Bay, using a model grid with at least 300 m resolution. To leverage the OPC- and NOAA-funded efforts focuses on broader assessments of local pollution sources, including Salinas River Valley ag inputs to Monterey Bay, this project proposed for NMS funding will focus on outflow from the SFB estuary, identifying impacted coastal regions which may vary seasonally as well as on short time-scales associated with changing atmospheric or oceanic conditions. The objective would be to compare realistic coastal BGC and lower ecosystem models that can investigate whether pollution sources from SFB influences coastal ecosystem dynamics relative to natural processes associated with the ocean dynamical response to local and remote physical forcing.

We will investigate dynamics of the coastal ecosystem, quantifying the relative significance of naturally occurring processes with those influenced by the plume. Ecosystem impact by outflow properties will

be assessed through changes in primary production, phytoplankton standing stock and phytoplankton community structure, as well as other metrics. To asses model uncertainty associated with model construction (e.g., number of phytoplankton functional types) and mathematical representation of biological processes (e.g., nutrient uptake), two independent BGC and lower ecosystem models will be applied, and their results compared.

The added benefit of a next higher nest (having perhaps 75 m resolution) will be considered in terms of dynamical processes represented and overall model fidelity (see additional background on physics and biogeochemistry, Appendix 1). Simulations will extend for at least two model years, allowing statistical analysis and characterization of plume evolution and dispersal under a wide range of conditions. SFB would not be resolved explicitly, but volume and property fluxes would be specified at the mouth of the bay based on observations or independent modeling studies that focus on bay-ocean exchange. The time-period would be historical, a multi-year integration that has characteristic bay-ocean exchange and typical California Current System dynamics.

Responsibilities:
Modeling activities will be shared between the UCLA, UCSC, and SCCWRP groups, with science support (interpretation and management translation) from SFEI, UW, and NOAA PMEL. UCLA researchers will be responsible for carrying out the physical ROMS calculations, including construction of nests, attainment of a relevant, multi-year atmospheric forcing. The UCLA and SCCWRP group will calculate biogeochemical fields using the BEC model, described above, which will be applied in an online configuration, simultaneously with the physics. The team have assembled a first cut of atmospheric and terrestrial forcing data for the CCS 300-m domain, including SFB outflow, CCS rivers and coastal outfalls, atmospheric wet and dry deposition, and atmospheric ambient C02 (Kessouri et al. in prep), and will run 300-m resolution scenarios in the spring 2019, with and without atmospheric and terrestrial forcing, to assess total impact on nutrient budget, productivity, and OAH on the CCS. The significant computational expense of running the coupled model system will restrict this configuration to only a few additional tests. The UCSC group will calculate complementary BGC integrations offline (i.e., independent of the physical circulation, but using the stored physical circulation fields as input), applying versions of either the NEMURO or Darwin biogeochemical models. The NEMURO model (Kishi et al., 2007), has been extensively used in the CCS (e.g., Fiechter et al., 2014, Song et al., 2016, Mattern et al., 2017), and it is computationally quite efficient with a small number of total state variables. The Darwin model is a much more complex model, with more phytoplankton functional types. It has a long history in global models (Follows et al. 2007, Ward et al. 2014) as well as in the CCS (Goebel et al., 2010). Sensitivity calculations that consider different nutrient loading conditions within the outflow plume will be carried out with the offline configuration.

A joint post-doctoral research associate, co-supervised by UCSC and UCLA, will work collaboratively to diagnose model output and verify that outflow plume dynamics are well-represented and reasonably consistent with available observations, such as remotely sensed satellite-derived information, HF RADAR surface current estimates. UCSC personnel will work collaboratively with UCLA and SCCWRP group members, with regular skype calls and travel, enabling cross-fertilization of ideas, technology transfer when appropriate, and ensuring best practices in model development and analysis.

SFEI and SCCWRP will engage the NMS steering committee and technical/scientific advisory workgroups to vet the overall project approach, identify best available data for terrestrial and atmospheric forcing as well ambient ocean observations, and discuss model validation and interpretation throughout the project periods.

Timeframe: We envision a multi-year effort. Year 1 would include formalizing atmospheric and terrestrial forcing data for the CCS, setting up and running the physical model and biogeochemical model (UCLA, SCCWRP), gathering and analyzing data sets for evaluation and beginning physical and biogeochemical model evaluation and validation (UCSC, SCCWRP and UCLA). Year 2 would include necessary refinements of the physical and BEC model (UCLA), possible downscaling near the San Francisco Coast, and its evaluation (UCSC, UCLA and SCCWRP). Year 3 would pursue sensitivity studies in which anthropogenic forcing is modified to investigate source attribution and ecosystem response relative to natural processes is determined, with both parties involved in either online or online contexts (UCLA, SCCWRP and UCSC).

Deliverables: As noted above, project deliverables include progress reports or technical reports at the ends of Years 1-3, with the technical reports written as journal manuscripts if relevant. We anticipate that three publications will result from this study. One will report on the validation and preliminary pollution impact of collective atmospheric and terrestrial sources on the CCS (questions 1 and 2 above). The second is the physical evolution and fate of the SF Bay outflow plume, addressing question 3 above. The third publication will examine question 4 above, focusing on biogeochemical impacts resulting from plume outflow. Additional publications relating to these calculations and analysis are likely.

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Planning Subcommittee Meeting No. 45
March 4, 2020
9:00 am – 12:00 pm
Water Board Offices
Chair: Tom Mumley
Meeting Notes

Attendees: Tom Mumley, Eric Dunleavey, Ariella Chelski, Robert Schlipf, Richard Looker, Lorien Fono.

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

   Dave identified a visualization of priorities as the most important item to move forward with at the steering committee meeting on 3/13. He also requested that we discuss modeling work.

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

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

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

   a. *Staffing*

   Dave described the range of candidates for the modeling position that SFEI is considering, and how the top candidate would be selected to offer a position. They are considering how to move forward with a program manager role. There is one potential modeler who may also be able to play a program manager role. There were questions about whether the RMP manager could participate in NMS program management. SFEI is looking at what kind of staffing they would need for data analysis. It was agreed that Martin Valarek (sp?) will be funded through the NMS regardless of whether he'll get delta stewardship funding. Emma will be going to grad school in the spring and the Science Manager is considering how to replace her role in the program.

   b. *Other*

   NMS staff have spoken with USGS staff about the future of the vessel-based monitoring program. USGS staff were encouraging. We would like a letter of intent from someone in USGS management. Responsibility is being shifted from USGS' Menlo Park to Sacramento offices. This transfer may have funding and administrative issues.

The Bay Model will cost more than anticipated, partially due to staffing turnover, so the Science Manager described alternative approaches to provide the funding shortfall.

There was a discussion about using numerical tracers to track the ultimate fate of a single unit of nitrogen through biological cycling. Current models lose that nitrogen unit after the first uptake of nitrogen into phytoplankton. Turning off the loads associated with the large plants may be sufficient to understand transport scenarios.

There was a discussion about establishment of subembayments for potential future trading schemes. Impairment should be the driver of subembayment allocation, but we need to think about how to establish subembayments in the absence of a finding of impairment. Steering committee can vet options for how to establish subembayments. Making this a top priority will require allocation of resources, so the Science Manager will develop a proposal.

Lorien gave an update on the OPC 5-year strategic plan adoption which includes a target to set a date to decrease coastal. OPC may be able to pilot an ocean monitoring program.

4. *Priority Updates*
   a. Report-Outs - 10 min 9:20
      none
   b. Current Issues – 25 min 9:30
      none
   c. NMS Calendar Review -10 min 9:55
      i. Review future SC and PS meeting schedules (DW/IW)
         The group agreed to schedule an assessment framework meeting on April 8. The next PSC meeting will be May 6, then June 3, skipping the previously schedule April 1 meeting.
5. Other Updates – 45 min 10:05
   a. Discussion: Technical workgroups (trends and LSB DO)
   DO workgroup – developing charge questions to send out to experts. Meeting is planned in April.
   b. Discussion: TBD
   Update of Charter – Lorien And Ian will work together on revision and will send update. The Planning Subcommittee needs to be recognized within the Charter. The structure of the NMS needs to be updated to reflect current practices. The goal will be to adopt a revision in June, or September if necessary. The Chair will be approved each year at the March Steering Committee meeting.
6. Planning the next Steering Committee meeting – 45 min 10:50

A Steering Committee member had requested we develop elements of science plan in a visual. Ian developed a graphical depiction of the Science plan elements using the Lucid Chart tool. There was a discussion about what would be the audience for this graphic, since

this would dictate the level of detail. Ian will update the graphic prior to the steering committee.

Dave gave an overview of the Steering Committee agenda. The primary goal is an overview of FY21 projects and core program. The discussion topics would be an overview of FY21 projects, Science Plan updates, LSB Doc mechanisms (informed by the expert group), ship monitoring and contingencies, The meeting briefs will be the LSB DO Workshop, and trends, There will be a monitoring and modeling update. In general, the morning will be allocated for status updates and the Afternoon will be for planning.

7. Review of Action items from meeting (DW)

- Make sure Deb at USGS is prepared to have discussion about USGS sampling program. Work with USGS to get letter of intent on program - Dave
- Develop plan to address local load impacts in subembayments and source apportionment - Dave
- Contact Mark Gold about participating in the Steering Committee - Ian
- Develop redlines to Charter – Lorien and Ian
- Update Science Plan Overview graphic - Ian

a. Next steps (ALL)

8. Adjourn or address Parking Lot items 11:35

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

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.

COST ESTIMATE
Prepared for
BACWA EXECUTIVE BOARD

2020 AIR TOXICS POOLED EMISSIONS ESTIMATION PROGRAM (PEEP)
March 13, 2020

Purpose: To provide participating agencies a standard estimation methodology for determining air toxics emissions from their respective facilities.

A. Estimate of Effort

Task	Description	1990	2020
1	Project Management and Meetings	Breakdown of Budget Not Available	Depends on List of Targeted Compounds
2	Development of Source Testing Protocols		
3	Preparation of a Project Specific QA/QC Plan		
4	Voluntary Pooled Source Testing		
5	Evaluation of the Source Testing Data		
6	Report Development		
	Labor SUBTOTAL	**2,500,000**	**TBD**
B. Other Direct Costs			
	TBD		
	TBD		
	Travel/ODC SUBTOTAL		**TBD**
	Participating Agency Contribution		**TBD**

1990 Study Facts:
25 POTWs formed a JPA
18 unit processes (liquid - 12, solid - 3, and gas - 3)
20 sites (managed in as two regions, north and south)
3 rounds of sampling over an 11-month period

Short-list of targeted compounds determined by participating agencies and air districts staff

Draft questions for strategic planning survey

-to be sent to member agencies via Surveymonkey

1. BACWA aims to develop and represent a consensus position when engaged in regulatory advocacy on behalf of our members. Do you feel that BACWA has well represented your agency's interests in these efforts? Provide examples if you would like.

2. What are the most important issues facing your agency?
   (Consider workforce challenges, developing regulations, capital/operations programs)

3. Are there issues that BACWA should be engaging on but hasn't yet?

4. Would you like your agency to have more engagement with BACWA but don't have the resources? If yes, how can BACWA facilitate that engagement?

5. What are your agency's concerns pertaining to the third nutrient watershed permit (estimated adoption in 2025)?

6. Please share any other thoughts on how BACWA can better serve your agency.

DRAFT
Scope of Work
TDC Environmental, LLC
Pesticide Regulatory and Technical Support
July 2020-June 2021

A. Regulatory

- Master Tracking Schedule & Action Plan. Track pesticide-related regulatory activities by EPA and Department of Pesticide Regulation (DPR) that have significant potential to affect BACWA member agencies. Notify BAPPG/BACWA Pesticides Workgroup of such items as they arise. Maintain and periodically update a schedule of anticipated pesticide regulatory activities including upcoming activities on watch list pesticides (e.g., EPA Registration Review process steps, DPR registration applications). Approximately monthly, prepare a crystal-ball schedule of upcoming items for which regulatory engagement is recommended and distribute it to BAPPG/BACWA workgroup and key agency and NGO Partners.
- Key Points/Draft Comment letters. Based on scientific review of regulatory documents, relevant scientific information, and the regulatory context, make recommendations regarding regulatory participation or other follow-up steps. Communicate about scientific reviews of regulatory documents with other agencies (DPR, Water Board). When so directed and as resources allow, 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 2020-21 these are anticipated to include: fipronil, several individual pyrethroids (bifenthrin, permethrin), and several swimming pool and pet flea control products.
- Outcomes Evaluations. Review pesticide regulator responses to BACWA comments to evaluate effectiveness of input and share these evaluations with BAPPG.
- Facilitate Communications with Pesticides Regulators. Maintain lines of communications with pesticides regulators at DPR and EPA (primarily EPA Region 9). Identify and arrange opportunities for BACWA/BAPPG Workgroup members to have educational conversations with regulators, with a goal of ensuring pesticide regulators understand the POTW context.
- Regulatory Engagement Priorities for 2020/2021:
    - Pet treatments (fipronil, imidacloprid, pyrethroids). Engage DPR management with a goal of getting them to initiate work on mitigation measures for POTW discharges of pesticides. Priorities are fipronil, imidacloprid discharges from pet spot-on treatments and bifenthrin and permethrin pet shampoos.
    - 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.

- Toxic Substances Control Act (TSCA) Reform. As resources allow, Track TSCA reform implementation and support BACWA's coordination with NACWA on providing input and other communications with US EPA. Maintain lines of communication with EPA staff and allies like Washington Department of Ecology.
- NACWA Coordination on Pesticides & Other Pollution Prevention Regulatory Activities. Provide technical information to support BACWA's coordination with NACWA on Federal pollution prevention related to pesticides.

B. Science

- Obtain scientific information to support the above activities (recognizing that pesticides regulatory programs are science based). This includes obtaining scientific journal and government agency publications, reviewing, and identifying important publications. On occasion, this may include reaching out to authors regarding details of publications to understand them and/or to provide information revealing potential errors. This may include attendance at scientific conferences such as the American Chemical Society (ACS) and Society of Environmental Toxicology and Chemistry (SETAC) conferences, with prior review and approval by BACWA's Project Managers.
- Pesticides Watch list. Coordinate with BAPPG representatives to maintain a list of pesticides with potential to adversely affect POTW operations or POTW product quality (effluent, biosolids). Created a tiered list identifying highest priorities pesticides for BACWA's attention (currently copper, silver, fipronil, imidacloprid, and pyrethroids). To develop and update list, obtain and review scientific information about pesticides (e.g., monitoring data, aquatic and drinking water hazard (for future potable reuse of effluents) and reference values, environmental fate/transformation, sources/pathways to POTWs) from scientific literature, government literature, scientific conferences, and professional network. Formally update the list at least annually and distribute it to the BAPPG/BACWA Workgroup and Urban Pesticides Pollution Prevention Partnership (UP3 Partnership) allies.
- Support and encourage POTW pesticides science. 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. Encourage research scientists to pursue work that would provide information to improve predictive modeling, to identify pesticides sources to POTWs, and to develop mitigation strategies.

C. Communications

- Communicate and Collaborate with UP3 Partnership Network of Allies. Maintain lines of communication with pesticide regulators, pesticide manufacturers, Water Boards (non-regulatory communications only), Federal agency staff (like USGS), non-California state agency staff working on pesticides in water/POTWs, scientific researchers, and non-government organizations through attendance at in-person science and pesticides-related meetings, online meetings, conference calls, and individual telephone conversations. Track websites, publications, letters to EPA, and activities of UP3 Partners to identify opportunities for coordination and collaboration. Encourage these partners to conduct activities that provide information (e.g., research data) or support BACWA pesticides regulatory efforts (e.g., echo BACWA scientific comments to pesticides regulators). Notify BAPPG of important information obtained through these contacts.

- UP3 Updates. Prepare periodic email updates for BAPPG/BACWA and UP3 Partners on scientific, regulatory, and other pesticides/water quality news topics. Updates will typically include background and analysis. Updates provide information, education, answer common questions, correct common misconceptions, correct errors or assist with interpretation of pesticides news stories. Updates are intended to inform BAPPG/BACWA and to build and maintain the UP3 Partnership network.
- Explore potential to set up a UP3 Website (if resources allow). Under workgroup guidance and as resources are available, examine options, and if feasible at low cost, populate a public website with resources for UP3 partners, including current pesticide watch lists and past correspondence with regulatory agencies (hundreds of POTW, Water Board, and partner pesticides scientific letters to EPA on dozens of pesticides dating back to the early 2000s that are frequently requested by UP3 Partners). A limited website set up with CASQA funding (www.UP3Partnership.org) currently exists, but its free host ("google sites") does have the capacity to serve as a repository for past correspondence.
- Presentations. Give presentations to educate BACWA members and partners about pesticides and wastewater. Prepare and give annual presentations to the BACWA Board and BAPPG. Scientific and wastewater-related conferences. With prior approval by BACWA's Project Managers, give presentations at scientific and wastewater-related conferences.

D. BAPPG/BACWA Support

- BAPPG/BACWA Pesticides Workgroup Support. 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.
- Answer pesticide-related regulatory or scientific questions from BAPPG/BACWA Workgroup, BAPPG members, other BAPPG consultants, and San Francisco Bay Water Board. Provide technical and pesticide regulatory advice to support development of BAPPG program(s) or materials to address pesticides, such as planned pet flea control-related outreach. Answer simple questions (<1 hour of effort). When so directed by BACWA's contract managers, address complex questions.
- Reporting. Provide summary of actions taken for BAPPG Annual report.

Work Products (Produced by tasks above)

- Pesticide watch list
- Pesticides regulatory tracking schedules ("action plans")
- Comment letters
- Outcomes evaluations
- UP3 Updates
- Input for BAPPG Annual Report

Staff and Budget

All work to be conducted by Kelly D. Moran, Ph.D. with the support of Tammy Qualls, P.E. and Stephanie Hughes, 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. Ms. Hughes support activities (anticipated to involve <15% of total expenditures) will include providing key points for draft comment letters (when so directed and as resources allow) and assistance with engagement with DPR and allies around pet flea control alternatives.

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

- Kelly D. Moran, Ph.D. – $220 per hour
- Tammy Qualls, P.E. – $162 per hour
- Stephanie Hughes, P.E. – $195 per hour
- Direct costs – at cost

Total expenditures not to exceed $130,000.

Contractor

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

UP3 Partnership Accomplishments

Urban Pesticides Pollution Prevention Partnership (UP3 Partnership) successes reflect the combined, coordinated actions of dozens of UP3 Partners; hard work by talented agency staff and diligent scientific researchers; funding from the Water Boards, CASQA, BACWA, and individual municipalities; and UP3 leadership provided by Kelly Moran, Ph.D. and the staff team.

POTW Accomplishments 1996-2019

- US EPA and California Department of Pesticide Regulation (DPR) today recognize that pesticides can pass through POTWs and occur in effluents and biosolids (previously indoor pesticides were not believed to reach the outdoor environment).
- California DPR hired wastewater expert Ph.D. scientists.
- California DPR is developing a POTW model and preparing to make POTW discharge review a routine part of its pesticide registration process.
- US EPA developed a simple model to estimate pesticide pass through into effluent and often uses this model to evaluate pesticides.
- US EPA adopted testing requirements for antimicrobial pesticides so that they have data to evaluate potential for pesticides to cause process interference or to occur in effluent.
- US EPA's Pesticides and Water Offices collaborated to harmonize pesticides toxicity evaluation methods.
- California DPR required pyrethroids manufacturers to work with POTWs to conduct the POTW pyrethroids survey.
- California DPR joined BACWA and SFEI in the RMP fipronil/imidacloprid study.
- California DPR washed dogs to prove that pet flea pesticides are discharged to sewers.
- California DPR established a permanent POTW pesticides monitoring program in 2019.
- California DPR prohibited sales of copper-based root killer and tributyltin cooling water additives in the SF Bay Area to protect Bay Area POTWs and SF Bay.
- POTWs will be notified 24 hours prior to all professional root control chemical applications in collection systems.
- When professionals empty biocide-treated swimming pools, they must contact their local government and follow discharge instructions. (The UP3 team is working to make sure this will be a requirement for every biocide).

Non-POTW Accomplishments 1996-2019

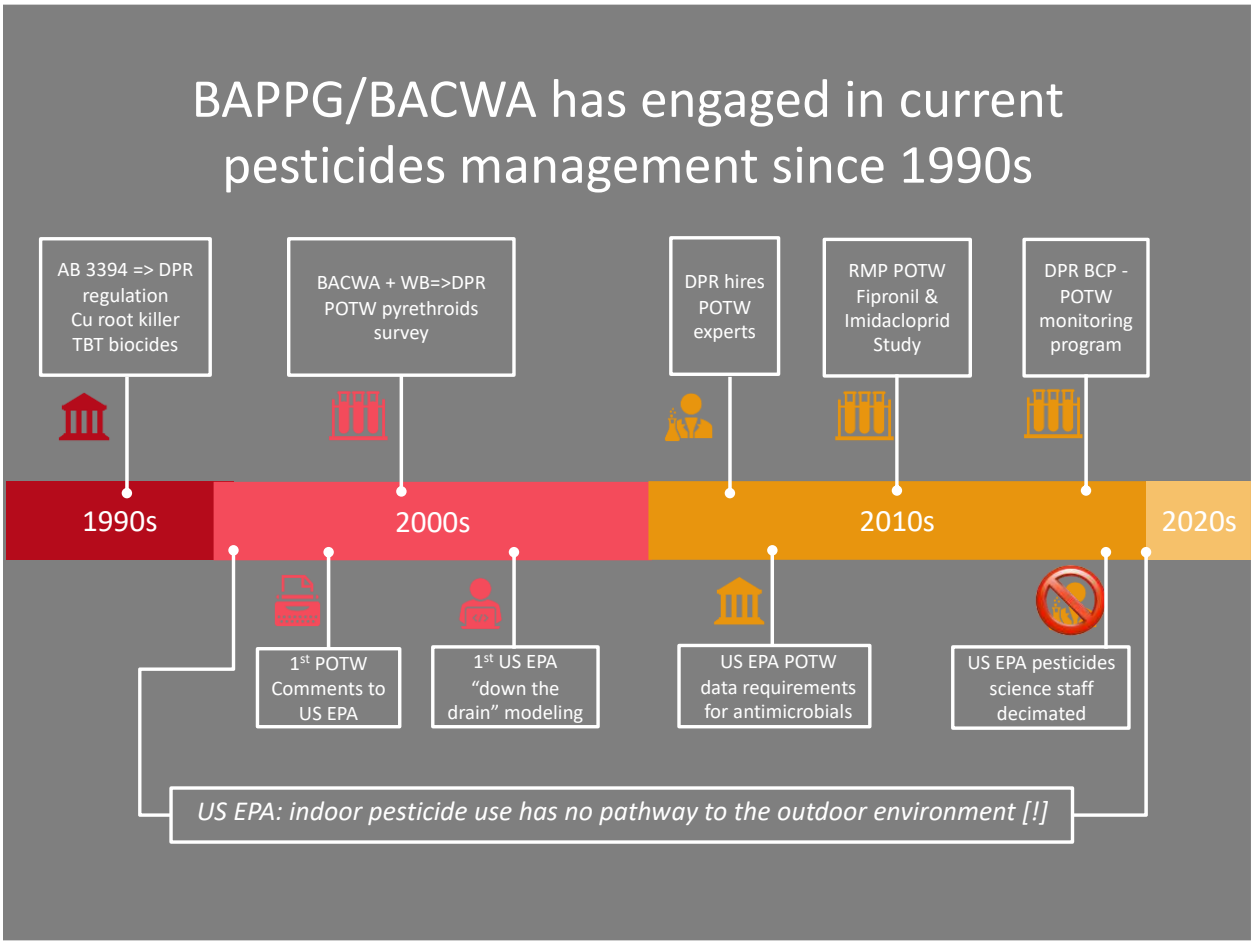
- California DPR adopted surface water protection regulations on outdoor structural pest control intended to reduce concentrations of pyrethroids in urban runoff by >90%. (These regulations are being reevaluated due to lack of expected reductions).
- California DPR conducts surface water protection reviews of pesticide registration applications using a predictive model. It disapproves registrations where it predicts surface water toxicity. (The model currently does not include POTW discharges).
- California DPR worked with manufacturers to establish fipronil use requirements intended to reduce concentrations of fipronil in runoff by >90%.
- US EPA developed aquatic life and human health benchmarks for pesticides and published them online for use in evaluating monitoring data. The human health benchmarks are developed by the same methods used drinking water Health Advisories.
- California DPR established a permanent urban runoff monitoring program.
- California DPR created multiple new positions in its surface water protection program and hired urban runoff experts.
- The State Water Board initiated development of the Urban Pesticides Amendments, to establish a prevention-based regulatory framework for pesticides in urban runoff.
- State Water Board and DPR completed an update of their Management Agency Agreement, to clarify their respective roles and achieve better coordination on addressing water quality impacts, particularly in urban areas.
- USGS and academic researchers developed chemical analysis methods for the newest pesticides and used them in environmental monitoring studies.
- NGOs joined Water Boards and municipalities in asking US EPA and California DPR to prevent pesticides water pollution.

UP3 Partnership Funding History

- Urban Pesticides Committee formed in the 1990s by the Region 2 and 5 Water Boards.
- Funding obtained/Staff first hired in the early 2000s.
- Lead funder has historically paid for the lion's share of (1) regulatory agency communication & regulatory document scientific reviews; (2) scientific literature review & networking with scientific community; (3) communications/collaboration with UP3 partners
- Lead funders:
  - SF Bay Water Board - 2001 to early 2012
  - CASQA - mid-2012 through 2019
  - No lead funder for 2020
- POTWs have never been lead funder

UP3 Partnership Staff

- Current: Kelly Moran, Ph.D.; Tammy Qualls, PE; Stephanie Hughes, PE; Armand Ruby
- Former: Jen Jackson; San Francisco Estuary Partnership Athena Honore/Laura Speare
- Extensive pro-bono work: Dave Tamayo (Sacramento County/M.S. Entomology)


BAPPG/BACWA has engaged in current pesticides management since 1990s
AB 3394 => DPR regulation
Cu root killer
TBT biocides
BACWA + WB=>DPR POTW pyrethroids survey
DPR hires POTW experts
RMP POTW Fipronil & Imidacloprid Study
DPR BCP - POTW monitoring program
1990s
2000s
2010s
2020s
1st POTW Comments to US EPA
1st US EPA "down the drain" modeling
US EPA POTW data requirements for antimicrobials
US EPA pesticides science staff decimated
US EPA: indoor pesticide use has no pathway to the outdoor environment [!]

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%; $93.63/hour; contract based on full time same as FY 20, 2080 hrs
	Assistant Executive Director	$100,907	$22,798	$100,907	$102,551	2.5% CPI (SF Bay Metro Area Dec 2018); $66.7/hour; Reflects 1500 hours
	Regulatory Program Manager	$137,727	$64,820	$137,727	$141,170	2.5% CPI (SF Bay Metro Area Dec 2018); $100.16/hour; Reflects 1375 hours/yr - Contract TBD
	Total	**$446,165**	**$191,383**	**$446,165**	**$438,471**	
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 from projected FY20 actual. 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	
	File Storage (Box.net)	$750	$720	$750	$765	
	Website Development/Maintenance	$1,500	$618	$1,500	$1,530	Domains, website changes
	IT Support (As Needed)	$2,600	$0	$2,600	$2,652	2% increase
	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	$130,000	Includes CPSC @ $10,000, OWOW @ $10,000, and Pest. Reg Spt. @ $60,000.
	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**	**$260,050**	
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	$0	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**	**$39,000**	
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	$250,000	AB617 emissions factors, nutrient technical review, other nutrient support, PFAS
	CEC Investigations	$0	$0	$0	$50,000	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**	**$3,467,500**	
	TOTAL EXPENSES	**$3,470,857**	**$347,379**	**$3,582,542**	**$4,306,470**	
	NET INCOME BEFORE TRANSFERS	**-$351,060**		**-$454,745**	**-$1,146,527**	
	TRANSFERS FROM RESERVES	**$351,060**		**$454,745**	**$1,146,527**	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**	**$838,970**	
	OPERATING RESERVE	**$199,709**		**$200,131**	**$209,743**	

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

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

EXECUTIVE ORDER N-25-20

WHEREAS on March 4, 2020, I proclaimed a State of Emergency to exist in California as a result of the threat of COVID-19; and

WHEREAS despite sustained efforts, the virus remains a threat, and further efforts to control the spread of the virus to reduce and minimize the risk of infection are needed; and

WHEREAS state and local public health officials may, as they deem necessary in the interest of public health, issue guidance limiting or recommending limitations upon attendance at public assemblies, conferences, or other mass events, which could cause the cancellation of such gatherings through no fault or responsibility of the parties involved, thereby constituting a force majeure; and

WHEREAS the Department of Public Health is maintaining up-to-date guidance relating to COVID-19, available to the public at http://cdph.ca.gov/covid19; and

WHEREAS the State of California and local governments, in collaboration with the Federal government, continue sustained efforts to minimize the spread and mitigate the effects of COVID-19; and

WHEREAS there is a need to secure numerous facilities to accommodate quarantine, isolation, or medical treatment of individuals testing positive for or exposed to COVID-19; and

WHEREAS, many individuals who have developmental disabilities and receive services through regional centers funded by the Department of Developmental Services also have chronic medical conditions that make them more susceptible to serious symptoms of COVID-19, and it is critical that they continue to receive their services while also protecting their own health and the general public health; and

WHEREAS individuals exposed to COVID-19 may be temporarily unable to report to work due to illness caused by COVID-19 or quarantines related to COVID-19 and individuals directly affected by COVID-19 may experience potential loss of income, health care and medical coverage, and ability to pay for housing and basic needs, thereby placing increased demands on already strained regional and local health and safety resources such as shelters and food banks; and

WHEREAS in the interest of public health and safety, it is necessary to exercise my authority under the Emergency Services Act, specifically Government Code section 8572, to ensure adequate facilities exist to address the impacts of COVID-19; and

WHEREAS under the provisions of Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay appropriate actions to prevent and mitigate the effects of the COVID-19 pandemic.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes of the State of California, and in particular, Government Code sections 8567, 8571 and 8572, do hereby issue the following order to become effective immediately:

IT IS HEREBY ORDERED THAT:

1. All residents are to heed any orders and guidance of state and local public health officials, including but not limited to the imposition of social distancing measures, to control the spread of COVID-19.

2. For the period that began January 24, 2020 through the duration of this emergency, the Employment Development Department shall have the discretion to waive the one-week waiting period in Unemployment Insurance Code section 2627(b)(1) for disability insurance applicants who are unemployed and disabled as a result of the COVID-19, and who are otherwise eligible for disability insurance benefits.

3. For the period that began January 24, 2020 through the duration of this emergency, the Employment Development Department shall have the discretion to waive the one-week waiting period in Unemployment Insurance Code section 1253(d) for unemployment insurance applicants who are unemployed as a result of the COVID-19, and who are otherwise eligible for unemployment insurance benefits.

4. Notwithstanding Health and Safety Code section 1797.172(b), during the course of this emergency, the Director of the Emergency Medical Services Authority shall have the authority to implement additions to local optional scopes of practice without first consulting with a committee of local EMS medical directors named by the EMS Medical Directors Association of California.

5. In order to quickly provide relief from interest and penalties, the provisions of the Revenue and Taxation Code that apply to the taxes and fees administered by the Department of Tax and Fee Administration, requiring the filing of a statement under penalty of perjury setting forth the facts for a claim for relief, are suspended for a period of 60 days after the date of this Order for any individuals or businesses who are unable to file a timely tax return or make a timely payment as a result of complying with a state or local public health official's imposition or recommendation of social distancing measures related to COVID-19.

6. The Franchise Tax Board, the Board of Equalization, the Department of Tax and Fee Administration, and the Office of Tax Appeals shall use their administrative powers where appropriate to provide those individuals and businesses impacted by complying with a state or local public health official's imposition or recommendation of social

distancing measures related to COVID-19 with the extensions for filing, payment, audits, billing, notices, assessments, claims for refund, and relief from subsequent penalties and interest.

7. The Governor's Office of Emergency Services shall ensure adequate state staffing during this emergency. Consistent with applicable federal law, work hour limitations for retired annuitants, permanent and intermittent personnel, and state management and senior supervisors, are suspended. Furthermore, reinstatement and work hour limitations in Government Code sections 21220, 21224(a), and 7522.56(b), (d), (f), and (g), and the time limitations in Government Code section 19888.1 and California Code of Regulations, title 2, sections 300-303 are suspended. The Director of the California Department of Human Resources must be notified of any individual employed pursuant to these waivers.

8. The California Health and Human Services Agency and the Office of Emergency Services shall identify, and shall otherwise be prepared to make available—including through the execution of any necessary contracts or other agreements and, if necessary, through the exercise of the State's power to commandeer property – hotels and other places of temporary residence, medical facilities, and other facilities that are suitable for use as places of temporary residence or medical facilities as necessary for quarantining, isolating, or treating individuals who test positive for COVID-19 or who have had a high-risk exposure and are thought to be in the incubation period.

9. The certification and licensure requirements of California Code of Regulations, Title 17, section 1079 and Business and Professions Code section 1206.5 are suspended as to all persons who meet the requirements under the Clinical Laboratory Improvement Amendments of section 353 of the Public Health Service Act for high complexity testing and who are performing analysis of samples to test for SARS-CoV-2, the virus that causes COVID-19, in any certified public health laboratory or licensed clinical laboratory.

10. To ensure that individuals with developmental disabilities continue to receive the services and supports mandated by their individual program plans threatened by disruptions caused by COVID-19, the Director of the Department of Developmental Services may issue directives waiving any provision or requirement of the Lanterman Developmental Disabilities Services Act, the California Early Intervention Services Act, and the accompanying regulations of Title 17, Division 2 of the California Code of Regulations. A directive may delegate to the regional centers any authority granted to the Department by law where the Director believes such delegation is necessary to ensure services to individuals with developmental disabilities. The Director shall describe the need justifying the waiver granted in each directive and articulate how the waiver is necessary to protect the public health or safety from the threat of COVID-19 or necessary to ensure that services to individuals with developmental disabilities are not disrupted. Any waiver granted by a directive shall expire 30 days from the date of its issuance. The Director may grant one or more 30-day extensions if the waiver continues to be necessary

to protect health or safety or to ensure delivery of services. The Director shall rescind a waiver once it is no longer necessary to protect public health or safety or ensure delivery of services. Any waivers and extensions granted pursuant to this paragraph shall be posted on the Department's website.

11. Notwithstanding any other provision of state or local law, including the Bagley-Keene Act or the Brown Act, a local legislative body or state body is authorized to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to attend and to address the local legislative body or state body, during the period in which state or local public officials impose or recommend measures to promote social distancing, including but not limited to limitations on public events. All requirements in both the Bagley-Keene Act and the Brown Act expressly or impliedly requiring the physical presence of members, the clerk or other personnel of the body, or of the public as a condition of participation in or quorum for a public meeting are hereby waived.

    In particular, any otherwise-applicable requirements that

    (i) state and local bodies notice each teleconference location from which a member will be participating in a public meeting;
    (ii) each teleconference location be accessible to the public;
    (iii) members of the public may address the body at each teleconference conference location;
    (iv) state and local bodies post agendas at all teleconference locations;
    (v) at least one member of the state body be physically present at the location specified in the notice of the meeting; and
    (vi) during teleconference meetings, a least a quorum of the members of the local body participate from locations within the boundaries of the territory over which the local body exercises jurisdiction

    are hereby suspended, on the conditions that:

    (i) each state or local body must give advance notice of each public meeting, according to the timeframe otherwise prescribed by the Bagley-Keene Act or the Brown Act, and using the means otherwise prescribed by the Bagley-Keene Act or the Brown Act, as applicable; and
    (ii) consistent with the notice requirement in paragraph (i), each state or local body must notice at least one publicly accessible location from which members of the public shall have the right to observe and offer public comment at the public meeting, consistent with the public's rights of access and public comment otherwise provided for by the Bagley-Keene Act and the Brown Act, as applicable (including, but not limited to, the requirement that such rights of access and public comment be made available in a manner consistent with the Americans with Disabilities Act).

In addition to the mandatory conditions set forth above, all state and local bodies are urged to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to the provisions of the Bagley-Keene Act and the Brown Act, and other applicable local laws regulating the conduct of public meetings, in order to maximize transparency and provide the public access to their meetings.

IT IS FURTHER ORDERED that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 12th day of March 2020.

GAVIN NEWSOM
Governor of California

ATTEST:

ALEX PADILLA
Secretary of State

BARNES & THORNBURG LLP
SUITE 4400
ONE NORTH WACKER DRIVE
CHICAGO, IL 60606-2833 U.S.A.
E.I.N. 35-0900596

Ms. Sherry Hull
Assistant Executive Director
Bay Area Clean Water Agencies
P.O. Box 24055
Oakland, California 94623

February 15, 2020
21891
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PAYABLE UPON RECEIPT

FEDERAL WATER QUALITY COALITION INVOICE

To: Bay Area Clean Water Agencies

Dues for FWQC Activities	$7,500.00

Please remit payments, including a copy of this invoice, to Barnes & Thornburg, Accounting Department, Suite 4400, One North Wacker Drive, Chicago, IL 60606-2809 U.S.A. and include invoice number on your remittance.

Executive Director's Report to the Board

February 2020

NUTRIENTS:

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

- Met with NMS Science manager and SFEI staff to discuss BACWA perspective on studies.
- Attended 2/5 PSC meeting and drafted meeting summary.
- Reviewed NMS Charter
- Reviewed GAR data for 2019

BACWA BOARD MEETING

- Conferred with Chair on ways to improve EB meetings, and expectations for communications
- Drafted/edited notes from 12/20 EB meeting, Special meetings on 1/27 and 2/3, and Joint meeting with Regional Water Board on 1/8
- Conducted the monthly agenda review with the Chair of BACWA
- Continued to track all action items to completion
- Developed Framework for Strategic Plan Update

COMMITTEES:

- Reviewed Permits committee agenda, and attended meeting
- Attended Lab committee meeting
- Discussed emissions factor update with AIR consultant

REGULATORY:

- Reviewed toxicity lab capacity comment letter
- Discussed NOIs on Exfiltration with member agencies
- Met with BACWA members, Water Board Staff, and RMP staff on potential PFAS Regional Study
- Discussed OPC Strategic Plan with Regional Water Board staff and NMS Science manager
- Developed oral comments and attended OPC 5-year Strategic Plan adoption hearing in Sacramento on 2/26
- Joined call on PFAS 13267 Letter with State Water Board staff on 2/24

FINANCE:

- Reviewed the monthly BACWA financial reports and updated budget to actual tracking sheet for February
- Updated draft FY21 budget with new information
- Calculated FY21 Nutrient surcharge
- Coordinated with the consultant on the internal audit report

- Reviewed and approved invoices

COLLABORATIONS:

- Coordinated with CASA on PFAS issues, including call on 2/11 and 2/18
- Attended Regional BayCAN meeting
- Discussed EPA National Reuse Plan new action on interjurisdictional challenges with consultant proponent

BABC:

- Attended meeting and produced meeting summary.
- Discussed BABC research plan with Project Manager

BACC:

- Reviewed communications on FY21 bid documents

STAFF TRANSITIONS:

- Held kick-off meeting with Interim RPM
- Met with Chair on expectations and workflow as new ED
- Prepared for AED interviews, held AED interviews. Followed up on references for top candidates, and notified all candidates regarding decision.
- Drafted contract and BAR for new AED. Discussed questions about contract with attorney.

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.
- Developed and responded to numerous emails and phone calls as part of the conduct of BACWA business on a day-to-day basis.

MISCELLANEOUS MEETINGS/CALLS:

- 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
- Responded to Board members requests for information
- Attended CSDA Seminar on the Brown Act

BACWA
BAY AREA
CLEAN WATER
AGENCIES

BACWA ACTION ITEMS

Number	Subject	Task	Responsibiity	Deadline	Status
	Action Items from December 20, 2019 BACWA Executive Board Meeting		**resp.**	**deadline**	**status**
2020.02.52	Assessment Framework	Get clarity on intention from Water Board staff	ED	3/19/2020	pending
2020.02.51	USGS monitoring program	forward copy of NMS letter in support of USGS ship-based monitoring program to Eileen White	ED	2/28/2020	complete
2020.02.50	5-year plan, NMS funding	Discuss funding schedule with Science Manager	ED	3/15/2020	complete
2020.02.49	Exfiltration suits	Discussion issue with Baykeeper	ED	3/15/2020	complete
2020.02.48	Interagency Collaboration	Engage with BAWAC and other Regional Organizations	ED	3/15/2020	complete
2020.02.47	OPC 5-yr strategic plan	Reach out to Water Board and NMS Science manager on commenting. Send BACWA oral coments to Board	ED	2/25/2020	complete
	Action Items Remaining from Previous BACWA Executive Board Meetings				
2019.12.46	Risk reduction	Reach out to cities with public health clinics to work with CIEA	RPM	2/29/2020	
2019.12.39	Update CEC White Paper Data		RPM	2/29/2020	
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: *50 of 52 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

February 2020

COMMENT LETTERS: Drafted and submitted comment letter on Appendix K to Toxicity Draft Provisions Staff Report; submitted comment letter on EPA's Pyrethroids and Pyrethrins Ecological Risk Mitigation Proposal for 23 Chemicals.

COLLABORATIONS: Participated in CASA RWG meeting (Conference call).

COMMITTEE SUPPORT:
BAPPG – Attended meeting and drafted Board Report.
Collection Systems – Drafted notes and Board Report for Jan 30 meeting.
Laboratory – Attended committee meeting and drafted Board Report. Discussed latest draft of ELAP regulations with Committee leadership.
Permits – Drafted agenda, attended meeting, and drafted Board Report.
Executive Board – Attended meeting and drafted EB minutes and action items.

ADMINISTRATION/STAFF MEETING – Met with BACWA ED to prepare for February activities and discuss BACWA operations.

MEETINGS ATTENDED:
Staff meeting (2/4), BAPPG (2/5), Lab Committee (2/12), Permits Committee meeting (2/12), CASA RWG (2/20), Executive Board Meeting (2/21)

Lorien Fono

From: Regulatory <regulatory-bounces@lists.casaweb.org> on behalf of Jared Voskuhl via Regulatory <regulatory@lists.casaweb.org>
Sent: Wednesday, March 4, 2020 11:42 AM
To: regulatory@lists.casaweb.org
Cc: Jared Voskuhl
Subject: [Regulatory] CASA Regulatory Update - March 2020
Attachments: ATT00001.txt

Categories: Board Packet

Good Morning,

For March and from February, please see the updates and associated materials for water and land issues. Our next Regulatory Workgroup meeting will be held by teleconference on Thursday, March 19. Please let us know if you have any questions about this information.

Thank you,
The CASA RWG Team

WATER

PFAS Phase 3 Investigation Update – Spring Release

This spring, the SWB will issue the General Order for Phase 3 of its PFAS investigation. The Order may require POTWs to develop a quarterly sampling workplan for approximately 20 – 40 analytes in their influent, effluent, and biosolids, and the workplan must then be approved by the recipient's Regional Water Quality Control Board. In anticipation for what to expect, you may review the SWB's orders for Landfills and Chrome Platers, with particular attention to Attachments 1 and 2 in each Order, which display the list of recipients along with the workplan requirements and a general questionnaire for the sector. Our coalition comprised of BACWA, CVCWA, SCAP, and CASA met with the SWB investigative team and are still trying to narrow the list of entities that would receive such an order. We also are working on a decision tree/flow chart to help highlight which entities may not need to engage in extended sampling. We will attempt to meet with the SWB's investigative team again later this month 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 Adopts Strategic Plan for the Next 5 Years

On Wednesday, February 26, the OPC adopted its Strategic Plan to Protect California's Coast and Oceans for 2020-2025. You may view CASA's comment letter here. The Strategic Plan establishes the OPC's vision for protecting California's coast and ocean, identifying objectives, targets and actions for numerous state agencies. Pertinent to the wastewater sector, Target 1.2.3. projects for the OPC to, "By 2022, based on the latest scientific results, establish interim goals as needed for significantly reducing nutrient loading and/or phasing out coastal wastewater 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." Along with WateReuse, BACWA, and SCAP, CASA testified at the adoption hearing to request the technical changes that we identified in our comment letter. The Council discussed the requests in the hearing, and while the OPC did not accept them, senior staff from the OPC and State Water Board testified that the existing language in the Strategic Plan was equivalent to what for we had asked, and so no changes in fact were needed. If you have questions or comments, please reach out to Jared Voskuhl.

Central Coast Regional Water Quality Control Board Requires 100% Recycling of Effluent in New Permit

Last month, the Central Coast Regional Water Quality Control Board notified the Cayucos Sanitary District through their draft permit for renewal that they will require CSD to recycle 100% of their effluent. In January, the Region 3 board also notified the Montecito Sanitary District that they anticipate requiring all ocean dischargers to recycle 100% of their treated wastewater. CASA is preparing a comment letter on these developments. Please reach out to Jared Voskuhl if you have received similar notice or have questions.

ELAP Regulations – Adoption Hearing on March 17

On Tuesday, March 17, the State Water Board is scheduled to adopt the proposed regulations for single-track, TNI-only, accreditation. 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 for adoption. Also, on February 13, ELAP released revised regulations and provided a 15-day comment period for comments that pertained to the new changes to the proposed regulations. CASA did not submit comments, but you may review remarks on these updates by CVCWA, SCAP, and SOCWA. Please reach out to Jared Voskuhl if you have any questions.

SWB Water Quality Fees for 2020-21

On March 2, the State Water Board kicked off its annual series of meetings on water quality fees. The agenda and proposed fees are available here. As foretold in last year's hearings, this year's WDR fee increase will be 11%, and the fee increase NPDES will be 11.3%. This increase was forecasted during last year's fee discussion and will likely decrease to more normal levels in future years. Staff did make a caveat for these estimated increases by noting that currently the EPA's employee union is in negotiations, and thus these figures could be increased further to reflect the outcome of those. If interested, there was a Performance Report presentation for 2018-19, which you may review here. The next meeting on water quality fees is scheduled for June 9, from 9 – 11 AM. Please reach out to Jared Voskuhl with questions.

National Water Reuse Action Plan Released February 27

On February 27, the US EPA released their revised National Water Reuse Action Plan. BACWA and CASA submitted a joint comment letter on the November 2019 draft, and

subsequently, Action 2.2.16 was developed pertaining to interagency collaboration across multiple jurisdictions for reuse projects, for which CASA will be involved as an "interested collaborator" alongside Felicia Marcus and BACWA, amongst others. Please reach out to Jared Voskuhl with questions.

Land Disposal Program WDR for Disaster-Related Wastes Adopted on February 18

On February 18, the SWB adopted the general waste discharge requirements for disaster-related wastes. CASA submitted technical comments related to discharges to wastewater systems, for which the State Water Board's response to comments are available here. You may view the Staff presentation, here, during the 4:00 – 12:00 frame, during which, Staff shared that the WDR does not authorize any discharge or connection to sanitary systems (8:55). Please contact Jared Voskuhl with questions.

CASA Submits Comments on The Governor's Water Portfolio

On February 7, CASA submitted comments on the Governor's Water Resilience Portfolio, which was released on January 4. You may review our remarks here, which focused on the additional places throughout the Portfolio where water recycling may be incorporated. If you have questions, please reach out to Jared Voskuhl.

CASA Comments upon Appendices for the Toxicity Provisions

CASA submitted a comment letter on the release of Appendices J and K last month that 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 Update

CASA's nutrients subgroup met 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 about the follow-up actions from the call.

April 2020 Deadline to File 2019 Volumetric Wastewater and Recycled Water Data

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 WDRs, NPDES 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, or as you may review in the notice sent in July 2019.

LAND

SB 1383 Update

CalRecycle submitted the regulatory package to implement SB 1383 to the Office of Administrative Law (OAL) on Tuesday, January 21. 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 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

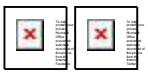
At least three California wastewater agencies are in the process of developing a Tier 2 application for the LCFS Credit which requires a site-specific analysis to develop the carbon intensity (CI) of transportation fuel they would produce. The air board has been responsive with this process, which goes 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.



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