



Executive Board Meeting Agenda

Friday, December 19, 2014, 9:00 a.m. – 12:30 p.m.
EBMUD Treatment Plant Lab Library,
2020 Wake Avenue, Oakland, CA.

<u>Agenda Item</u>	<u>Time</u>	<u>Page #</u>
ROLL CALL AND INTRODUCTIONS	9:00 a.m. – 9:03 a.m.	
PUBLIC COMMENT	9:03 a.m. – 9:05 a.m.	
CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER	9:05 a.m. – 9:10 a.m.	
CONSENT CALENDAR	9:10 a.m. - 9:15 a.m.	
1. November 21, 2014 BACWA Executive Board Meeting Minutes		3-7
2. December 8, 2014 Special Board Meeting Minutes		8-9
3. October, 2014 Treasurer's Report		10-15
REPORTS	9:15 a.m. – 10:00 a.m.	
4. Committee Reports		16-24
5. Executive Board Reports		
6. Executive Director Report		25-33
7. Regulatory Program Manager Report		34-35
8. Other BACWA Representative Reports		
a. RMP-TRC: Rod Miller		
b. RMP Steering Committee: Karin North; Jim Ervin		
c. Summit Partners: Dave Williams		
d. ASC/SFEI: Laura Pagano; Dave Williams		
*See Link to CA Stream Nutrient Objectives Stakeholder Meeting Presentation		
e. Nutrient Governance Steering Committee: Ben Horenstein; Jim Ervin		
f. SWRCB Nutrient SAG: Dave Williams		
g. SWRCB Focus Group – Bacterial Objectives: Lorien Fono; Amy Chastain		
h. SWRCB Focus Group – Mercury Amendments to the State Plan: Tim Potter		
i. Nutrient Technical Workgroup – Eric Dunlavey		
j. NACWA Taskforce on Dental Amalgam – Tim Potter		
CHAIR & EXECUTIVE DIRECTOR AUTHORIZED ACTIONS	10:00 a.m. – 10:05 a.m.	41-44
9. <u>Chair Authorization</u> of funds for Kelly Moran's assistance to BAPPG for monitoring and helping to develop comments on pesticides		
* http://bacwa.org/Portals/0/ExecutiveBoard/Library/SCCWRP%20Stakeholders Meeting_120920149.pdf		

OTHER BUSINESS		
10. <u>Discussion</u> : Nutrients	10:05 a.m. – 10:45 a.m.	
a. Technical Work		
i. Update on Pilot Studies		45-47
ii. Sea Level Rise		
b. Regulatory		
i. Meeting with Water Board on Scoping/Evaluation Plan		
ii. Optimization/Upgrade Survey webinars		
c. Governance Structure		
i. Planning Subcommittee activities		48-51
ii. Options for Program Coordination		52-54
iii. Approve CCP Contract in the amount of \$10,000		
11. <u>Discussion</u> : Recycled Water Update (Bhavani Yerrapotu/Cheryl Munoz)	10:45 a.m. – 11:15 a.m.	
a. POTW activities to promote recycled water; residential fill stations, scalping plants, other.		
b. Update on Truck Fill Station survey		79-80
c. IRWM update		+link
d. Proposition 1 activities		
e. Permitting under State permit vs. Region 2 * See Link 1		link
12. <u>Discussion</u> : Toxicity	11:15 a.m. – 11:30 a.m.	81-82
a. Petition to SWRCB		
b. Discussions with State Board members		
c. LGVSD Tentative Order		
13. <u>Discussion</u> : San Jose 60 Day Notice from BayKeeper * See Link 2	11:30 a.m. – 11:45 a.m.	link
14. <u>Discussion</u> : FY 2016 Budget Planning	11:45 a.m. – 11:55 a.m.	
a. Schedule for Budget Adoption		83
b. Key Issues		84-86
i. Percent Increase		
ii. Securing Contract Support		
iii. New Initiatives		
15. <u>Discussion</u> : Annual Member Meeting Planning	11:55 a.m. – 12:15 a.m.	87-89
16. <u>Discussion</u> : Ebola Update	12:15 p.m. – 12:25 p.m.	
a. Agency preparation		90-93
b. NSF Research Funding Request		94-108
SUGGESTIONS FOR FUTURE AGENDA ITEMS	12:25 p.m. – 12:30 p.m.	
NEXT REGULAR MEETING		
The next regular meeting of the Board is scheduled for February 20, 2015 from 9:00 am – 12:30 pm at the SFPUC, Hetch Hetchy Room, 13th Floor, San Francisco, CA. The BACWA Annual Member Meeting will be on January 30, 2015 from 9:00 am - 3:00 pm at the Elihu M. Harris State Building Auditorium, 1515 Clay St., Oakland, CA.		
ADJOURNMENT	12:30 p.m.	

*1. http://bacwa.org/Portals/0/ExecutiveBoard/Library/11.e.%20SWB_Revise Draft RW GP 05-30-2014.pdf

*2. <http://bacwa.org/Portals/0/ExecutiveBoard/Library/2014%2011%2024%20San%20Jose%20NOI%20%28w%20exhibits%29.pdf>



Executive Board Meeting Minutes

September 26, 2014

ROLL CALL AND INTRODUCTIONS

Executive Board Representatives: Mike Connor, Chair (East Bay Dischargers Authority); Amy Chastain (San Francisco Public Utilities Commission); Jim Ervin (San Jose); Ben Horenstein/Vince De Lange (East Bay Municipal Utility District); Roger Bailey (Central Contra Costa Sanitary District).

Other Attendees:

<u>Name</u>	<u>Agency/Company</u>
Bhavani Yerrapotu	Sunnyvale
Tim Potter	Central Contra Costa Sanitary District
Vince De Lange	East Bay Municipal Utility District
Karin North	Palo Alto
Amanda Roa	Delta Diablo
Amy Chastain	SFPUC
Denise Connors	Larry Walker Associates
Tricia McGovern	PME
Steve Bui	RMC
Monica Oakley	RMC
Yuan Yu	EBMUD
Vince Falzon	Burlingame
David Williams	BACWA
Sherry Hull	BACWA

PUBLIC COMMENT

None.

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER

None.

CONSENT CALENDAR

1. August 15, 2014 BACWA Executive Board Meeting Minutes
2. July 2014 Treasurer's Report
3. September 9, 2014 BACWA Executive Board Special Meeting Minutes

Consent Calendar items 1, 2 and 3 were approved in a motion made by Roger Bailey and seconded by Jim Ervin. The motion carried unanimously.

REPORTS

Committee Reports were included in the handout packet for agenda **item 4**.

AIR Committee: Report in Handout.

BAPPG: No meeting.

Biosolids Committee – No meeting.

Collections Committee: Report in Handout.

InfoShare Group: Two meeting reports in Handout. Maintenance group asked if BACWA would consider paying for lunch. Budget provides support for the committee this year in the amount of \$12,000. Approved by Executive Director with limits. Committee must inform the ED and get approval in advance.

Lab Committee: Two meeting reports in Handout.

Permits Committee: Two meeting reports in Handout. EBMUD has consent decree.

Recycled Water Committee: Report in Handout.

Executive Board representatives (Board) were given an opportunity to provide updates from each of the Principal agencies under agenda **item 5, Executive Board Reports**. Non-principal members were also given an opportunity to report out on behalf of their agencies. No actions were taken on the report-outs.

EBMUD reported on the Food Waste Program. The City of Oakland contracted with California Waste Solutions, but Waste Management challenged the contract and 2 of 3 were reversed. EBMUD will still get commercial source-separated organics. Also noted are upcoming changes to security at the Treatment Plant.

The SFPUC reported that they had a good meeting with Regulatory Board about best practices for backup power. The Oceanside permit process still going on. The primary concern is ammonia.

San Jose reported that their permit has been reissued. They have 14 projects in the works for next year.

Central San is finalizing a study on phytoplankton production. Final report will be completed in February 2015. The study was coordinated with the NMS efforts.

EBDA noted that the recent scientific data doesn't support the ammonia toxicity hypothesis. Also noted comments from the CA Attorney General on wetlands goals. There were 95 specific goals recommended in the report. These are worth reviewing.

The **Executive Director's June Report** was included in the handout packet for agenda **item 6** and David Williams highlighted items in the report. Announcement for the next Workshop on Wheels will be in the BACWA Bulletin. It will focus on nutrients. BACWA has contracted with Computer Courage to design a new website. There will be a "members only" section on the new site. EBMUD has completed their audit of BACWA financials. The audit noted that the JPA requires additional insured certificates which have been procured. A "blanket waiver" letter has been sent to the Water Board. He noted that 3 action items remain incomplete from fiscal year 2013-14 and 11 of the 16 action items from fiscal year 2014-15 have been completed.

The **Regulatory Program Manager (RPM) Report under agenda item 7** was included in the handout packet. The ED suggested that the RPM make HDR aware of the Committees and coordinate the committees with HDR.

Other BACWA Representative Reports were given an opportunity to provide updates under **agenda Item 8, Other BACWA Representative Reports**. No actions were taken based on the reports.

- a. RMP-TRC: Rod Miller
- b. RMP Steering Committee: Karin North; Jim Ervin – The annual meeting will be October 14, 2014.
- c. Summit Partners: Dave Williams –
- d. ASC/SFEI: Laura Pagano; Dave Williams – The quarterly meeting was a closed session to discuss the search for a new director. Negotiations continue.
- e. Nutrient Governance Steering Committee: Ben Horenstein; Jim Ervin –
- f. SWRCB Nutrient SAG: Dave Williams – A presentation was made to the State Board from CASA with a focus on management actions and a link to benefits.
- g. SWRCB Focus Group – Bacterial Objectives: Lorien Fono; Amy Chastain –
- h. SWRCB Focus Group – Mercury Amendments to the State Plan: Tim Potter -
- i. Nutrient Technical Workgroup – Eric Dunlavey –
- j. NACWA Taskforce on Dental Amalgam – Tim Potter – Amalgam rules out, going forward with standard. Low impact per EPA. Will create dental industry user category. Needs definition. Several questions were raised; including should BACWA comment? Should BACWA support NACWA in request for extension? should BACWA focus on education of dentists? The Board expressed general support for the rule. Board also supported extending comment time and Tim will take the lead in drafting a comment letter.

CHAIR & EXECUTIVE DIRECTOR AUTHORIZED ACTIONS

The following **Executive Director Authorized Actions** were taken since the August 15, 2014 Board meeting, listed under agenda **item 9**, and reviewed by the ED.

Agenda **Item 9** –Executive Director Authorization of funds for BAPPG/O'Rourke for social marketing ads for P2 Week.

OTHER BUSINESS

Agenda **Item 10** - Approve – JPA Funding Resolution. The ED noted that pages 45-47 of the Handout show details of BACWA revenues as requested by the Board at the August 15, 2014 EB meeting. *A motion to approve the JPA Funding Resolution was made by Jim Ervin and seconded by Ben Horenstein. The motion carried unanimously.*

Agenda **Item 11** –Discussion- Feedback on Joint Meeting with Water Board: Discussed Nutrients, RMP Fees, Drought Issues, Chlorine. San Jose gave a presentation on net environmental benefit. Agreed that Risk Reduction would be discussed at Pardee Seminar. The Board discussed what it wishes to accomplish in discussions with the Water Board at the Pardee Technical Seminar. The issues include toxicity, bacterial objectives and mercury (no burden on POTW's).

Agenda **Item 12** –Discussion- Feedback on Meeting with Chair of RWQCB – Planning to meet in November. Issues are sustainability, update of Basin Plan, Coordinate with ReNUWIt, grant to Conserve Our Wetlands, joint strategy in the South Bay. Agreed to provide details to BayKeeper.

Agenda **Item 13** –Discussion- Collection Systems Committee Support – Page 48
Monica Oakley is taking a leave of absence. Lenny Rather, Chair of the committee, indicated that they would support Monica's replacement from RMC on a month to month basis. The Board indicated that the committees should have a process for transitions that include transparency. The issue will be discussed further at the Pardee Technical Seminar. The committee is deciding on its strategic direction. Dave Williams will attend a meeting. Karin North thanked Monica Oakley for her years of service.

Agenda **Item 14** –Discussion- SSO Enforcement Options – Meeting Handout. Monica noted that the most promising options are being identified and they are creating a template. Need to vet with committee. Next step is for BACWA to take to the Water Board. Looking for least burden on Water Board. There may be policy issues. Agencies would use the template when they are noticed or when they submit annually. The Board directed Monica to take it back to the Committee for review.

Agenda **Item 15** - Discussion - Nutrients

a) Technical Work

i) Update on WS Case Studies Symposium – Pages 49-53 of the Handout:
Yun Shang, EBMUD, provided a presentation on wastewater sidestream treatment project at EBMUD. The Board agreed that sidestream data questionnaire should be finalized and data collection should start. BACWA may add a link on its website.

b) Regulatory

i) HDR Contract for Optimization/Upgrade Studies – Pages 55-63 of the Handout:

A contract with HDR was approved. BACWA will identify a main point of contact for all POTW's. It was suggested that the CMG should participate in site visits. There will be a Scoping/Evaluation Plan review with the WB in December 2014.

c) Governance Structure

- i) Steering Committee Governance Workgroup Meeting – Pages 64-70 of the Handout show notes of the 2nd and 3rd meetings: Dave Ceppos is making sure that issues at Steering Committee meetings get moved forward. Developing a better process and relationship with BayKeeper.
- ii) Program Coordinator – To improve direction. 17 tasks identified that need to be undertaken. The Program Coordinator would be the person to undertake these tasks..

Agenda **item 16** – Discussion: Next Steps on Chlorine Residual Monitoring (Amada Roa):

Agenda **item 17** – Discussion: Toxicity Update (Mike Connor): Pages 71-87 of the Handout: LA County will challenge all recommendations. Not objecting to testing but to how it's being implemented. Lead through Permits Committee. Should BACWA meet with EPA? Invite the EPA to BACWA Annual Meeting? On Agenda for Pardee Technical Seminar. Notify the Water Board.

Agenda **item 18** – Discussion: Regulatory Issue Matrix, Updated: Pages 88-96 of the Handout: The Matrix will be updated before the Pardee Technical Seminar. CASA is looking to streamline the process. The level of detail is good.

Agenda **item 19** – Discussion: Pardee Planning. Pages 97-98 of the Handout show the draft Agenda: Discussed deadlines for inclusion in handout. Discussed attendee invitations. Asked David Senn to give a conceptual model presentation.

Agenda **item 20** – Discussion: Annual Member Meeting Planning. Pages 99-100 of the Handout show the Agenda for the last meeting: Discussed invitations. Discussed the length of the meeting vs. Committee participation.

Agenda **item 21** – Discussion: Summit Partners Meeting Agenda: Meets quarterly. Discussed value. There is little cost. Suggestions: micro-beads, cigarette butts, plastics.

SUGGESTIONS FOR FUTURE AGENDA ITEMS:

None

The meeting adjourned at 12:35 p.m.

The next regular meeting of the Board is scheduled for **November 21 26, 2014** from 9:00 am – 12:30 pm at the **SFPUC, Hetch Hetchy Room, 13th Floor, San Francisco, CA**. Pardee Technical Seminar is scheduled for October 21-23, 2014.



Executive Board Special Meeting Minutes

Tuesday, December 8, 2014, 8:00 a.m. – 9:00 a.m.
TELECONFERENCE

ROLL CALL AND INTRODUCTIONS

Executive Board Representatives: Mike Connor, Chair (East Bay Dischargers Authority); Amy Chastain (San Francisco Public Utilities Commission); Jim Ervin (San Jose); Ben Horenstein (East Bay Municipal Utility District); Tim Potter (Central Contra Costa Sanitary District)

Other Attendees: Dave Williams (BACWA).

PUBLIC COMMENT

None

PETITION FOR REVIEW OF THE LACSD PERMITS TO THE SWRCB

BACWA Executive Director gave background on the request to join the Petition. It was made clear that this was a petition to the SWRCB to review the actions of the LA RWQCB in changing the LACSD permits for two of their POTW facilities in response to an objection letter the RWQCB received from EPA regarding the toxicity testing provisions in the permits.

The Board discussed the pros and cons of joining in the Petition. Although these permits do not directly impact permits in the San Francisco Bay Region 2, the main concern was that the changes to the permits were counter to the negotiations that were concluded between the POTW community in California and the SWRCB as part of the SWRCB's outreach efforts to develop a Toxicity Plan that is scheduled to be released in the near future. Absent significant objections to the changes to the permits it is not clear what impact the EPA's objections and the re-writing of the LACSD permits will have on the SWRCB's soon to be released Toxicity Plan.

A motion was made by Jim Ervin and seconded by Tim Potter to join the Petition. A vote was then taken with the results being 4 ayes (Mike Connor, Amy Chastain, Jim Ervin, and Tim Potter) and 1 abstention (Ben Horenstein).

It was then noted that meetings were being schedule in the coming weeks by CASA with the SWRCB and the Board felt it would be beneficial for a BACWA representative to attend the meetings.

ADJOURNMENT The meeting adjourned at 8:45 a.m.

Teleconference Locations:

San Francisco Public Utilities Commission
525 Golden Gate Ave
San Francisco, CA 94102

East Bay Municipal Utility District
375 11th Street, 7th Floor
Oakland, CA 84607

Central Contra Costa Sanitary District
5019 Imhoff Place
Martinez, CA 94553

East Bay Discharger's Association
2651 Grant Avenue
San Lorenzo, CA 94580

San Jose/Santa Clara Water Pollution Control Plant
700 Los Esteros Road
San Jose, CA 95134



Bay Area Clean Water Agencies

A Joint Powers Public Agency

Leading the Way to Protect our Bay

December 18, 2014

MEMO TO: Bay Area Clean Water Agencies Executive Board
MEMO FROM: D. Scott Klein, Controller, East Bay Municipal Utility District
SUBJECT: Fourth Month 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, 2014 through October 31, 2014** (four months of Fiscal Year 2014-2015). This report covers expenditures, cash receipts, and cash transfers for the following BACWA funds:

- Bay Area Clean Water Agencies (BACWA),
- BACWA Training Fund (Trng Fnd),
- Air Issues and Regulation Group (AIR),
- Bay Area Pollution Prevention Group (BAPPG),
- BACWA Legal Reserve Fund (Legal Rsrv),
- Water Quality Attainment Strategy (WQA CBC),
- BACWA Operating Reserve Fund (BACWAOpRes),
- Regional Water Recycling (RWR),
- BACWA Reserve (Reserve),
- Water/Wastewater Operator Training (WOT),
- Prop84 Bay Area Integrated Regional Water Mgmt (PRP84),
- WQA Emergency Reserve Fund (WQA Emerg),
- WQA Tech Action Fund (TechAction),
- CBC Operating Reserve Fund (CBC OpRsrv), and
- Prop50 Bay Area Integrated Regional Water Mgmt (PRP50)

Fund Balances as of month end 10/31/14

DESCRIPTION	BEGINNING FUND BALANCE 07/1/14	TOTAL RECEIPTS	TOTAL DISBURSEMENTS	ENDING FUND BALANCE 10/31/14	OUTSTANDING ENCUMBRANCES	UNOBLIGATED FUND BALANCE 10/31/14
BACWA	777,507	618,863	118,703	1,277,667	421,353	856,314
TRNG FND	-	-	-	-	-	-
AIR	19,063	66,159	28,674	56,548	48,390	8,158
BAPPG	60,537	77	7,325	53,289	21,719	31,570
LEGAL RSRV	300,000	-	-	300,000	-	300,000
WQA CBC	675,382	825,033	1,088,192	412,223	203,026	209,197
BACWAOPRES	160,000	-	-	160,000	-	160,000
RWR	16,780	20	-	16,800	-	16,800
RESERVE	-	-	-	-	-	-
WOT	58,295	114,593	77,500	95,388	-	95,388
PRP84	158,082	5,336,248	2,459,926	3,034,404	24,451	3,009,954
WQA EMERG	-	-	-	-	-	-
TECHACTION	-	-	-	-	-	-
CBC OPRSRV	1,198,890	1,957	-	1,200,847	-	1,200,847
PRP50	109,015	127	3,233	105,910	14,820	91,089
	3,533,551	6,963,078	3,783,552	6,713,077	733,759	5,979,317

BACWA Revenue Report for October 2014

DEPARTMENT	REVENUE TYPE	AMENDED BUDGET	CURRENT PERIOD			YEAR TO DATE				UNOBLIGATED
			DIRECT	INVOICED	JVS	DIRECT	INVOICED	JVS	ACTUAL	
Bay Area Clean Water Agencies	BDO Member Contributions	459,000	-	-	-	-	459,000	-	459,000	-
Bay Area Clean Water Agencies	BDO Other Receipts	41,354	3,900	1,150	-	3,900	3,450	-	7,350	34,004
Bay Area Clean Water Agencies	BDO Fund Transfers	6,500	-	-	-	-	-	-	-	6,500
Bay Area Clean Water Agencies	BDO Interest Income	4,000	-	-	547	-	-	1,043	1,043	2,957
Bay Area Clean Water Agencies	BDO Assoc.&Affiliate Contr	168,300	-	16,830	-	-	151,470	-	151,470	16,830
BACWA TOTAL		679,154	3,900	17,980	547	3,900	613,920	1,043	618,863	60,291
AIR-Air Issues&Regulation Grp	BDO Member Contributions	81,120	-	6,000	-	-	66,120	-	66,120	15,000
AIR-Air Issues&Regulation Grp	BDO Interest Income	-	-	-	24	-	-	39	39	(39)
AIR TOTAL		81,120	-	6,000	24	-	66,120	39	66,159	14,961
BAPPG-BayAreaPollutnPreventGrp	BDO Interest Income	-	-	-	35	-	-	77	77	(77)
BAPPG TOTAL		-	-	-	35	-	-	77	77	(77)
WQA-WtrQualityAttainmntStratgy	BDO Member Contributions	675,000	-	22,442	-	-	564,645	-	564,645	110,355
WQA-WtrQualityAttainmntStratgy	BDO Other Receipts	627,369	-	10,728	-	8,153	251,484	-	259,637	367,732
WQA-WtrQualityAttainmntStratgy	BDO Interest Income	-	-	-	353	-	-	751	751	(751)
WQA CBC TOTAL		1,302,369	-	33,170	353	8,153	816,129	751	825,033	477,336

BACWA Revenue Report for October 2014

DEPARTMENT	REVENUE TYPE	AMENDED BUDGET	CURRENT PERIOD			YEAR TO DATE				UNOBLIGATED
			DIRECT	INVOICED	JVS	DIRECT	INVOICED	JVS	ACTUAL	
Regional Water Recycling	BDO Interest Income	-	-	-	10	-	-	20	20	(20)
RWR TOTAL		-	-	-	10	-	-	20	20	(20)
WOT - Wtr/Wwtr Operat Training	BDO Member Contributions	-	-	-	-	-	114,500	-	114,500	(114,500)
WOT - Wtr/Wwtr Operat Training	BDO Interest Income	-	-	-	60	-	-	93	93	(93)
WOT TOTAL		-	-	-	60	-	114,500	93	114,593	(114,593)
Prop84BayAreaIntegRegnIWtrMgmt	BDO Interest Income	-	-	-	146	-	-	258	258	(258)
Prop84BayAreaIntegRegnIWtrMgmt	Administrative Support	-	-	-	-	-	91,906	-	91,906	(91,906)
Prop84BayAreaIntegRegnIWtrMgmt	CCCSO-Concord RW Pipeline	-	-	-	-	-	978,500	-	978,500	(978,500)
Prop84BayAreaIntegRegnIWtrMgmt	Central Dublin RW Project	-	-	-	-	-	56,500	-	56,500	(56,500)
Prop84BayAreaIntegRegnIWtrMgmt	EBMUD East Bayshore I-80 PL	-	-	-	-	-	703,950	-	703,950	(703,950)
Prop84BayAreaIntegRegnIWtrMgmt	Novato So. Area, Hamilton Fiel	-	-	-	-	-	31,250	-	31,250	(31,250)
Prop84BayAreaIntegRegnIWtrMgmt	South Bay Adv RW Treatment R.O	-	-	2,360,750	-	-	2,360,750	-	2,360,750	(2,360,750)
Prop84BayAreaIntegRegnIWtrMgmt	South Bay Salt Pond Habitat Re	-	-	-	-	-	63,250	-	63,250	(63,250)
Prop84BayAreaIntegRegnIWtrMgmt	Regional Green Infrastructure	-	-	44,460	-	-	78,220	-	78,220	(78,220)
Prop84BayAreaIntegRegnIWtrMgmt	Water Efficient LRP	-	-	40,937	-	-	106,168	-	106,168	(106,168)
Prop84BayAreaIntegRegnIWtrMgmt	Bay Friendly Landscape TP	-	-	-	-	-	78,374	-	78,374	(78,374)
Prop84BayAreaIntegRegnIWtrMgmt	Weather Based Irrigation Cntrl	-	-	9,665	-	-	13,589	-	13,589	(13,589)
Prop84BayAreaIntegRegnIWtrMgmt	High Efficiency Toilet & UR	-	-	126,843	-	-	260,941	-	260,941	(260,941)
Prop84BayAreaIntegRegnIWtrMgmt	High Efficiency Toilet & UI	-	-	6,626	-	-	39,986	-	39,986	(39,986)
Prop84BayAreaIntegRegnIWtrMgmt	High Efficiency Clothes Washrs	-	-	226,361	-	-	226,361	-	226,361	(226,361)
Prop84BayAreaIntegRegnIWtrMgmt	Napa Co. Rainwater HP	-	-	4,404	-	-	10,970	-	10,970	(10,970)
Prop84BayAreaIntegRegnIWtrMgmt	Conservation Program Admin	-	-	13,349	-	-	20,454	-	20,454	(20,454)
Prop84BayAreaIntegRegnIWtrMgmt	Flood Infrastructure Mapping T	-	-	19,614	-	-	29,262	-	29,262	(29,262)
Prop84BayAreaIntegRegnIWtrMgmt	Stormwater Improvements & PBP	-	-	28,059	-	-	33,438	-	33,438	(33,438)
Prop84BayAreaIntegRegnIWtrMgmt	Pescadero Integrated FRAH	-	-	34,236	-	-	48,653	-	48,653	(48,653)
Prop84BayAreaIntegRegnIWtrMgmt	Restoration Guidance, San FC	-	-	19,111	-	-	37,660	-	37,660	(37,660)
Prop84BayAreaIntegRegnIWtrMgmt	SF Estuary Steelhead MP	-	-	28,166	-	-	56,471	-	56,471	(56,471)
Prop84BayAreaIntegRegnIWtrMgmt	Watershed Program Admnstrtn	-	-	6,842	-	-	9,339	-	9,339	(9,339)
PRP84 TOTAL		-	-	2,969,424	146	-	5,335,990	258	5,336,248	(5,336,248)
CBC Operating Resrve Fnd	BDO Interest Income	-	-	-	989	-	-	1,957	1,957	(1,957)
CBC OPRSRV TOTAL		-	-	-	989	-	-	1,957	1,957	(1,957)
Prop50BayAreaIntegRegnIWtrMgmt	BDO Interest Income	-	-	-	63	-	-	127	127	(127)
PRP50 TOTAL		-	-	-	63	-	-	127	127	(127)

BACWA Expense Report for October 2014

DEPARTMENT	EXPENSE TYPE	AMENDED BUDGET	CURRENT PERIOD				YEAR TO DATE				OBLIGATED	UNOBLIGATED
			ENC	PV	DA	JV	ENC	PV	DA	JV		
Bay Area Clean Water Agencies	BC-Collections System	26,000	(3,594)	5,817	-	-	18,221	9,002	-	(850)	26,373	(373)
Bay Area Clean Water Agencies	BC-Permit Committee	1,000	-	-	-	-	-	-	-	-	-	1,000
Bay Area Clean Water Agencies	BC-Water Recycling Committee	8,365	-	-	-	-	7,365	-	-	-	7,365	1,000
Bay Area Clean Water Agencies	BC-Biosolids Committee	5,000	-	-	-	-	-	-	-	-	-	5,000
Bay Area Clean Water Agencies	BC-InfoShare Groups	12,000	-	-	-	-	12,000	-	-	-	12,000	-
Bay Area Clean Water Agencies	BC-Laboratory Committee	7,000	-	-	-	-	-	-	-	-	-	7,000
Bay Area Clean Water Agencies	BC-Miscellaneous Committee Sup	28,064	(5,763)	5,763	-	-	142,301	5,763	-	-	148,064	(120,000)
Bay Area Clean Water Agencies	LS-Regulatory Support	4,475	-	-	-	-	4,475	-	-	-	4,475	-
Bay Area Clean Water Agencies	LS-Executive Board Support	2,000	-	-	-	-	1,048	952	-	-	2,000	-
Bay Area Clean Water Agencies	CAS-PSSEP	20,000	-	-	-	-	-	-	-	-	-	20,000
Bay Area Clean Water Agencies	CAS-CPSC	5,000	-	-	-	-	-	-	-	-	-	5,000
Bay Area Clean Water Agencies	CAS-PSI	500	-	-	-	-	-	-	-	-	-	500
Bay Area Clean Water Agencies	CAR-BACWA Annual Report	1,000	-	-	-	-	-	-	-	-	-	1,000
Bay Area Clean Water Agencies	CAR-BACWA Website Development/	8,300	-	-	-	-	1,500	-	3,600	-	5,100	3,200
Bay Area Clean Water Agencies	AS-BACWA Admin Expense	5,500	-	-	253	-	-	-	2,598	-	2,598	2,902
Bay Area Clean Water Agencies	CAR-Other Communications	200	-	-	-	-	-	-	-	-	-	200
Bay Area Clean Water Agencies	GBS- Meeting Support	15,600	-	-	1,097	-	795	205	1,097	(300)	1,797	13,803
Bay Area Clean Water Agencies	AS-Executive Director	178,500	-	-	-	-	148,750	29,750	-	-	178,500	-
Bay Area Clean Water Agencies	AS-Assistant Executive Directo	76,500	-	-	-	-	55,487	20,043	7,007	-	82,537	(6,037)
Bay Area Clean Water Agencies	AS-EBMUD Administrative Servic	40,000	(10,589)	10,589	-	-	29,411	10,589	2,940	(3,000)	39,940	60
Bay Area Clean Water Agencies	AS-Insurance	4,500	-	-	-	-	-	-	4,308	-	4,308	192
Bay Area Clean Water Agencies	BC-Pretreatment Committee	1,000	-	-	-	-	-	-	-	-	-	1,000
Bay Area Clean Water Agencies	BC-BAPPG	81,000	-	-	-	-	-	-	-	-	-	81,000
Bay Area Clean Water Agencies	CAS-CWCCG	25,000	-	-	-	-	-	-	25,000	-	25,000	-
Bay Area Clean Water Agencies	AS-Regulatory Program Manager	120,000	-	-	-	-	-	-	-	-	-	120,000
Bay Area Clean Water Agencies	BDO-CAS-Stanford ERC	10,000	-	-	-	-	-	-	-	-	-	10,000
Bay Area Clean Water Agencies	CAS-FWQC	5,000	-	-	-	-	-	-	-	-	-	5,000
BACWA TOTAL		691,504	(19,946)	22,169	1,350	-	421,353	76,304	46,550	(4,150)	540,057	151,447
AIR-Air Issues&Regulation Grp	Administrative Support	4,056	-	-	-	-	-	-	-	-	-	4,056
AIR-Air Issues&Regulation Grp	BDO Contract Expenses	77,064	(28,674)	28,674	-	-	48,390	28,674	-	-	77,064	-
AIR TOTAL		81,120	(28,674)	28,674	-	-	48,390	28,674	-	-	77,064	4,056
BAPPG-BayAreaPollutnPreventGrp	BAPPG-CE-General P2	-	-	1,500	-	-	-	1,500	-	-	1,500	(1,500)
BAPPG-BayAreaPollutnPreventGrp	BAPPG-CE-Emerging Issues	8,044	(1,500)	-	-	-	3,216	3,328	-	-	6,544	1,501
BAPPG-BayAreaPollutnPreventGrp	BAPPG-CE-Other	-	-	-	-	-	5,000	-	-	-	5,000	(5,000)
BAPPG-BayAreaPollutnPreventGrp	BAPPG-CE-Multi-Pollutant	-	(1,783)	1,783	-	-	13,504	2,497	-	-	16,000	(16,000)
BAPPG TOTAL		8,044	(3,283)	3,283	-	-	21,719	7,325	-	-	29,044	(21,000)
WQA-WtrQualityAttainmntStratgy	WQA-CE-Technical Support	377,369	(57,433)	55,210	-	-	184,470	232,446	-	(43,200)	373,716	3,653
WQA-WtrQualityAttainmntStratgy	WQA-CE-Collaborations & Sponso	-	-	-	15,000	-	-	-	20,000	-	20,000	(20,000)
WQA-WtrQualityAttainmntStratgy	WQA-CE-Commun. & Reporting	21,000	-	-	-	-	6,000	-	-	-	6,000	15,000
WQA-WtrQualityAttainmntStratgy	WQA-CE-Other	-	-	-	-	-	-	-	-	-	-	-
WQA-WtrQualityAttainmntStratgy	WQA-CE-Nutrient WS Permit Comm	880,000	-	-	-	-	12,556	2,444	865,000	-	880,000	-
WQA-WtrQualityAttainmntStratgy	WQA-CE-Nutrient Tech Support	450,000	-	-	11,502	-	-	-	11,502	-	11,502	438,498
WQA-WtrQualityAttainmntStratgy	WQA-CE Risk Reduction	15,000	-	-	-	-	-	-	-	-	-	15,000
WQA CBC TOTAL		1,743,369	(57,433)	55,210	26,502	-	203,026	234,890	896,502	(43,200)	1,291,218	452,151
WOT - Wtr/Wotr Operat Training	BDO Contract Expenses	-	-	-	77,500	-	-	-	77,500	-	77,500	(77,500)
WOT TOTAL		-	-	-	77,500	-	-	-	77,500	-	77,500	(77,500)
Prop84BayAreaIntegRegnlWtrMgmt	Administrative Support	-	-	-	-	-	500	-	-	-	500	(500)

Prop84BayAreaIntegRegnlWtrMgmt	BDO Contract Expenses	-	-	-	-	-	23,951	4,778	-	-	28,728	(28,728)
Prop84BayAreaIntegRegnlWtrMgmt	CCCSD-Concord RW Pipeline	-	-	-	-	-	-	-	978,500	-	978,500	(978,500)
Prop84BayAreaIntegRegnlWtrMgmt	Central Dublin RW Project	-	-	-	-	-	-	-	56,500	-	56,500	(56,500)
Prop84BayAreaIntegRegnlWtrMgmt	EBMUD East Bayshore I-80 PL	-	-	-	-	-	-	-	703,950	-	703,950	(703,950)
Prop84BayAreaIntegRegnlWtrMgmt	Sonoma Valley RWP Stage 1	-	-	-	-	-	-	-	31,250	-	31,250	(31,250)
Prop84BayAreaIntegRegnlWtrMgmt	Bair Island Restoration	-	-	-	-	-	-	-	63,250	-	63,250	(63,250)
Prop84BayAreaIntegRegnlWtrMgmt	Regional Green Infrastructure	-	-	-	44,460	-	-	-	78,220	-	78,220	(78,220)
Prop84BayAreaIntegRegnlWtrMgmt	Water Efficient LRP	-	-	-	-	-	-	-	65,230	-	65,230	(65,230)
Prop84BayAreaIntegRegnlWtrMgmt	Bay Friendly Landscape TP	-	-	-	-	-	-	-	78,374	-	78,374	(78,374)
Prop84BayAreaIntegRegnlWtrMgmt	Weather Based Irrigation Cntrl	-	-	-	-	-	-	-	3,924	-	3,924	(3,924)
Prop84BayAreaIntegRegnlWtrMgmt	High Efficiency Toilet & UR	-	-	-	-	-	-	-	134,098	-	134,098	(134,098)
Prop84BayAreaIntegRegnlWtrMgmt	High Efficiency Toilet & UI	-	-	-	-	-	-	-	33,359	-	33,359	(33,359)
Prop84BayAreaIntegRegnlWtrMgmt	Napa Co. Rainwater HP	-	-	-	-	-	-	-	6,566	-	6,566	(6,566)
Prop84BayAreaIntegRegnlWtrMgmt	Conservation Program Admin	-	-	-	-	-	-	-	7,106	-	7,106	(7,106)
Prop84BayAreaIntegRegnlWtrMgmt	Watershed Partnership TA	-	-	-	-	-	-	-	-	-	-	-
Prop84BayAreaIntegRegnlWtrMgmt	Flood Infrastructure Mapping T	-	-	-	19,614	-	-	-	29,262	-	29,262	(29,262)
Prop84BayAreaIntegRegnlWtrMgmt	Stormwater Improvements & PBP	-	-	-	28,059	-	-	-	33,438	-	33,438	(33,438)
Prop84BayAreaIntegRegnlWtrMgmt	Pescadero Integrated FRAH	-	-	-	34,236	-	-	-	48,653	-	48,653	(48,653)
Prop84BayAreaIntegRegnlWtrMgmt	Restoration Guidance, San FC	-	-	-	19,111	-	-	-	37,660	-	37,660	(37,660)
Prop84BayAreaIntegRegnlWtrMgmt	SF Estuary Steelhead MP	-	-	-	28,166	-	-	-	56,471	-	56,471	(56,471)
Prop84BayAreaIntegRegnlWtrMgmt	Watershed Program Admnstrtn	-	-	-	6,842	-	-	-	9,339	-	9,339	(9,339)
PRP84 TOTAL		-	-	-	180,488	-	24,451	4,778	2,455,149	-	2,484,377	(2,484,377)
Prop50BayAreaIntegRegnlWtrMgmt	Administrative Support	-	-	-	-	-	500	-	-	-	500	(500)
Prop50BayAreaIntegRegnlWtrMgmt	BDO Contract Expenses	-	-	-	-	-	14,320	3,233	-	-	17,553	(17,553)
PRP50 TOTAL		-	-	-	-	-	14,820	3,233	-	-	18,053	(18,053)
		2,524,037	(109,336)	109,336	285,840	-	733,759	355,202	3,475,700	(47,350)	4,517,312	(1,993,275)

BACWA - Information Sharing Group
Meeting Minutes
November 19, 2014
10:00-2:00 at City of Sunnyvale

ATTENDEES

Dave Freitas, EBMUD
Dave Livingston, USD
David Stoops, EBDA
Bryan Berdeen, Sunnyvale
Pat Lennar, Sunnyvale
Brian Hawley, FSSD
Izaiah Kruenegel, FSSD
Mike Barnes, KJ

DISCUSSION ITEMS

City of Sunnyvale – Plant Rebuild Planning

Bryan described the plan to rebuild the plant. The plant was constructed in 1956 and many processes need rehabilitation. In addition, the plant will need to be able to meet the new nutrient standards. These are the main two factors that are driving the plan to rebuild the plant. Two digesters are currently being rehabilitated with new mixing, heating, and covers. A new headworks project is in the 30% design phase. Bryan noted that an Adobe 3D model of the 30% design has helped staff review the project. The chlorine contact tank cannot be retrofit to meet current seismic standards, so it will need to be rebuilt.

Major Plant Rebuild Projects

EBMUD has leaking joints in their hypochlorite piping. This will need repair or replacement. Their dewatering process also has issues that should be addressed. The old low speed centrifuges were capable of dewatering without problems from grit. The newer high speed centrifuges are prone to plugging with the grit.

USD. Dave noted that they have used fused joints for their hypochlorite piping, and that so far leaking has not been an issue. They just completed a new dewatering facility with centrifuges. Grit has not been an issue since they degrit their primary sludge. They just replaced their cogeneration engine and are in the start-up phase. Unknown deposits have built up on the spark plugs and cylinders even though they have a new gas treatment system. They are in the process of analyzing this. They have many tilt-up structures that are seismically vulnerable. They are undergoing a site use assessment study now to review how the plant will address issues such as nutrient removal.

FSSD previously installed a screw press as part of a plan to replace their plate and frame filter presses. The screw press runs 24/7 and has been very reliable and produced an 18%

cake. They are considering adding a fan press or a second screw press as a back up to the screw press. They pilot tested a fan press recently and it performed much better than the one they pilot tested 6 years ago. They successfully control struvite by adding Flosperse 30S by Polydyne to the screw press feed sludge. David Stoops noted that he had past success using the Schaner's struvite control product.

Disinfection using Peracetic Acid

Sunnyvale decided not to pursue further at this time since there is not a reliable supply. It was noted that the only supplier in the US is located in Chicago. However, if more agencies pursue this and the supply situation improves, they will revisit this.

EBDA also reviewed the use of Peracetic Acid disinfection. If it were feasible, it could reduce their high bisulfite addition cost

Chlorination and Dechlorination

EBDA reduced their sodium bisulfite (SBS) use from 550 gpd to 230 gpd after installing new Watson Marlow peristaltic pumps. They measure flow using a magmeter. Their target SBS is 0.5 mg/l.

Sunnyvale used a Capital Controls 3000 analyzer to measure SBS. Their dosage is based on flow and chlorine residual, with trimming based on SBS residual. The SBS residual target is 2-3 mg/l.

Influent Flow Decreases

Sunnyvale's average flow has decreased from 14 to 12.5. The solids load is the same or higher. Water conservation and sealing of the collections system are the likely reasons for the flow decrease. Their PWWF previously spiked to 60 mgd, but only reached in the 30's during a recent 25 year storm.

FSSD's average flow was 15 in 2008 and is now about 12.9. The solids loading is about the same. The flow from Anheuser Busch has decreased to 0.5 mgd and is also lower strength.

EBMUD's average flow in 1991 was 85-89 mgd and is now 45-50 mgd. The solids loading is about the same. The low flow at night is about 20 mgd. The flow decrease is due to manufacturers leaving and water conservation.

USD's average flow has decreased from 30 to 22 mgd. The solids loading is about the same. Dave noted that the flow decrease has made their metric of kW/MGD increase.

ACTION ITEMS

- None

NEXT MEETING SUGGESTION ITEMS

- Peracetic Acid addition (DS 11/14)
- Sodium Bisulfide dosage control (DS 11/14)
- Disinfection (11/14)
- Struvite management (BB 11/14)
- Operations Metrics discussion
- Baywork presentation by Cheryl Davis of SF PUC (9/13)

NEXT MEETING

- March 25, 2015 (Tentatively at EBDA, David Stoops to confirm)

Maintenance Subgroup BAMI
Meeting Minutes
October 22, 2014 at SFPUC Office (525 Golden Gate Ave, SF)

ATTENDEES

Maurice Atendido, Dublin San Ramon Sanitary District
Scott von de Lieth, Oro Loma Sanitary District
David Stoops, EBDA
Dan Lopez, Dublin San Ramon Sanitary District
Ellen Butawan, EMA
Jim Carlson, SFPUC
Christine Spencer, SFPUC
Paul Bonitz, SFPUC
Allen Keelalan, SFPUC
Bryan Berdeen, City of Sunnyvale
Leonard Espinosa, City of Sunnyvale
Tanner McGinnis, City of Sunnyvale
Mike Barnes, Kennedy Jenks

DISCUSSION ITEMS

SFPUC Asset Management Program for 525 Golden Gate Ave. – Paul Bonitz

Paul gave a presentation of the asset management program for this building. It has been a different since the PUC is accustomed to managing water, sewer, and power assets rather than buildings. In addition, the features of the building are unique. They use Maximo 7.5. They define assets as items that have a value of greater than \$5000. They have chosen to enter data using the Import/Export tool in Maximo 7.5. With this tool, data can be entered into Excel, and then imported into Maximo. They plan to use mobile devices to improve warehouse operations by making sure spare parts are available. They plan to use DatasplICE software to facilitate this.

They determine criticality of assets based on a calculation of consequence of failure and likelihood of failure, using a Maximo tab. They added a Condition Assessment tab with custom programming. They use Cognos software to get reports from Maximo, and needed the developer to customize the software to accomplish this.

Asset Management and CMMS

EBDA. Uses an Excel spreadsheet developed by GHD. They use for their renewal and replacement fund management. Their annual R&R budget is currently \$430,000. They have 430 major assets with an estimated value of \$280 million. Their CMMS software is by Davidson software. A condition assessment of their outfall is in process.

Sunnyvale. Use Maximo 4.0 for their CMMS. They are in the process of evaluating CMMS software for future use. Would like to have a new CMMS operational by 2019 for the new Headworks project. Maintenance Connection is used by other city departments.

SFPUC conducted a CMMS selection process and reviewed Mainsaver, SAP, Oracle, and Maximo 7. Selected Maximo 7, which is web based and very different from Maximo 4. Christine will send a lessons learned document based on this selection process.

OLSD. Completed a CMMS selection process in 2008. Selected Mainsaver. For asset management, they are starting with a remote pump station and use a spreadsheet developed by GHD. In Mainsaver, they have tabs for life expectancy and consequence of failure, but currently use mechanic knowledge to prioritize asset maintenance.

DSRSD. They use Lucity for their CMMS. (Formerly known as Butler.). They use asset management primarily for their collection system. At the WWTP, they currently use mechanic knowledge to prioritize asset maintenance.

SFPUC Asset Management for Grease to Biofuel Program-Ellen Butawan

Ellen discussed the development of the asset management system using Maximo for the biofuel production program, which consists of about 100-125 work orders per day to schedule trucks to pick up grease. They also use the system for route planning. They are using a paperless system using iPads, which has eliminated the need for 2 admin staff. The iPads use 3G to connect to Maximo remotely, and remote access is needed to enter data. Since 3G connectivity is not always adequate to allow internet access to Maximo, they plan to modify the system to allow remote data entry without internet access. Data entered in this manner would then be uploaded to Maximo when it is accessible.

SFPUC Green Building Features

Christine gave a presentation of the green features of 525 Golden Gate Avenue, which is Platinum Certified LEED. The building includes 7 kW of wind power and 164 kW of solar power, design features to maximize natural light, automated shades on the south facing windows to control solar impacts on heating and cooling, and HVAC ducts in the flooring. In addition, the water from the facility is recycled using a purification system called the Living Machine. There was a tour of the building after the presentation.

ACTION ITEMS

1. Christine will send the SFPUC lessons learned document on their CMMS selection process.

BACKLOG

- Laney College-Industrial Mechanical Maintenance Machinery- Steering Committee (IB 2/12)
- EBMUD Turbine tour

NEXT MEETING

January 28, 2015, site to be determined

Permits Committee – Report to BACWA Board

Permits Committee Meeting on: 12/09/14
Executive Board Meeting Date: 12/19/14
Committee Chair: Meg Herston

Committee Request for Board Action: None

17 attendees representing 7 BACWA member agencies

Lila Tang and Bill Johnson from Regional Water Board in attendance

Presentation by Lila Tang of Regional Water Board NPDES Wastewater Priorities

Presentation was given to RWQCB Board earlier in the year (presentation available electronically):

- The Bay Area RWQCB oversees 500 MGD treated at 46 municipal treatment plants serving over 7 Million people and producing roughly 570 tons of biosolids per day.
- 346 acres of wetlands are supported by wastewater effluent, of which greater than 200 acres were created.
- Permit violations have significantly decreased over years.
- NPDES wastewater challenges that were identified: 1) Aging sewer systems, 2) Nutrients, and 3) Pharmaceuticals, personal care products, etc.

Permits/Permit Amendments:

March – *Las Gallinas Valley Sanitary District* has been moved to the March calendar. RWQCB is not proposing to veer from their standard toxicity requirements.

Fairfield Suisun Sewer District – They are happy with their administrative draft.

San Francisco's Oceanside Plant – The TST test will be required although this is an Ocean discharge and EPA permit.

Nutrients

- *Optimization/Upgrade Studies* – On behalf of its member agencies, BACWA submitted both the Scoping Plan (on time) and Evaluation Plan (ahead of schedule) to the RWQCB. The Contract Managers Group (CMG) is meeting with the Water Board to over the plans on December 15, 2015.
- The Points of Contact (POC) for all 37 major POTWs have been identified and a two-part survey has been distributed to them. The first part of the survey focuses in on the Optimization aspect of the study and is due in January. The second part of the survey focuses in on Upgrades and is due in February.
- Site visits as follow-up to the survey will start in April and will be conducted throughout 2015.
- The Nutrient Steering Committee amended their charter to include a Planning Subcommittee to do the work on behalf of the Steering Committee
- A new part-time Nutrient Program Coordinator position will be opened to help the subcommittee get work done, fundraise, day-to-day operations of science manager, etc.

Toxicity

- BACWA signed on to a petition for a request for stay of Whittier Narrows and Pomona LA Region permits alongside SCAP, CASA, and LA County Sanitation District. Main issues still related to inclusion of numeric limits, "safe harbor" provisions (when you fail a monthly limit and go into accelerated monitoring you would be in violation, where as with State Plan you are not while working on TIE/TRE), TST test required running only 2 concentrations (dilution and blank) vs. 5 concentrations which provides a dose response curve (reduces false positives).

Ebola Procedures for Hospital Waste

- WEF and CDC conducted a webinar that specified following your agency's Bloodborne Pathogen Plan (BPP) for Ebola treated waste from hospitals. Leah Walker provided information on the viability of the Ebola Virus in medical waste which has been forwarded to the group. The CDC's interim guidance on workers handling untreated sewage is also available.

Executive Committee Meeting Report

- Annual Meeting will be held January 30th, 2015. Nutrients will be a big part of the agenda.
- The AIR Committee is currently independent of BACWA. Pretreatment and BAPGG were also at one time, but have come under the BACWA umbrella. BACWA would like to incorporate the AIR Committee into BACWA; financially, this would be phased over several years.
- California Climate Change Group is tracking available State funding which may be available to POTWs if they show they are benefiting the environment
- BACWA is moving towards a new website with a new look, members only section, and easier for committees to upload information.

Mercury/PCB TMDL Risk Reduction Letter

- A letter was sent by BACWA on behalf of dischargers under the Mercury/PCB Watershed Permit as a first step in compliance with the risk reduction requirements. Three options were submitted: 1) fund counties developing outreach to at-risk communities in coordination with BASMAA's pilot study, 2) work with a Aquatic Science Center to fund grants for Community Based Organizations (CBO) that would provide outreach, and 3) fund one CBO. BACWA is will to contribute \$50,000 to fund one of these alternatives.

Informational Items/Announcements

- EPA issued a notice requesting further comment on its E-Reporting Rule. BACWA will not be commenting, although CASA will be getting involved. Overall, this is a non-issue for majority of BACWA members, and would require minor (<1 MGD) dischargers to do DMR.

Next Meeting

The next meeting will be held on January 13, 2015 from 1:00-3:00 at the EBMUD Library.

Committee Request for Board Action: None.

18 attendees (incl. 9 on phone) representing 11 BACWA member agencies.

Detailed notes from previous meetings are posted [online](#).

Topics to be Reviewed at BACWA Executive Board Meeting on December 19

1. Bhavani Yerrapotu will present on Sunnyvale's long-term plans for zero discharge with respect to nutrient issues.
2. Cheryl Muñoz will provide a brief update on the recycled water truck fill survey.
3. Cheryl will provide a brief update on the outlook for Prop 84 Round 3 IRWM, and Prop 1 IRWM and Recycled Water funding if the drought continues. Also, if the drought does not continue, what, if anything, should BACWA be doing with respect to these funds to promote funding of Bay Area recycled water and wastewater projects?
4. There will be discussion to identify agencies in the Bay Area that have recycled water scalping facilities and any specific issues involved such as regulatory requirements.
6. There will be discussion of brine discharge issues from the four facilities in Region 2 that use reverse osmosis to treat water, two of which treat wastewater (EBMUD and San Jose) and two of which treat groundwater (Zone 7 and Alameda).
7. There will be discussion of the new state-wide general recycled water permit (2014-0090), including a comparison of 2014-0090 requirements versus General Order 96-011 requirements and the possibility of moving away from new permit requirements.

Prop 84 Funding Rounds

- The first Round 2 invoicing period is coming up and will include all charges for the backdated period for which the funding match can be charged (back to 9/30/08), thus including six years' worth of material. LPS agreements need to be signed and approved by their governing boards or councils in order to submit project charges.
- With respect to the Drought Relief Round, post-award contracts from LPS agreements were submitted to ABAG by 12/3, and all project submissions were due to DWR by 12/12.
- Round 3 draft solicitation is planned for Summer or Fall 2015.

Legislation/Regulations Updates

- AB 1471 – Water Bond (Prop 1)
There is \$65M in IRWM funds available for the Bay Area. It is assumed that DWR will be administering these funds. There is \$725M available state-wide for recycled water and desalination projects. The funding split between the two is not yet known. It is assumed that the SWRCB will be administering these funds. We don't know what the project criteria will be yet for the IRWM, or recycled water/desal projects, and probably won't for at least a year or more.
- AB 1699 - Plastic Microbeads
This legislation did not pass State Senate by 1 vote. Environmental groups are planning to reintroduce the bill. The WaterReuse Association CA Section will be preparing a briefing paper and is asking agencies that have a good understanding of this issue to help in the preparation. Melody LaBella from CCCSD is working with a wastewater group on this issue to provide some information to WaterReuse for their paper.

Bay Area Recycled Water Truck-fill Facilities Survey

The survey is complete. Twenty-two agencies have been identified that have truck-fill stations, and 26 respondents indicated that they did not have fill facilities. A draft one-page fact sheet has been prepared for each of the 22 sites, all of which are being verified for correctness by the corresponding sites. The pages will be assembled into a Bay Area Recycled Water Fill Facility Guidebook and posted on the BACWA site at the beginning of next year.

Next BACWA Recycled Water Committee Meeting

January 7, 2014 from 10:00 am to 12:00 pm, 2nd Floor Small Training Room at EBMUD Headquarters.

Executive Director's Report to the Board December 2014

NUTRIENTS:

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

- Attended and participated in the 5th meetings of the Steering Committee's Planning Subcommittee meeting and served as scribe. Following the meeting prepared detailed meeting minutes and summary of action items. Materials delivered to the Steering Committee Facilitator.
- Participated in a special meeting of the Planning /subcommittee to establish a schedule for meeting of the Steering Committee and Planning Subcommittee over the next six months.
- Set up monthly meetings of the CMG and consulting teams and participated in the December monthly conference call.
- Organized and held a joint meeting with the CMG, the Nutrient Optimization/Upgrade consulting team, the Water Board staff and BayKeeper to review the Scoping and Evaluation Plan.
- Met with Board member Horenstein to develop options for providing future facilitation and program coordination for the NMS Steering Committee. Option will be reviewed by the Planning Subcommittee.
- Continued coordination on the in-kind support committed by BACWA for the EBMUD EPA grant for nutrient research

BACWA BOARD MEETING:

- Worked with the AED in preparing the December BACWA Board agenda including reviewing the agenda with the chair.
- Attended the BACWA November Board meeting and worked with the AED and RPM in preparing the minutes and Action Items.
- Scheduled and participated in a BACWA Special Board meeting to discuss participation in the CASA sponsored Petition for Review of the LACSD permits.
- Continuing to track all action items to completion.

ASC/SFEI:

- Participated in the ASC/SFEI Quarterly Board meeting held December 12, 2014.
- As the Chair of the Governance Committee, coordinated with the new Executive Director to set the agenda and hold the next Governance Committee meeting in January.
- Participated in the Executive Committee monthly conference call.

FINANCE:

- Reviewed the BACWA financial reports with the AED and planned for revisions of the reports to make them more effective in conveying financial information to the Board.

AIR COMMITTEE:

- Attended the Joint CWCCG/CASA Energy Workgroup meeting. Discussed funding opportunities under the State's Cap and Trade Program.
- Discussed options, with the leadership of the AIR Committee, for incorporating the AIR Committee as a regular committee of BACWA



Executive Director's Report to the Board December 2014

RECYCLED WATER COMMITTEE:

-Attended the monthly Recycled Water Committee meeting and discussed, Prop 1 opportunities, status of the Truck Fill Survey, on-going legislation and met the new Water Board staff member who will be working on recycled water projects.

PERMIT COMMITTEE:

-Attended the December monthly Permit Committee meeting. Discussed a variety of permitting topics with the Water Board staff who attended the meeting. Also discussed what members were doing to protect their workers following the recent CDC release of guidelines for dealing with Ebola in wastewater.

COLLABORATION:

-Coordinated with the CASA ED on topics on mutual interest (i.e. State Nutrient Objectives, toxicity plan and a Petition to the SWRCB for review of the LASCDB permit and potential litigation, and utility leadership committee).

ADMINISTRATION:

-Reviewed the proposed scope of work for the new IT/Website consultant and attended meeting with Computer Courage to review scope of work and draft of the new web page design.

-Signed off on invoices, reviewed correspondence, prepared for upcoming Board meeting, responded to inquiries on BACWA efforts, oversaw updating of web page and provided general direction to BACWA staff.

-Worked with the RPM in the preparation of the monthly BACWA bulletin.

-Coordinated with the AED to plan activities and review duties, schedules, and priorities.

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

MISCELLANEOUS MEETINGS/CALLS:

-Paul Gilbert Snyder on Prop 50 and Prop 84

-BACWA Chair and Committee Chairs on items that arose during the month

-Water Board staff on coordinating the nutrient activities

-other misc. calls and inquiries regarding BACWA activities

BACWA ACTION ITEMS

Number	Subject	Task	Deadline	Status
Action Items from November 19, 2014 BACWA Executive Board Meeting				
2014.11-42	SSO Enforcement Options	set up meeting with WB to discuss (ED)	12/19/2014	pending
2014.11-41	San Jose Notice of Intent from BayKeeper	put link on web site and in next Bulletin (AED)	11/24/2014	pending
2014.11-40	Habitat Goals and Wetlands Report	put link to report in Bulletin and send out link to report (AED)	11/24/2014	completed
	December Board agenda	include recycled water, nutrient pilot projects (ED)	12/16/2014	completed
	Treasurer Island Permit	check with Collection and Permit Committee on BACWA commenting (ED)	12/3/2014	completed
2014.11-39	State Cap & Trade Program	Include info in next Bulletin (RPM)	12/1/2014	pending
2014.11-38	Risk Management	Send letter re alternatives to WB (ED)	11/21/2014	completed
2014.11-37	Scoping/Eval Plans	Revised document and send to Water Board and BayKeeper (ED)	12/1/2014	completed
2014.11-36	Annual Meeting Planning	include discussion of Opt/Upgrade , provide template for Committee Fact Sheet, provide high interest item last to entice staying to end of meetin, consider adding Air issues (ED)	1/30/2015	pending
2014.11-35	Ebola	circulate CDC Guidance once it is released (RPM)	12/10/2014	completed
2014.11-34	Annual Meeting	Present Final Agenda (ED)	12/16/2014	completed

2014.11-33	New Dental Amalgam Rule	Prepared Fact Sheet for Dental Offices (TP)	3/31/2015	Pending
2014.11-32	Biosolids (RPM)	Add links to BACWA Bulletin & send out Sept Bulletin		completed
2014.11-31	Wipes Advertising (RPM)	Add links to BACWA Bulletin	12/1/2014	completed

	Action Items Remaining from Previous BACWA Executive Board Meetings			
2014.10-30	Review of CBC fees (ED)	Prepare options for changing the CBC fees	12/19/2014	Pending
2014.10-24	Nutrients Regulatory (ED)	Arrange for workshop for Points of Contact	1/1/2015	completed
2014.08-8	IT update (AED)	Develop Scope and Enter into a Contract	12/31/2014	completed
2014.06-113	Joint meeting with Air District (ED, Air Comm. Chair)	Set up meeting with senior staff at BAAQMD	12/31/2014	Pending
2014.05-105	Annual Report (ED)	Produce scaled-down version.		Pending
2014.05-102	NACWA Inquiry Regarding Collaboration with Agriculture (ED)	Forward request to Napa and Sonoma agencies and respond to NACWA.		Pending

FY 15: 36 of 42 Action Items completed.
FY 14: 125 of 128 Action Items completed.
FY 13: 67 of 67 Action Items completed.

Board Calendar January thru December 2015

DATE	ASSIGNMENT	STATUS NOTES
1/30/2015 Annual Member Mtg Items due: 1/23/15 Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	Nutrients Overview Nutrients Regulatory Update Nutrients Technical Update Business Meeting Committee Updates	
2/?/2015 Joint Meeting Items due: ? Connor; Pagano; Horenstein; Ervin; Bailey Water Board Staff Williams; Fono	<u>Other Business: Discussions</u>	
2/20/2015 Monthly Board Mtg Items due: 2/? Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	<u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting) <u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)	
	<u>Other Business: Authorizations</u>	
	<u>Other Business: Discussions</u>	
3/20/2015 Monthly Board Mtg Items due: 3/? Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	<u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting) <u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)	
	<u>Other Business: Authorizations</u>	



	<u>Other Business: Discussions</u>	
4/?/2015 Joint Meeting Items due: ? Connor; Pagano; Horenstein; Ervin; Bailey Water Board Staff Williams; Fono	<u>Other Business: Discussions</u> 	
4/17/2015 Monthly Board Mtg Items due: 4/? Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	<u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting) <u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED) <u>Other Business: Authorizations</u> <u>Other Business: Discussions</u>	
5/15/2015 Monthly Board Mtg Items due: 5/? Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	<u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting) <u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED) <u>Other Business: Authorizations</u> <u>Other Business: Discussions</u>	
6/?/2015 Joint Meeting Items due: ? Connor; Pagano; Horenstein; Ervin; Bailey Water Board Staff Williams; Fono	<u>Other Business: Discussions</u> 	



<p>6/19/2015 Monthly Board Mtg Items due: 6/?</p> <p>Connor; Pagano; Horenstein; Ervin; Bailey</p> <p>Williams; Fono; Hull</p>	<p><u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting)</p> <p><u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)</p> <p><u>Other Business: Authorizations</u></p> <p><u>Other Business: Discussions</u></p>	
<p>7/17/2015 Monthly Board Mtg Items due: 7/?</p> <p>Connor; Pagano; Horenstein; Ervin; Bailey</p> <p>Williams; Fono; Hull</p>	<p><u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting)</p> <p><u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)</p> <p><u>Other Business: Authorizations</u></p> <p><u>Other Business: Discussions</u></p>	
<p>8/?/2015 Joint Meeting Items due: ?</p> <p>Connor; Pagano; Horenstein; Ervin; Bailey</p> <p>Water Board Staff</p> <p>Williams; Fono</p>	<p><u>Other Business: Discussions</u></p>	
<p>8/14/2015 Monthly Board Mtg Items due: 8/?</p> <p>Connor; Pagano; Horenstein; Ervin; Bailey</p> <p>Williams; Fono; Hull</p>	<p><u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting)</p> <p><u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)</p> <p><u>Other Business: Authorizations</u></p>	



	<u>Other Business: Discussions</u> Annual RMP Update (RPM)	
9/18/2015 Monthly Board Mtg Items due: 9/? Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	<u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting) <u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)	
	<u>Other Business: Authorizations</u>	
	<u>Other Business: Discussions</u>	
10/21 – 10/23 Pardee Technical Seminar Items due: 10/15 Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	<u>Other Business: Discussions</u> AIR Committee Restructuring	No Board Actions Permitted
11/20/2015 Monthly Board Mtg Items due: 11/? Connor; Pagano; Horenstein; Ervin; Bailey Williams; Fono; Hull	<u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting) <u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)	
	<u>Other Business: Authorizations</u>	
	<u>Other Business: Discussions</u>	
12/?/2015 Joint Meeting Items due: ? Connor; Pagano; Horenstein; Ervin; Bailey Water Board Staff Williams; Fono	<u>Other Business: Discussions</u>	

<p>12/18/2015 Monthly Board Mtg Items due: 12/?</p> <p>Connor; Pagano; Horenstein; Ervin; Bailey</p> <p>Williams; Fono; Hull</p>	<p><u>Consent</u> Previous Board Meeting Minutes (AED) Monthly Treasurer's Report (EBMUD Accounting)</p> <p><u>Reports</u> Committee Reports (Committee Chairs) Board Reports (Executive Board) ED Report (ED) RPM Report (RPM) Chair/ED Authorizations (AED)</p> <hr/> <p><u>Other Business: Authorizations</u></p> <hr/> <p><u>Other Business: Discussions</u></p>	
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CURRENTLY UNSCHEDULED AND SIGNIFICANT

- Approval of Annual Report FY12 & FY13
- Defining BACWA Priorities/Revisit Strategic Plan
- BACWA Membership Engagement Opportunities
- Tech Seminar/Workshop: CCCSD Cogen explosion, SFPUC force main leak and repair, and BACWA member pilot plants.
- Chlorine Residual Analyzer Investigation
- Suggestions for Monthly Meeting Guest Speakers/Presenters: ie. Jim McGrath, State Water Board; ?
- CEC's (Kelly Moran)
- Strategy Development for Triennial Review (Permits Committee/Board)
- Optimization/Upgrade Studies Quarterly Report to Board(CMG) Mar, Jun, Sept, Dec 2015-2017
- Optimization/Upgrade Studies Biannual Report to Members (CMG/Consultant) Oct, April
- BAAQMD Biannual Joint Meetings (Feb, Aug 2015)

BOARD COMMITTEES WITH NO MEETINGS CURRENTLY SCHEDULED

-



REGULATORY PROGRAM MANAGER'S REPORT TO THE BOARD

November 18, 2014-December 15, 2014

Prepared for the December 19, 2014 Executive Board
Meeting

SFEI CONTRACT OVERSIGHT: Reviewed SFEI invoices for November, 2014. Approximately \$554K of \$675K has been spent for Fiscal Year 2014. Summary of SF Bay Nutrient Strategy Tasks Status attached.

NUTRIENT WATERSHED SUPPORT: Participate in the Contract Management Group effort. Review and provide comments on the Nutrient Scoping and Evaluation Plan and Questionnaire, attend CMG meetings.

BACWA BULLETIN: Develop December Bulletin sent out to membership at the beginning of the month.

COMMITTEE SUPPORT: Drafted agenda and Board Report for Permits Committee. Attend meeting. Reviewed Kim West's meeting notes and Board Report for Recycled Water meeting.

MEETINGS ATTENDED: Recycled Water Committee Meeting (12/3/14), Contract Management Group Meeting (12/5/14), Permits Committee Meeting (12/9/14), CASA Regulatory Committee Meeting (12/11/14), Contract Management Group and Regional Water Board Meeting (12/15/14)

SF Bay Nutrient Strategy FY2014 Status (Contract with SFEI)

Updated 11/13/2014

Total Spent of \$675,000**\$554,410.00**

Task	Description	Upcoming Deliverable	Original Date	Updates
11	Lower South Bay Synthesis	Draft Report	December 2013	Draft expected February 2014
4 (FY13)	Suisun Synthesis I	Final Report	December 2013	Delivered March 2014
12	Suisun Synthesis II	Draft Report	April 2014	Expected in March 2014
13	Nutrient Science Plan	Draft Plan	February 2014	First draft expected January 2014
22	Moored Sensor Program	Progress Update	April 2014	Circulated for comment September 2014
23	Characterizing Phytoplankton Community Composition	Draft Report	April 2014	Manuscripts in preparation
24	Nutrient Monitoring Program Development	Draft Plan	March 2014	Circulated for comment September 2014
3 (FY13)	Conceptual Model of Nutrient Exchange through Golden Gate	Draft Report	July 2013	Delivered February 2014

Sherry Hull

From: Sherry Hull
Sent: Monday, December 15, 2014 10:18 AM
To: Sherry Hull
Subject: Summary of SFEI-ASC Board Meeting

From: Warner Chabot [<mailto:warnerc@sfei.org>]
Sent: Friday, December 12, 2014 6:21 PM
To: Warner Chabot
Subject: Summary of Today's SFEI-ASC Board Meeting

To: SFEI-ASC Board Members, Alternates and Staff
From: Warner Chabot
Re: Summary of Today's Board Meeting

Full minutes of today's Board meeting will be prepared and distributed. Here's a quick summary of several key actions. Today the SFEI-ASC Board took the following actions:

- **Programs and Strategy** – Reviewed and offered advice on several draft SFEI Fact sheets on SFEI programs, projects and proposed strategy for the 2015 **State of the Estuary** conference.
- **Program Highlights** – Received a briefing by the Executive Director on recent outreach and partnership efforts. This included potential collaborations with the North Coast Regional Water Board, BCDC and discussions with SPUR, TNC and others. The Board also received program director/manager briefings on emerging possible work on sea level rise, climate change, green infrastructure and interactive data systems.
- **Fiscal Year** – Agreed to move the SFEI Fiscal Year to begin on July 1 to coincide with the ASC fiscal year.
- **Budget** – Approved a six month extension of the FY 2014 budget to create a (one time only), 18 month budget to conclude on June 30, 2015.
- **Jim Kelly** – Provided several well deserved “THANK-YOU” gifts to Jim Kelly in grateful appreciation of his year of service as interim Executive Director to SFEI-ASC.
- **Audits** – Approved several audit reports.
- **Operations and Programs** – Approved Operations reports and Quarterly Program Plan updates for both SFEI and ASC.
- **Next Steps:**
 - **SFEI Promotional Material** – Staff will revise SFEI-ASC promotional material based on today's feedback from Board members.
 - **State of the Estuary Conference** – Staff will focus producing the publications for the conference
 - **Board Committees** – At a minimum, the following Committees will meet in the near future:

- **Governance Committee** – This committee will meet with Leyna Bernstein to consider a process for new directors (note: we have 14 but can expand to as many as 21).
- **Executive/Audit Committee** – The Executive or Audit Committee will meet to consider our range of allowable overhead (multiplier), rates and how they affect our business options.

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Warner Chabot
Executive Director - SFEI
San Francisco Estuary Institute
W: 510 746-7396
Cell: 510 375-2141
E-mail: warnerc@sfei.org

Sherry Hull

From: Sherry Hull
Sent: Wednesday, December 17, 2014 3:56 PM
To: Sherry Hull
Subject: FW: agenda item # 8d
Attachments: StakeholdersMeeting_120920149.pdf; SAG SP ranking (2) 12-10-14[1].xlsx

From: Adam Link [<mailto:alink@casaweb.org>]
Sent: Tuesday, December 16, 2014 1:24 PM
To: dpedersen@lvmwd.com; dhix@slocity.org; jdeakin@simivalley.org; lmcgovern@ci.camarillo.ca.us; jeff.palmer@ojaisan.org; SGryczko@cityofdavis.org; franklin_re@sbcitywater.org; efiladelfia@riversideca.gov; lgarcia@wmwd.com; tpirondini@cityofvacaville.com; mconnor@ebda.org; MitchM@lwa.com; drynn@ci.burbank.ca.us; joyj@emwd.org; shepardson_je@sbcitywater.org; bradley.davis@unitedwater.com; jpastore@dudek.com; eofficer@cvcwa.org; mitchellt@sacsewer.com; Dave Williams; Hassan.Rad@lacity.org; AHeil@lacsdsd.org; Tomg@lwa.com; AshliD@lwa.com; CReyes@lvmwd.com; rorton@lvmwd.com; GGallis@lacsdsd.org; PMarkle@lacsdsd.org; paul@robertson-bryan.com; kbuchan@wspa.org; abraham.razon@lacity.org; DianaE@lwa.com; Bobbi Larson
Subject: Statewide Nutrient Policy Update

Nutrient Workgroup,

As you are aware, there was a stakeholder meeting for the statewide nutrient policy development process last Tuesday, December 9 at SCCWRP. Tom Grovhoug attended as the POTW representative, but there were several others there representing the wastewater community as well. For those who are interested, attached is a copy of the presentation that was made. At the meeting, Tom expressed our concerns that (a) there had been no feedback on our comments to the technical workplan that we submitted detailed comments on earlier this year and (b) there was no mention of a charter or focus on some of the other policy/process considerations that we had been emphasizing. In terms of next steps, there are two immediate action items and one more long term approach for your consideration:

(1) **Respond by December 17** to Walter Dodds as the suggested final independent science panel candidate. While we objected to his participation initially, it is clear that this is the direction the State Water Board and SCCWRP are heading, and the other candidates in the new ranking sheet offered (also attached) do not seem to be markedly better. Moreover, according to those in attendance his prior Tetra Tech recommendations seem to be in better agreement with the POTW point of view than subsequent work conducted by SCCWRP. Thus, our current thinking is to accept him as the final candidate and move forward from there. On a side note, the other three candidates already selected were among those who we preferred, or at a minimum had no objections to.

(2) **Respond by December 19** with any edits or comments on the draft "Science Plan" that was circulated previously and was discussed at the stakeholder meeting. Tom has already developed some points related to the plan and others have provided a good deal of feedback. If you have specific edits or thoughts that you would like included, please let us know no later than **Thursday, December 18**. We will try to send something to Brock/Martha before the deadline (though we have a little wiggle room on this date), and then send our final comments out to this group.

In terms of the longer term step, Tom and I are going to try and set a meeting with Rik Rasmussen at the State Water Board (preferably in January-February) to discuss our concerns, including: SCCWRP's expanding role in this process, the possibility of getting some of the charter/workplan to be a more central part of process, and the seeming departure from an approach that does not focus exclusively on numbers and objective setting. We are also hoping to gather another meeting of the "regulated community" (i.e. wastewater, stormwater, ag, etc.) in that same timeframe.

Please let me know if you have any thoughts or suggestions on the above, and thank you for your continued participation in this group.

- Adam

Adam D. Link
Director of Government Affairs
California Association of Sanitation Agencies
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Sacramento, CA 95814
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www.facebook.com/casacleanwater



Second Round of Science Panel Ranking: Stream Ecology Position

Area	Name	Rank (1 High to 4 Lowest)	Links	Comments
Aquatic ecology, nutrient bio-geochemistry and management of eutrophication in FRESHWATER HABITATS	Walter Dodds, Professor, Kansas State University		http://www.k-state.edu/dodds/20CV.pdf	
	Barry Biggs, New Zealand National Institute of Water and Atmospheric Research		http://www.niwa.co.nz/people/barry-biggs	
	Jennifer Tank, University of Notre Dame		http://biology.nd.edu/people/faculty/tank/	
	Clifford Dahm, University of New Mexico		biology/unm.edu/core-faculty/dahm.shtml	



EXECUTIVE BOARD CHAIR AUTHORIZATION REQUEST

FILE NO.: 13,448

DATE: December 8, 2014

TITLE: Contract with TDC Environmental, LLC for BACWA/BAPPG Pesticide Regulatory and Technical Support, not to exceed \$9,975.

ACTION

Executive Board Chair authorization to execute an agreement with TDC Environmental, Inc. in an amount not to exceed \$9,975 to provide regulatory and technical support related to BACWA/BAPPG priorities.

SUMMARY

This contract will allow Dr. Kelly Moran, of TDC Environmental, LLC to provide support to BACWA and BAPPG on regulatory, technical and outreach issues related to priorities mainly focused on pesticides. Work under this contract will include the tracking of pesticide-related regulatory activities by the EPA and Department of Pesticide Regulation (DPR) and making recommendations regarding regulatory participation and other follow-up steps, including recommending key points for comment letters and reviewing draft comment letters. .

This work will be carried out under the supervision of Melody LaBella (CCCSD) and Karin North (City of Palo Alto).

FISCAL IMPACT

Funds for this project are available in BAPPG's approved Fiscal Year 2014-2015 budget and workplan (under Pesticides and Unplanned Issues).

ALTERNATIVES

No other alternatives were considered as the BACWA contracting policies authorize a sole source selection process for contracts under \$50,000.

Attachments:

1. Scope of Work

BAY AREA CLEAN WATER AGENCIES**PURCHASE ORDER**

TO:	Dr. Kelly Moran TDC Environmental, LLC 4020 Bayview Avenue San Mateo, CA 94403	kmoran@tdcenvironmental.com (650) 627-8690
FROM:	David Williams, Executive Director BACWA PO Box 24055, MS702 Oakland, CA 94623	dwilliams@bacwa.org Phone: (415) 308-5172 FAX: (510) 287-1351

RE: BAPPG Purchase Order for 2014/2015 TDC Environmental, LLC to provide regulatory and technical support to BACWA and BAPPG

This Purchase Order (PO) covers professional consulting services to be performed by TDC Environmental, LLC in order to provide regulatory and technical support related to BACWA priorities. This work is described in the attached Scope of Work and under the direction of Melody LaBella (Central Contra Costa Sanitary District) and Karin North (City of Palo Alto). The total cost of professional services to be performed by TDC Environmental, LLC is not to exceed \$9,975. This contract will be funded by the BAPPG accounts for Pesticides (Permethrin) and Unplanned Issues.

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


TDC Environmental, LLC shall submit invoices to the Assistant Executive Director via e-mail. Invoices shall indicate hours associated with each task. EBMUD will pay TDC Environmental, LLC within thirty (30) days of receipt and approval of satisfactory TDC Environmental, LLC invoices.

E-mail: shull@bacwa.org

If this purchase order for professional services is acceptable to you, please sign and mail this document to me for BACWA records and distribution. Please call me if you have any questions or concerns relating to this matter.

Approved:

By _____
Michael S. Connor
Chair, BACWA Executive Board


By _____
Kelly D. Moran, President
TDC Environmental, LLC

Date December 16, 2014

Date December 16, 2014

BACWA EIN: 94-3389334

Scope of Work
TDC Environmental, LLC
Pesticide Regulatory and Technical Support

- Coordinate with BAPPG representatives to clarify the list of highest priorities pesticides for BACWA's attention (tentatively copper, silver, fipronil, and pyrethroids). Provide to the extent possible a schedule of anticipated pesticide regulatory activities on these pesticides.
- Track pesticide-related regulatory activities by EPA and DPR that have significant potential to affect BACWA member agencies. Notify BAPPG of such items as they arise. On the basis of regulatory documents, relevant scientific information, and the regulatory context, provide recommendations regarding regulatory participation or other follow-up steps. When so directed, provide key points for comments and review draft comment letters.
- Based on existing lines of communication with pesticide regulators and pesticide manufacturers (which are maintained for other clients), notify BAPPG of important information obtained through these contacts.
- Provide technical and regulatory advice to support development of BAPPG program(s) or materials to address pesticides, such as anticipated outreach on the pyrethroid permethrin or possible fipronil-related outreach.
- Upon request, provide responses to pesticide-related regulatory or scientific questions.

All services identified in this Scope of Work shall be compensated on a time and materials basis at \$175.00 per hour, not to exceed \$9,975.

Contractor

TDC Environmental, LLC
Kelly D. Moran, Ph.D., President
4020 Bayview Ave.
San Mateo CA 94403
650-627-8690
kmoran@tdcenvironmental.com

Sherry Hull

From: Mike Connor <mconnor@ebda.org>
Sent: Thursday, December 11, 2014 5:22 PM
To: Dave Williams
Cc: Sherry Hull
Subject: RE: CAR for BAPPG - TDC

Approve

Mike Connor
General Manager
East Bay Dischargers Authority
2651 Grant Avenue
San Lorenzo, CA 94580
510-278-5910
510-278-6547 (fax)
mconnor@ebda.org

From: Dave Williams [mailto:dwilliams@bacwa.org]
Sent: Wednesday, December 10, 2014 9:02 AM
To: Mike Connor
Cc: Sherry Hull
Subject: FW: CAR for BAPPG - TDC

Chair Authorization for Kelly Moran's assistance to BAPPG on pesticides and other priorities, for your approval.

David R. Williams
Executive Director
Bay Area Clean Water Agencies (BACWA)
Cell: 925-765-9616
Email: dwilliams@bacwa.org

From: Sherry Hull
Sent: Tuesday, December 9, 2014 4:51 PM
To: Dave Williams
Subject: RE: CAR for BAPPG - TDC

Dave,

Sorry about that. Melody made the changes to the CAR but forgot to make them on the Scope. It should be correct now.

If you approve, please forward to Mike Connor for his approval. **Please copy me on the email so I will see his response.** Once I have his approval, I will get the PO signed by Kelly Moran. I will then add Mike's signature and send a copy to the BAPPG Committee. The CAR will then be included in the handout for the December Executive Board meeting.

Thanks,
Sherry

Sherry Hull
Assistant Executive Director

1. What is the purpose of your pilot study?

To identify feasible sidestream treatment technologies for removing nitrogen in the form of ammonium at the SFPUC Southeast Plant (SEP) and to study sidestream treatment for sidestream generated from thermally hydrolyzed (THP) pretreated anaerobically digested sludge.

Three processes using Anammox bacteria are being piloted as summarized in the table below. The three processes being piloted include: 1. A suspended biomass sequencing batch reactor (SBR) 2. An attached growth moving bed biological reactor (MBBR), and 3. A Biozeolite reactor using ion-exchange combined with Anammox to achieve deammonification.

Reactor	Suspended	Attached	Biozeolite
Volume	24-gallon	24-gallon	24-gallon
Reactor operation	SBR fill-hold-draw operation	MBBR semi- or continuous flow	semi- or continuous flow
Carrier (media)	None	Kaldnes plastic media (filled 50% reactor volume)	3/4" diameter Zeolite
Target NH_4^+ -N loading rate (kg NH_4^+ -N/ m^3 /d)	0.5	0.8	1.0

2. What is the flow?

At peak feed concentrations and loading ~14 liters. (THP pretreated Sludge Sidestream)

At minimum peak concentration ~42 liters/day (Sidestream from Full-scale Facility)

3. How long is the study (starting date and ending date)?

Start: Spring 2014 – End: Winter 2015

4. Any key findings to date?

Potential alkalinity limitation, ammonium conversion greater than 90%

5. Any particularly noteworthy issues, problems, successes you have encountered to date?

Reached full-scale removals, reached target loading for Reactors 1 and 4. Reactor 3 at >80% target loading.

6. What is the budget for the study?

~\$200,000

7. Any grant funding involved?

No

**CENTRAL CONTRA COSTA SANITARY DISTRICT
ZEOLITE-ANAMMOX PILOT PLAN SUMMARY**

**December 17, 2014
BY RANDY SCHMIDT**

1. What is the purpose of your pilot study?

The zeolite-anammox technology was one five cutting-edge nitrogen removal technologies identified for further investigation in the 2013 Nutrient Visioning Plan submitted by CCCSD to the RWQCB. Both zeolite and anammox have been used separately in the past, but not in combination for ammonia removal. The zeolite anammox process has several potential advantages over conventional nitrification/denitrification.

Zeolite Anammox Process Theory

Ammonia containing liquid is continuously fed to a bio-reactor filled with zeolite. The zeolite immediately captures the NH_4 (cationic resin) and the NH_4 in the treated liquid goes to zero. Since the zeolite has a finite capacity for NH_4 , the NH_4 must be removed before the zeolite is saturated. The zeolite is seeded with a mix of nitrifying and anammox bacteria at the start of the liquid flow. The nitrifying bacteria start converting the zeolite bound NH_4 into NO_2 and then to NO_3 , resulting in an initial gradual increase in NO_3 . Then the anammox bacteria also begin growing converting NO_3 to NO_2 and NO_2 to N_2 and H_2O . After approximately 6 months, the system reaches steady state. The nitrifying bacteria can only convert NH_4 to NO_2 before the anammox bacteria converts the NO_2 to N_2 and H_2O . At steady state, there is virtually no NO_3 in the system. The bioreactor is divided into two zones. The top third is usually an aerated zone using blown aeration or trickling filter aeration for growing nitrifying bacteria. The bottom two thirds is the anoxic zone for the anammox bacteria growth.

Goal of the pilot study is to confirm whether the following expectations can be achieved:

- Capital and O&M costs are estimated to be about a third to half the cost of conventional treatment.
- The estimated footprint is half the size needed for conventional treatment.
- No need for carbon addition for denitrification.
- Self-regenerating reactor with minimal sloughing
- Determine the energy demands and NH_4 removal efficiencies of two types of aerated systems and one type of non-aerated system
- Develop scale-up/design criteria to potentially build a Phase Two 100,000 gallon per day pilot plant
- Develop planning level costs estimates for full scale process
- Identify any limitations to the process



2. What is the flow?

Pilot is based on a 3000 gallon per day flow of secondary effluent with approximately 30 mg N-NH₄ per liter.

3. How long is the study (starring date and ending date)?

The pilot testing is scheduled to occur from August 2014 to August 2016. Collison Engineering provided trailer mounted reactors, while CCCSD provided process instrumentation for monitoring the process. CCCSD is also supplying in-kind resources for sampling and analysis.

4. Any key findings to date?

As of November 18, 2014, the best performing blown aeration reactor is showing complete NH₄ removal and generating NO₃ at 30 mg/liter. The best performing trickling filter aeration reactor is also showing complete NH₄ removal and generating NO₃ at 19 mg/liter. This indicates the blown aeration systems are growing nitrifying bacteria faster than the trickling filter aeration systems. We expect to see a decrease in NO₃ in the blown aeration reactors first followed by the trickling filter reactors as the anammox bacteria start to grow.

5. Any particularly noteworthy issues, problems, and successes you have encountered to date?

Too early to tell.

6. What is the budget for the study?

CCCSD has a \$225,000 contract with Collison Engineering to pilot test the zeolite anammox process to remove NH₄ from its secondary effluent. Collison Engineering has a pending patent on the zeolite-anammox process using a single vessel, two-stage bio-reactor.

7. Any grant funding involved?

No grant funding was used.



Planning Subcommittee (PS) Meeting No. 5
(Formerly the Governance Workgroup)
December 4, 2014
Meeting Summary

Attendees: Tom M., David S., Ian W., Ben H., Dave W. (notes)

Note: Action Items and Decisions are shown in ***bold italic***.

1. Welcome, Introductions, and Agenda Review

The participants reviewed and discussed the agenda and future agendas for the PS. It was agreed that future agendas should include the following key items:

- a. Science Program update (very brief review)
 - i. Projects
 - ii. Financial management
- b. Update on priority list of things to do
 - i. Reporting
 - ii. Issues
 - iii. Scheduling
- c. Planning for upcoming Steering Committee meetings
- d. Other Updates
- e. Planning the next Subcommittee meeting
 - i. Action items
 - ii. Next steps

It was agreed that the Science Manager would send out the Science Program updates ahead of time so that only a cursory review and answering any questions would be required at the Subcommittee meeting.

2. Science Program Update

The Science Manager (SM) thanked PS members for their letters of support on the USGS grant. He also reported that he gave his presentation at the recent Bay Delta

Science Conference which included his findings on the ammonium toxicity issue in Suisun Bay. Some of the attendees expressed concern about the findings.

The Core Science Team will be meeting on December 18th and 19th to update the Science Plan. This will help set the stage for reporting at the next SC meeting.

The SM met with the USGS to plan for locating sensors in the Bay.

3. Discussion of Future Facilitation and Steering Committee Support Needs.

At this point in the meeting a lengthy discussion followed on various options for meeting future facilitation and SC support needs. It was noted that at SC Meeting No. 3 it was agreed that continuing with CCP until the SC Meeting No. 4 was acceptable with the understanding that the PS would present a recommendation for future support and facilitation at the next meeting of the SC. CCP has provided a proposal for roughly \$17k that would provide SC and PS facilitation through June 2015.

During the lengthy discussion a number of potential support needs were discussed including the following:

- a. Facilitation
- b. Conflict resolution
- c. Program Management
- d. Steering Committee support and follow-up
- e. Out-reach to Steering Committee members
- f. Planning subcommittee support
- g. Fund raising

Some of the options discussed included; continuing with CCP, sending out an RFP; asking SFEI to provide services; and seeking other individuals to provide services on either a short or long term basis. Costs of various options were also discussed as well as the timing for implementation. Any option would need to ensure that the Science Program and its management continue to be viewed as completely objective and independent.

The Science Manager also mentioned that there is currently a need for additional program management support especially in the area of recruiting scientists to work on completing studies identified in the science program. An individual with skills in science, engineering and policy would be valuable to the Science Program. It would be helpful to have an organization chart that showed the current program management structure as well as what ultimately is envisioned.

One approach to help figure out how best to provide all of the support needs is to look at what has worked well elsewhere in similar programs.

Following the discussion several actions were agreed to as follows:

Action Items (and responsible individual):

- develop options to meet the near term and long term support needs of Steering Committee and the Planning Subcommittee (Ben)***
- at the next Planning Subcommittee have a budget and organizational chart developed that shows current and long term staffing needs for current and future tasks as well as desirable skill sets (David S.)***
- discuss with WB staff on how the WB will continue to weigh-in on policy issues (Tom)***
- execute a \$10k amendment to the BACWA contract with CCP to continue providing facilitation services on an as needed basis per the current scope of work (David W.)***
- arrange for CCP to attend the next Planning Subcommittee meeting via phone participation (David W.)***
- draft a preliminary agenda for the next Steering Committee Meeting and present at the next Planning Subcommittee meeting (David S.)***

4. Discussion of Future Meetings

The participants then began a discussion of the agendas and timing for future meetings. It was pointed out that there was still roughly \$400-500k in funds to be allocated to undertake “no regrets” studies identified in the Science Program of which \$100k had been designated for science program management.

One of the main drivers for determining the number and timing of future meeting is to ensure that a well thought-out Science Program is prepared and provided to the Steering Committee such that they have adequate time to digest the material and make informed decisions on the allocation of funds for FY 16.

The PS focused on whether 2 or 3 Steering Committee Meetings were needed between January and June 2015. A schedule of monthly PS meetings had been scheduled by CCP starting in January 2015. Three Steering Committee meetings had also been scheduled by CCP but it was determined that the February 18th SC meeting would not work since the WB would not be able to attend that meeting.

After discussing the pros and cons of various schedules for SC and PS meetings, the group agreed on the following action:

Action Items (and responsible individual):

-using the input provided at the PS meeting, propose a new schedule of Steering Committee meetings and needed Planning Subcommittee meetings and circulate to the participants in order to obtain consensus on the best schedule. This should be done by mid-December since once agreed upon, calendar invitations need to be sent out (Ian).

5. Next Meeting

The next meeting of the Planning Subcommittee is scheduled for January 14, 2015, at the WB's Offices from 1:00 -3:00 pm.

The meeting adjourned at 12"15 pm



BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 10.c.iii

FILE NO.: 13,463

MEETING DATE: Dec. 19, 2014

TITLE: Interim Contract for Nutrient Steering Committee Facilitation

☒ MOTION

☐ DISCUSSION

☐ RESOLUTION

RECOMMENDED ACTION

Approve an agreement for Nutrient Steering Committee Facilitation up to a maximum amount \$10,000.

SUMMARY

This action would approve an agreement with California State University Sacramento (Sacramento State), Center for Collaborative Policy (CCP) to allow David Ceppos to continue to provide interim assessment and facilitation services to support the development of an appropriate stakeholder-driven implementation of the San Francisco Bay, Nutrient Management Strategy (NMS). The final contract will specify a not to exceed total amount of \$10,000.

FISCAL IMPACT

Although this work is not included in the FY 2014 BACWA Budget and Workplan, funds are available for this agreement under the CBC Technical Support, FY14 budget line item. Since any BACWA funds provided for this contract will be deducted from the \$880k BACWA funding required by the Nutrient Watershed Permit, there would be no net cost to BACWA by executing this contract.

ALTERNATIVES

This action does not require consideration of alternatives.

Attachments:

Agreement

Scope and Budget

BAY AREA CLEAN WATER AGENCIES**PURCHASE ORDER**

TO:	David M. Ceppos (Consultant) California State University, Sacramento Center for Collaborative Policy (CSUS/CCP) 815 S Street, First Floor Sacramento, CA 95811	E-mail: dceppos@ccp.csus.edu Phone: (916) 341-3336 FAX: (916) 445-2087
FROM:	Dave Williams, Executive Director BACWA PO Box 24055, MS702 Oakland, CA 94623	Email: dwilliams@bacwa.org Phone: (925) 765-9616 FAX:

RE: California State University, Sacramento
Center for Collaborative Policy

Purchase Order for 2014-2015 Facilitation Assistance

This Purchase Order (PO) covers professional Facilitation services to be performed by CONSULTANT in order to implement the Facilitation Assistance for the San Francisco Bay Nutrient Management Strategy (NMS) process beginning January 1, 2015 through June 30, 2015, FY 2014-2015. This work is described in the attached Scope of Work and under the direction of Dave Williams (PROJECT MANAGER). The total cost of professional services to be performed by CONSULTANT is not to exceed \$10,000.00. This contract will be funded by the BACWA account, Watershed Permit line item.

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

CONSULTANT shall submit invoices to the Assistant Executive Director via e-mail. Invoices shall indicate hours associated with each task. EBMUD will pay CONSULTANT within thirty (30) days of receipt and approval of satisfactory CONSULTANT invoices.

Sherry Hull, Assistant Executive Director
BACWA
shull@bacwa.org
(415) 404-8303

If this purchase order for professional services is acceptable to you, please sign and mail this document to me for BACWA records and distribution. Please call me if you have any questions or concerns relating to this matter.

Approved:

By _____
Mike Connor
Chair, BACWA Executive Board

By _____
Michelle Johnson
Contract Specialist, CSUS/CCP

Date _____

Date _____

BACWA EIN: 94-3389334

SCOPE OF WORK

The Center for Collaborative Policy (Center) will provide the following facilitation and related services for the San Francisco Bay Nutrient Management Strategy (NMS) process

Conduct Stakeholder Meetings. The facilitator will work with NMS stakeholders to plan, prepare, and conduct up to six (6) NMS meetings on an as-needed basis when services are specifically requested. These meetings may include support to the NMS Steering Committee, NMS Planning Subcommittee, and/or the Nutrient Technical Workgroup (NTW).

*Deliverables (as requested): Draft and Final meeting agendas
 Draft and final meeting summaries (see assumptions below)
 Meeting materials (to be determined)*

Scope Assumptions and Cost Estimate

Labor hours and direct expenses will total no more than \$10,000.00.

Period of Performance

Activities for the project will start upon approval of the purchase order by BACWAA and the Center. The completion date is subject to revision based on external conditions and discussions between the CCP facilitator / project manager, BACWA and the Water Board.

Deliverables

CCP will be responsible for meeting the following standards and providing the following items:

- All work produced will be provided in electronic format.
- All written text will be produced in a format compatible with MS Office and or Adobe Acrobat.
- All deliverables will be free of grammatical and spelling errors and as accurate as possible.

Bay Area Recycled Water Truck Fill Facilities Location Guide

Agencies Reporting NO Truck Fill Facilities

West Bay Sanitary District

Benicia

South San Francisco

RVSD (Ross Valley?)

Millbrae

San Mateo

West Valley

Santa Clara Valley Water District

Brentwood

WCWD

Pacifica (none currently; plans to install facilities at treatment plant; applying for permits)

Stege SD

Alameda County Water district

Delta Diablo SD

Piedmont

Mill Valley

Albany

Union Sanitary District

Diablo Water

Daly City

Burlingame

American Canyon

Aaron Winer at Veolia (need to confirm agency)

St. Helena

Ironhouse Sanitary District

Windsor – not currently, but planning to have one on-line in April 2015

COUNTY/CITY	AGENCY
ALAMEDA COUNTY	
Dublin	Dublin San Ramon Services District
Livermore	City of Livermore
Oakland	East Bay Municipal Utility District
San Lorenzo	East Bay Dischargers Authority
CONTRA COSTA COUNTY	
Concord	Central Contra Costa Sanitary District
Martinez	Central Contra Costa Sanitary District
Richmond	East Bay Municipal Utility District
MARIN COUNTY	
San Rafael	Marin Municipal Water District
NAPA COUNTY	
Calistoga	City of Calistoga
Napa	Napa Sanitation District
Yountville	Town of Yountville
SAN FRANCISCO	
San Francisco	San Francisco Public Utilities Commission
San Francisco	San Francisco Interantional Airport
SAN MATEO COUNTY	
Redwood City	City of Redwood City
SANTA CLARA COUNTY	
Milpitas	City of Milpitas
Palo Alto	City of Palo Alto
San Jose	City of San Jose
Sunnyvale	City of Sunnyvale
SONOMA COUNTY	
Petaluma	City of Petaluma
Santa Rosa	City of Santa Rosa
Confirm city location of plant	Sonoma County Water Agency

57 of 108

Sherry Hull

From: Dave Williams
Sent: Monday, December 8, 2014 8:19 AM
To: Munoz, Cheryl (cmunoz@sfwater.org)
Cc: Sherry Hull
Subject: FW: Follow-up Items from the 12/3 Recycled Water Committee Meeting
Attachments: Proposition 1 - IRWM CC - 1Dec14.pptx; Comparison of RW Genl Order Requirements2-08132014.docx

Thanks Cheryl, we'll include the attachments and your email in the Board packet so you can refer to them if needed during your update on the Recycled Water Committee activities we had discussed.

David R. Williams
Executive Director
Bay Area Clean Water Agencies (BACWA)
Cell: 925-765-9616
Email: dwilliams@bacwa.org

From: Munoz, Cheryl [mailto:cmunoz@sfwater.org]
Sent: Thursday, December 4, 2014 4:09 PM
To: Leah Walker; Melody LaBella ; Eric Rosenblum; Luis James; Drew McIntyre; Jayne Stommer; Kevin Booker; Bhavani Yerrapotu; Tom Hall; Roanne Ross (rross@whitleyburchett.com); Melissa Gunter; Vince Christian; Dave Williams; Rhodora Biagtan; Kimberlee West; Dan Jackson ; Linda Hu
Subject: Follow-up Items from the 12/3 Recycled Water Committee Meeting

Hi All -

Thank you for your participation in yesterday's BACWA Recycled Water Committee meeting. It was a productive meeting.

Here are some items that came up during our discussion that I indicated I would forward:

1. PPT presentation on Prop 1 (attached)
2. Links to Prop 1 fact sheets prepared by ACWA
<http://www.acwa.com/sites/default/files/post/2014-water-bond/2014/09/updated-proposition-1-fact-sheet.pdf>
http://www.acwa.com/sites/default/files/post/2014-water-bond/2014/09/whats-2014-waterbond_infographic.pdf
3. Requirements included in GO 96-011 and 2014-0090 that I prepared back in August. It's not fancy, but includes the information. (attached)

A brief overview of the additional requirements included in 2014-0900 vs. 96-011 is:

- Requires additional monitoring and anti-degradation analysis
 - Irrigation application at agronomic rates
 - Monitoring of priority pollutants

- Best Practicable Treatment of Control
- Discretion regarding permitting storage in unlined ponds
- Basin Plan discharge requirements
- Must have a Salt and Nutrient Management Plan adopted by the RWQCB as a Basin Plan Amendment
- Monitoring and Reporting Program (must be consistent with SNMP for the basin/sub-basin)
 - Recycled Water
 - Disinfection System
 - Pond System
 - Use Area
 - Cooling/Industrial/Other Uses

Please let me know if I left anything out.

Don't forget the BACWA 12/19 Board meeting from 9:00 a.m. - 12:30 p.m. at the EBMUD Treatment Plant Lab Library, 2020 Wake Ave., Oakland. **A holiday lunch will follow!**

Happy Holidays,
Cheryl

Cheryl Muñoz
 San Francisco Public Utilities Commission
 Water Resources Division
 Office: (415) 934-5711 | Fax: (415) 934-5770
cmunoz@sfwater.org

Proposition 1

Water Quality, Supply, and Infrastructure Improvement Act of 2014

Bay Area IWRM Coordinating Committee

December 1, 2014

Carl Morrison

Purpose of the Bond

- ▶ Increase water supplies
- ▶ Protect and restore watersheds
- ▶ Improve water quality
- ▶ Increase flood protection

Figure 1
Uses of Proposition 1 Bond Funds

(In Millions)

Water Supply **\$4,235**

- Dams and groundwater storage—cost share associated with public benefits. \$2,700
- Regional projects to achieve multiple water-related improvements (includes conservation and capturing rainwater). 810
- Water recycling, including desalination. 725

Watershed Protection and Restoration **\$1,495**

- Watershed restoration and habitat protection in designated areas around the state. \$515
- Certain state commitments for environmental restorations. 475
- Restoration programs available to applicants statewide. 305
- Projects to increase water flowing in rivers and streams. 200

Improvements to Groundwater and Surface Water Quality **\$1,420**

- Prevention and cleanup of groundwater pollution. \$800
- Drinking water projects for disadvantaged communities. 260
- Wastewater treatment in small communities. 260
- Local plans and projects to manage groundwater. 100

Flood Protection **\$395**

- Repairs and improvements to levees in the Delta. \$295
- Flood protection around the state. 100

Total **\$7,545**

1-A. New Water Storage

- ▶ \$2.7 billion total
- ▶ Pays half the cost
- ▶ New water projects
- ▶ Includes dams and projects that replenish groundwater
- ▶ Also restoring habitats, improving water quality, reducing damage from floods, responding to emergencies, and improving recreation

1-B. Regional Water Projects

- ▶ \$810 million total
- ▶ \$510 million for specific funding areas (\$65 million for the Bay Area)
- ▶ Improve water supplies and benefits for fish and flood protection
- ▶ \$300 million statewide for managing urban runoff for water supply and also water conservation projects and programs

1-C. Water Recycling

- ▶ \$725 million
- ▶ Treat wastewater or saltwater
- ▶ Examples:
 - New treatment technology
 - Desalination plants
 - Recycled water pipelines

2. Protect and Restore Watersheds

- ▶ \$1.5 billion total
- ▶ \$515 million for designated watersheds (e.g. \$100.5 million for the State Coastal Conservancy)
- ▶ \$475 million for state commitments to environmental restoration
- ▶ \$305 million to restore habitat and watersheds and increase flows to streams (including purchasing water)

3. Improve Groundwater and Surface Water Quality

- ▶ \$1.4 billion total
- ▶ \$800 million to clean up and prevent pollution to current or past drinking water supplies
- ▶ \$260 million to improve access to clean drinking water
- ▶ \$260 million for wastewater treatment in small communities
- ▶ \$100 million for local governments to develop and implement plans to manage groundwater supply and quality

4. Flood Protection

- ▶ \$395 million total
- ▶ \$295 million to improve levees and respond to emergencies in the Delta
- ▶ \$100 million statewide for flood protection and to improve fish and wildlife habitat

Matching Funds

Of the \$7.5 billion in funds made available by the measure, \$5.7 billion is available only if recipients—mostly local governments—provide funding to support the projects. This matching requirement only applies to the water supply and water quality projects funded by the measure. The required share of matching funds is generally at least ***50 percent*** of the total cost of the project, although this can be waived or reduced in some cases.

What Can Be Matching Funds?

- ▶ Project proponent's funds
- ▶ Non-state funds
- ▶ In-kind services (probably back to when the bond was passed)
- ▶ Other contributions

Timetable?

- ▶ Who knows?
- ▶ Probably 2016 or even 2017
- ▶ Bonds have to sell
- ▶ Legislature has to appropriate the funds
- ▶ DWR has to write the guidelines and go through the public review process
- ▶ Local regions have to develop priorities and project selection guidelines

Discussion?

Comparison of Recycled Water General Order Requirements
8/29/14

Section	96-011	Section	2014-0090
Purpose and Applicability	<ul style="list-style-type: none"> A separate NPDES permit must be obtained for projects that use ephemeral or year-round streams or other waters of the State for rw conveyance 	Background	None
State Reclamation Policies and Regulations	<ul style="list-style-type: none"> RWQCB and CDPH must issue rw requirements for all projects via this Order 	Statutory and Regulatory Issues	<ul style="list-style-type: none"> RWQCB may prescribe general Waste Discharge Requirements (WDRs) for a category of discharges if the discharges are produced from the same or similar operations; same or similar types of waste, same or similar treatment standards; more appropriately regulated under general WDRs than individual WDRs. Technical and monitoring reports specified in this GO are required pursuant to Water Code Section 13267 - the NOI, and the Monitoring and Reporting Program (MRP) reports. Failure to submit or falsifying may result in assessment of civil liberties.
Reuse Water Quality Requirements and Limitations	<ul style="list-style-type: none"> Reuse Water Quality Requirements and Limitations shall meet the most current Title 22 regulations Producer/Distributor shall discontinue delivery of rw during any period in which it has reason to believe it doesn't meet requirements Minimum Recycled Water Quality – Rw shall be adequately oxidized and disinfected that receives at least secondary level treatment and meets corresponding DO, DS and Total Coliform limits Secondary – 23 Recycled Water (Restricted Use) – Shall meet the following total coliform limit prior to delivery: after adequate disinfection, does not exceed a median value of 23 MPN/100ml, etc., and a maximum value of 240 MPN/100ml, etc. Secondary rw may be used where the public has restricted access or exposure Secondary – 2.2 Recycled Water – Shall meet the following total coliform limit prior to delivery: after adequate disinfection, does not exceed a median value of 2.2 MPN/100ml, etc., and a maximum value of 23 MPN/100ml, etc. Tertiary Recycled Water – Shall be coagulated and filtered and meet the following coliform, disinfection process and turbidity limits: after adequate contact with disinfectant, does not exceed a median value of 2.2 MPN/100ml, and a maximum value of 23 MPN/100ml, etc. No sample shall exceed a total coliform value of 240 MPN/100/ml Disinfection Process – 1) a chlorine disinfection process that provides a CT value of not less than 300 milligram-minutes/liter at all times with a modal contact time of 90 minutes; or 2) A disinfection process that, when combined 	No Section – referred to in Specifications Section of 2014-0090	

Section	96-011	Section	2014-0090
	<p>with the filtration process, has been demonstrated to reduce the concentration of F-specific bacteriophage MS-2, or polio virus, per unit volume of water in wastewater to 1/100.000 of initial concentration in the filter influent.</p> <ul style="list-style-type: none"> • Turbidity – Shall not exceed 2NTU daily average, 5 NTU more than 5 percent of the time, or 10 NTU at any time. • Recycled Water Storage Limitations – Any storage facility containing rw shall be managed in a manner to control odor or nuisance conditions • All storage ponds shall be protected from erosion, washout and flooding from a 24-hour rainfall event (100 yr) 		
Regional Board Basin Plan	<ul style="list-style-type: none"> • Water quality objectives included in the Basin Plan will be used in regulating water quality factors in this Order for reuse. 	Basin Plans and Beneficial Uses	<ul style="list-style-type: none"> • Basin Plan discharge requirements – This GO requires that users abide by those objectives in receiving water. Determination of applicable water quality objectives is part of the application process.
Prohibitions	<ul style="list-style-type: none"> • Treatment, storage, distribution, or reuse shall not create a nuisance • No application during periods when soils are saturated • No run-off from use areas (or runoff that would cause degradation to other water bodies) • No spray or runoff to enter a dwelling or food handling facility, or contact drinking fountains • Not be applied in groundwater recharge or wellhead protection areas • Use shall not cause rising groundwater discharging to surface water to impair surface water quality objectives or beneficial uses • Incidental discharge of rw to waters of the State shall not unreasonably affect present and anticipated beneficial uses, and not result in water quality less than that prescribed in water quality control plans or policies unless authorized • No rw discharges other than those permitted in this GO • Not for use as a domestic or animal water supply • No cross connections 	Prohibitions	<ul style="list-style-type: none"> • No run-off from use areas • No spray or runoff to enter a dwelling or food handling facility, or contact drinking fountains • Incidental runoff shall not result in water quality less than that prescribed in water quality control plans or policies unless authorized • No rw discharges other than those permitted in this GO • No cross connections • No groundwater replenishment • No disposal of treated wastewater through percolation ponds, excessive hydraulic loading, etc.
No Section – referred to in Reuse Water Quality Requirements and Limitations Section of 96-011		Specifications	<p>All rw production, distribution, and use permitted under this GO shall be in compliance with the following:</p> <ul style="list-style-type: none"> • All applicable Title 17 and 22 requirements • All requirements under this GO • A CDPH approved Title 22 Engineering Report • A NOA issued by the RWQCB • A Salt and Nutrient Management Plan adopted by the RWQCB as a Basin Plan Amendment • WDRs and NPDES permits for rw production facilities • Water Recycling Use Permit issued by the rw Administrator • Applicable water quality related CEQA mitigation measure • Water Code Section 1211 for facilities where the changes to the discharge are necessary to accomplish water

Section	96-011	Section	2014-0090
			recycling and will result in changes in flow in a watercourse
No Section – referred to in Reuse Program Provisions and General Provision Sections of 96-011		Water Recycling Administration Requirements	<ul style="list-style-type: none"> • File and NOI indicating the intention to be regulated under this General Order • Enforce rules or regulations governing the design and use of recycled water facilities and use of recycled water • No cross connections • Ensure recycled water quality standards of this GO are met, and responsible for O&M of all associated facilities and appurtenances • Must conduct periodic inspections of the user's facilities and operations to determine compliance with this GO • Comply with Standard Provisions and Reporting Requirements • Comply with use area conditions • If recycled water will be transported by truck for Title 22 approved uses, the Administrator shall provide notification and control measures for users consistent with Engineering Report • Copy of Water Recycling Permit must be provided to users • Comply with monitoring and reporting program. The program must be consistent with Salt Nutrient Management Plan for the basin/sub-basin • Assure facilities and control systems in proper working order • Proper personnel training • Assure that all above ground equipment, pumps, piping, reservoirs, valves, etc. are appropriately identified.
General Provisions	<ul style="list-style-type: none"> • Producer will document User compliance with all conditions of this Order • Producer shall conduct periodic random inspections of selected Users to ensure compliance to be done when irrigation is in progress • RWQCB will conduct annual inspection/audit of each Producer's rw program and conduct periodic spot field inspections • Producer, User/Distributor shall permit the RWQCB • Access to records • Inspection of facilities, equipment, practices, or operations • Sample or monitor for compliance with Order • Order may be terminated for violations of conditions contained in the Order 	General Provisions	<ul style="list-style-type: none"> • Document compliance with all conditions of this GO and of rw criteria specified in Titles 17 and 22 • Submit a Salt Nutrient Management Plan • RWQCB will conduct inspections/audits of projects, and review project records, facilities, monitoring data, or perform sampling

Section	96-011	Section	2014-0090
Self-Monitoring Program	<ul style="list-style-type: none"> • Producer shall develop and implement a rw monitoring program • Program shall include observations, sampling, measurements, and analyses • Producer will set individual user monitoring requirements based on the size, volume used, complexity, etc. of each use area • All rw use areas shall be inspected at a frequency specified in the User's Water Reuse Permit, and will include standard observations (runoff, odor, ponding, leaks, erosion, etc.), and appropriate signage 	Monitoring and Reporting Program	<p>All samples must be representative of the volume and nature of the discharge or matrix of material sampled. Program must be consistent with SNMP for the basin/sub-basin.</p> <ul style="list-style-type: none"> • Recycled Water Monitoring – if rw is used for irrigation of landscaped areas, priority pollutant monitoring is required at the production facility (Frequency of monitoring corresponds to the flow rate of the recycle water use) • Disinfection System Monitoring – If disinfection is performed, samples shall be collected form immediately downstream of the disinfection system (Monitoring shall be customized to the site-specific conditions) • Pond System Monitoring – Ponds containing rw shall be monitored for the freeboard, odors, and berm condition quarterly • Use Area Monitoring – Monitoring will be performed at a frequency appropriate to determine compliance with this GO. The frequency of the use area inspections shall be based on the complexity and risk of each use area. • Cooling/Industrial/Other Uses of Recycled Water – Monitoring required for cross connections (four years), backflow incidents (continuous), and backflow device testing and maintenance (annually)
Reporting Requirements	<ul style="list-style-type: none"> • Significant Violation – Producer shall report to the RWQCB violations that threaten public health or water quality within 24 hours, followed by a written report within 15 days • Annual Report – Shall be submitted by March 15 of each year, summarizing rw use by User, list of authorized Users, daily volume delivered, effluent violations, and a discussion of the progress and results of the program 	Reporting	<ul style="list-style-type: none"> • Annual Reports – Summary table of all users and use areas; inspections and enforcement activities; evaluation of performance of treatment facility; tabular and graphical summaries of monitoring data collected; and name and contact info for O&M and system monitoring
No Section – referred to in Reuse Program Provisions of 96-011		No Section – referred to in Water Recycling Administration Requirements of 2014-0900	
Reuse Program Provisions	<u>Producer Responsibilities</u> <ul style="list-style-type: none"> • Producers shall submit and NOI to be covered under this Order • Producer may authorize specific rw projects on a case-by-case basis in accordance with a designed permit-based program for Users • Producer shall establish and enforce rules and regs for the design and construction of rw use facilities and the use of rw in accordance with CDPH criteria • Producer or Distributor shall submit to CDPH documentation for proper installation of backflow devices 	No Section – referenced in Water Recycling Administration Requirements Section of 2014-0900	

Section	96-011	Section	2014-0090
	<p>and absence of cross connections prior to commencing use of rw at sites</p> <ul style="list-style-type: none">• Producer will be responsible for ensuring rw quality, and O&M of facilities and appurtenances• Producer shall conduct periodic inspections of User's facilities and operations to assure compliance• Producer shall comply with the Standard Provision and Reporting Requirements <p><u>Joint Responsibilities</u></p> <ul style="list-style-type: none">• Each User shall demonstrate to the Producer all applicable use area requirements• If anyone other than the User is responsible for applying rw, the User shall inform the Producer• Copy of the Water Reuse Permit must be provided to the Users by the Producer• Producer shall comply with self-monitoring program• Producer shall assure no cross connections• Producer and Users shall maintain in good working order and operation any facility or control system installed by the Producer or User• Producer, Distributors and Users should receive appropriate employee training• Producer and Users shall assure that all above ground equipment including pumps, piping, storage reservoirs, valves, etc. are clearly identified with appropriate tags and signage		
No Section – referred to in General Provisions Section of 96-011		No Section – referred to in General Provisions Section of 2014-0900	
No Section – no references		Antidegradation Analysis	<p>Requires additional monitoring and anti-degradation analysis</p> <ul style="list-style-type: none">• Monitoring of priority pollutants - Annual monitoring for priority pollutants is required for design production flows greater than 1 million gpd; a five year monitoring frequency is required for flows less than one million gallons per day• Requires Best Practicable Treatment of Control (BPTC) – A combination of treatment, storage, and application methods that implement the requirements of Title 22 and the Regional Water Board Water Quality Control Plans (Basin Plans)<ul style="list-style-type: none">• Rw use shall not cause unacceptable groundwater and/or surface water degradation<ul style="list-style-type: none">• Discretion regarding permitting storage in unlined ponds (GGP lakes?)• Application of rw limited to agronomic rates to minimize nutrient loading – considering soil, climate, and plant demand• Use controlled to prevent runoff from application areas• Rw shall not create nuisance conditions – soil saturation, control spray, etc.• Use is consistent with Title 22 specifications –

Section	96-011	Section	2014-0090
			acceptable uses of rw water, signage, monitoring frequency, backflow prevention, cross-connection tests, setback requirements, etc. (Titles 22 and 17)

Sherry Hull

From: Sherry Hull
Sent: Thursday, December 18, 2014 9:12 AM
To: Sherry Hull
Subject: FW: agenda item #11e

From: Tom Hall [<mailto:twhall@eoainc.com>]
Sent: Monday, December 8, 2014 10:37 AM
To: DJackson@ci.benicia.ca.us
Cc: Dave Williams; cmunoz@sfwater.org; rross@whitleyburchett.com
Subject: SWB Order 2014-0090 vs Order 96-011 Coverage

Hi Dan -

I reviewed the final SWB Recycled Water General Permit 2014-0090 that was adopted on June 3, 2014. Remember that this was a rush rush project driven in part by the Governor's April 25, 2014 State of Emergency drought proclamation.

Comments on the April 25, 2014 original draft permit were due May 27, 2014. The Revised Draft Permit that was not released until May 30, 2014 as a redline strikeout version. There was no separate response to comments.

I found nothing in the final permit that prohibits a discharger from seeking coverage under an existing water recycling permit. Finding 29 (below) from page 13 of the attached revised draft permit, was added to the original draft permit, in response to comments from BACWA and WateReuse. It allows for continued coverage under existing permits but is silent on new permittees.

PURPOSE AND APPLICABILITY

29. Producers, Distributors, or Users of recycled water covered under existing orders (water recycling requirements, master reclamation permits, general or individual waste discharge requirements, or waivers of waste discharge requirements) for the use of recycled water may elect to either continue coverage under existing orders or apply for coverage under this General Order.

This language and approach is in contrast to the Community Water System Discharge Permit adopted by the SWB on November 18, 2014. In that permit, coverage under existing permits (with some exceptions) is explicitly terminated and dischargers are required to apply for coverage under the new SWB permit. I don't think that it's unreasonable to assume that if the SWB had wanted all water recycling entities to apply for coverage solely under this permit that they would have included similarly explicit language terminating coverage under existing recycled water permits.

Absent such prescriptive language in 2014-0090, it would be my interpretation that Bay Area agencies have three permitting options available to them:

1) Apply for coverage under 96-011;

2) Apply for coverage under 2014-0090; or

3) Apply for coverage under an individual permit.

Given the unnecessary additional monitoring and reporting requirements contained in 20014-0090 I don't know why anyone would seek coverage under it versus 96-011.

Thanks. Tom

[Tom Hall, Ph.D.](#)

Managing Environmental Engineer

EOA, Inc.

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Oakland, CA 94612

(510) 832-2852 x110

December 11, 2014

Jay T. Spurgin
Public Works Director

Via Email Felicia.Marcus@waterboards.ca.gov
Jeanine.Townsend@waterboards.ca.gov

Felicia Marcus, Chair
State Water Resources Control Board Members
Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I St., 24th Fl.
Sacramento, CA 95814

Request for Hearing and Designated Party Status

Dear Ms. Marcus and State Board Members:

The City of Thousand Oaks respectfully requests that the State Water Resources Control Board (State Board) take up the Petition for Review filed on December 8, 2014, by the County Sanitation District No. 2 of Los Angeles County, California Association of Sanitation Agencies (CASA), Southern California Alliance of POTWs (SCAP) and Bay Area Clean Water Agencies (BACWA) asking for review of the action and failure to act by the California Regional Water Quality Control Board, Los Angeles Region, in adopting Order Nos. R4-2014-0213 and R4-2014-0212 for the Whittier Narrows and Pomona Water Reclamation Plants (Petition).

The aforementioned Petition raises issues similar to those raised by the petitions filed by the City of Thousand Oaks, (A-2309), and the neighboring communities of Simi Valley, (A-2310), and Camarillo, (A-2308). Each of the petitions concern the numeric chronic toxicity effluent limitations and implementing provisions related to test method requirements recently imposed by the United States Environmental Protection Agency.

Accordingly, the City of Thousand Oaks requests the State Board conduct a hearing to consider the merits of the Petition in accordance with 23 California Code of Regulations (C.C.R.) sections 2052(c) and 2067, and designate the City as a party in that matter. The City further recommends the State Board consolidate all petitions raising similar issues under 23 C.C.R. Section 2054 to facilitate the prompt resolution of these matters without further delay.

Respectfully submitted,



Jay T. Spurgin
Public Works Director

DPW:\1030-65\jds\Final\Spurgin\SWCRB Request for Hearing.doc

Sherry Hull

From: Dave Williams
Sent: Tuesday, December 16, 2014 4:33 PM
To: Sherry Hull
Subject: agenda item 12b

Importance: High

Please include the email in the packet under 12b.

David R. Williams
Executive Director
Bay Area Clean Water Agencies (BACWA)
Cell: 925-765-9616
Email: dwilliams@bacwa.org

From: Bobbi Larson [mailto:blarson@casaweb.org]
Sent: Tuesday, December 16, 2014 4:30 PM
To: Thorne, Melissa; Dorn, Linda (MSA); Debbie Webster; Markle, Phil; Heil, Ann; Sharon Green; tmoore@risk-sciences.com; Tom Grovhoug; Friess, Phil; Michael D. Bryan; Hassan Rad; voightl@sacsewer.com; Jackson, Daniel; Tim Potter; Lorie Fono; pmcgovern@pmengineers.com; Salmon, Jonathan; Adam Walukiewicz
Cc: Martha Davis; Caulfield, Vickie; cirvine@ch2m.com; mkennedy@sfwater.org; Staci Heaton; Tess Dunham; Craig Johns; fandes@btlaw.com; Kevin Buchan; John Pastore; Miller, Rita; Dave Williams; Adam Link; Chris Hornback; Elizabeth Allan; Melody LaBella; Mitch Mysliwiec; Kepke, Jacqueline; 'Ervin, James'; ngardner-andrews@nacwa.org
Subject: Rescheduling of Toxicity Meetings
Importance: High

Hi all,

As some of you are aware, we have cancelled the meetings and conference calls we had scheduled this week with State Water Board members. After discussing the matter with the water board counsel, it appeared to be in our best interest to defer the meetings until after he has an opportunity to clarify EPA's legal position regarding the statewide plan with EPA Region 9 counsel. This way we will have a clearer picture of what EPA maintains is legally required as well as whether the State's lawyers concur with their position.

We will be back in touch early in January. For now, Happy Holidays!

Bobbi Larson
Executive Director
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FY 2016 Proposed Budget Planning/Adoption Timeline

January 19, 2015

Deadline for Special Programs and Committees to submit FY 2016 draft budgets and workplans / financial requests and proposals to ED.

February 2015 (to be scheduled during the week of 2/9 - 13)

Finance Committee Meeting

ED meets with Finance Committee to present rough draft BACWA/CBC and Special Programs (AIR, WOT) budgets and workplans, obtains feedback, and revises draft as necessary in preparation for the February 20, 2015 Board meeting.

February 20, 2015

Executive Board Meeting

As part of the regularly scheduled monthly Board meeting the ED will lead a discussion to present draft BACWA/CBC and Special Programs (AIR, WOT) budgets and workplans and obtain input to address any questions/concerns raised by the Finance Committee. Feedback from Board, with input from BACWA members/meeting attendees (including Committee Chairs) will be used for further revisions in preparation for the March Orinda meeting.

March 2015 (to be scheduled during the week of 3/9-13)

Orinda BACWA Board Workshop (half day BACWA Board only and half day with Water Board)

As part of the BACWA Board only portion of the meeting, the ED will obtain feedback from BACWA Board on the revised draft BACWA/CBC and Special Programs (AIR, WOT) budgets and workplans and make revisions as necessary in preparation for the March BACWA Board meeting.

March 20, 2015

BACWA Board meeting

As part of the regularly scheduled monthly Board meeting, the ED will request final feedback from Board on the revised draft BACWA/CBC and Special Programs (AIR, WOT) budgets and workplans. Any necessary final revisions will be made by the ED in preparation for approval at the April BACWA Board meeting.

April 17, 2015

BACWA Board meeting

The ED will include on the regular BACWA Board meeting agenda, a request that the Board approve the Final FY 2016 BACWA/CBC and Special Programs (AIR, WOT) budgets and workplans.

KEY BACWA BUDGET ASSUMPTIONS FOR FY 16

PERCENT INCREASES: BACWA collects revenues via its annual invoices. There can be as many as five separate line items on a BACWA member invoice as follows:

1. BACWA Dues: funds the on-going operations of BACWA.
2. CBC Fees: funds special, primarily regulatory special investigations including TMDL development, special studies, watershed permit requirements etc.
3. Nutrient Surcharge: recognizing the significant increase in BACWA expenses associated with the Nutrient Watershed Permit (e.g. \$880k per year to fund science studies, Optimization/Upgrade Studies, Annual Reporting), this surcharge supplements the CBC fees in order to meet the funding requirements of the permit while drawing down previously built up CBC reserves.
4. AIR Committee: The AIR Committee is a separately funded committee whose members contribute annually to provide consulting services to assist in the technical and administrative activities needed to run the committee. All but a few of the AIR Committee members are also members of BACWA. Funds collected are held in a restricted fund administered by BACWA to be used only for AIR Committee activities.
5. WOT: The WOT is comprised of a group of agencies that self-fund training classes through Solano College to help provide a pool of potential water and wastewater operators for Bay Area utilities. Similar to the AIR Committee, these funds are administered by BACWA but are held in a restricted fund to be used only for WOT activities.

In developing the FY 16 the following are assumptions on dues/fee increases which will be used to build the budget:

BACWA Dues: 2% increase over FY 15

CBC Fees: 0% increase over FY 15 fees. The CBC will remain funded at historical levels and is envisioned to continue into the future. Since the main expenditures from the CBC fund are associated with meeting the requirements of the Nutrient Watershed Permit and since the funds to meet those requirements are being collected via the Nutrient Surcharge which, at this point in time, is only being collected over the 5 year term of the Watershed Permit, the CBC is envisioned to remain level for the next several years unless some new regulatory requirement is imposed.

Nutrient Surcharge: Increase from \$300k to \$600k. The Nutrient Surcharge, in combination with a drawdown of the BACWA CBC reserves to target levels, is set to meet the anticipated funding requirements of the Nutrient Watershed Permit over the 5 year term of that permit. Increases in the Nutrient Surcharge will continue for a couple more years and then level off until they get re-evaluated as part of the funding needs for the next 5 year Nutrient Watershed Permit.

AIR Committee: Historically the AIR Committee establishes their own dues assessment. The dues currently are set at \$6,000 per agency member. Discussions are underway to incorporate the AIR Committee into BACWA as a regular committee supported by BACWA dues. If and when that occurs, the Committee leadership will establish their budget request and submit it to the BACWA Board as part of the annual budget preparation process.

WOT: Similar to AIR, WOT sets their own dues structure. It varies from \$3,000 to \$12,000 per member. It is envisioned that WOT will continue to be a stand-alone Special Program for which BACWA provides contract administration.

SECURING CONTRACT SUPPORT:

BACWA has no employees and secures support for all of its functions through contracts. BACWA has a Contracting Policy that sets forth requirements for obtaining contract support. The Policy provides for sole sourcing certain contracts dependent upon the cost of the contract. Regardless of the Contracting Policy, being a public JPA, BACWA strives to, whenever possible, to secure services through a competitive process. Three positions have been designated as exempt from the competitive process due to the recognized value of continuity for some BACWA functions. The three exempt services are; the Executive Director, the Assistant Executive Director and

the Regulatory Program Manager. Currently BACWA has several routine support needs and contracts in place to meet these needs as follows:

- Collection Committee support
- BAPPG support
- Info Share Operations and Maintenance Groups support
- AIR Committee support (contingent upon AIR becoming a regular BACWA committee)

As part of the budgeting process the Board intends to set budgets for these support needs and then solicit and evaluate proposals in order to determine the most cost-effective approach for providing the needed services.

NEW INITIATIVES:

Any new initiative needs to be identified and incorporated into the budget if it is expected to be accomplished. Currently there are no new initiatives but there are on-going initiatives that may have expanded scope of services. These include the following:

- IT/web site improvements
- risk reduction permit requirements

Other new initiatives or expanded initiatives should be identified as early as possible in the budgeting process.

BACWA ANNUAL MEMBER'S MEETING (DRAFT FOR DISCUSSION)

<u>TIME</u>	<u>SUBJECT</u>	<u>DESCRIPTION</u>	<u>SPEAKER</u>	<u>confirmed</u>
8:30 am - 9:00 am	Coffee and Refreshments			
9:00 am - 9:15 am	Welcome			
		Introduction and Year in Review	Mike Connor	x
9:15 am - 9:45 am	EPA & RWQCB Priorities			
		<u>Moderator</u>	Laura Pagano	
		EPA Region IX, Manager, NPDES Permits Office	Dave Smith	x
		RWQCB Executive Officer	Bruce Wolfe	x
9:45 am - 10:00 am	Nutrients - Overview			
		Activities Over the Last Year	David Williams	x
10:00 am - 10:25 AM	Nutrients - Governance Update			
		Steering Committee	Jim Ervin	
		Planning Subcommittee	Ben Horenstein	
10:25 am - 10:35 am	Break			
10:35 am - noon	Nutrients - Regulatory Update			
		<u>Moderator</u>	Roger Bailey	
		Watershed Permit	David Williams	x
		Optimization/Upgrade Studies	HDR	x

		Annual Reporting	HDR	x
		Next Steps	Water Board	?
noon - 12:30 pm	Lunch			
12:30 pm - 12:45 pm	BACWA Leadership Recognition		Mike Connor	x
12:45 pm - 12:55 pm	BACWA Business Meeting		David Williams	x
12:55 pm - 1:35 pm	BACWA Hot Topics			
		<u>Moderator</u>	Amy Chastain	
		Ebola	Tim Potter	
		Toxicity	Jim Ervin	
		AIR Issues/CWCCG	Sarah Deslauriers	
		Recycled Water	Cheryl Munoz	
		Risk Management	Lorien Fono	
1:35 pm - 2:55 pm	Nutrients - Technical Update			
		<u>Moderator</u>		
		Pilot Studies	Jason Warner	
			Vince DeLange	
			Amanda Roa	

		SFEI Study Findings & Science Plan	David Senn	x
2:55 pm - 3:00 pm	Annual Meeting Wrap-Up		Mike Connor	x



Frequently Asked Questions (FAQs) on Interim Guidance for Managers and Workers Handling Untreated Sewage from Suspected or Confirmed Individuals with Ebola in the U.S.

Healthcare Facility Wastewater

Can sanitary sewers be used for the disposal of Ebola-contaminated patient waste?

A sanitary sewer is a system of underground pipes that carries sewage and wastes from homes and other buildings to a wastewater treatment plant for disposal. The World Health Organization (WHO) states sanitary sewers may be used for the safe disposal of waste, such as feces, urine, or vomit, from patients with Ebola.¹

At this time, there have been no reports of Ebola spreading through sewage.^{2,3} In the United States, wastewater treatment processes are designed to inactivate or remove infectious agents, making it unlikely that Ebola virus could spread through sewers.

Why can sanitary sewers be used for waste disposal from Ebola patients?

In the United States, human waste, blood, and other potentially infectious materials are routinely released into sanitary sewers. Wastewater treatment plant processes are designed to inactivate or remove human disease-causing organisms (pathogens), including bacteria, viruses, protozoa (such as *Giardia* and *Cryptosporidium*), and helminthes (parasitic worms).

Workers directly handling sewage pipes and in the prescreening stage of wastewater treatment are at the highest risks for exposure to disease-causing organisms. These workers should follow the guidelines provided in the CDC [Interim Guidance for Managers and Workers Handling Untreated Wastewater from Suspected or Confirmed Individuals with Ebola in the U.S.](#) to prevent exposure to Ebola when working with untreated wastewater.

Have enveloped viruses like Ebola been transmitted to wastewater treatment plant workers?

In an enveloped virus, such as Ebola, hepatitis B, hepatitis C, and HIV, the core of the virus is surrounded by a lipoprotein outer layer. This lipoprotein envelope makes enveloped viruses more susceptible to destruction by numerous physical and chemical agents than viruses without a lipoprotein envelope (called non-enveloped viruses, e.g., norovirus, rotavirus, adenovirus, poliovirus).

Several studies have investigated wastewater treatment plant workers for evidence of infection or prevalence of antibodies (antibodies are proteins that are produced by the body's immune system when it detects harmful

substances). The studies looked at both enveloped viruses and enteric non-enveloped viruses that can affect the gastrointestinal tract (stomach).

A few studies evaluated the prevalence of antibodies to hepatitis B, parainfluenza virus, and hepatitis C. Studies found a significantly higher prevalence of anti-hepatitis B virus antibodies in wastewater treatment plant workers, but other risk factors were not taken into account, such as sexual behavior, injection drug use, or possible exposure in the healthcare environment.^{4,5} These factors could have influenced the study results. Other studies reported a significantly higher prevalence of antibodies towards parainfluenza virus type 1.⁶ Another study reported two cases of hepatitis C in wastewater treatment plant workers.⁷ There have been no other published reports of infections of wastewater treatment plant workers with bloodborne pathogens such as hepatitis B, hepatitis C, or HIV, or other enveloped viruses such as Ebola or influenza.

Why does CDC not recommend disinfecting patient waste in the toilet?

For several reasons, the CDC does not currently recommend disinfection of patient's waste in the toilet before disposal in sanitary sewer systems.

There are no published data on the effectiveness of disinfectants against viruses in human waste, such as feces and urine. Thus, there are currently no U.S. Environmental Protection Agency (EPA)-registered disinfectants approved for use against enveloped or non-enveloped viruses in feces, urine, or vomit in the toilet before their disposal in the sanitary sewer system. The EPA requires all disinfectants be used according to instructions on the product label. If the product is not used according to these instructions, there is no guarantee of its effectiveness.

In addition, viruses (including Ebola) will associate with particles and organic material in patient waste and be protected from disinfectant, thereby decreasing the effectiveness of the disinfectant.⁸ Organic and nitrogenous components of patient wastes will also react with disinfectants that are halogen-based (such as sodium hypochlorite, or bleach), further reducing the efficacy of disinfection.⁹

Lastly, there are safety concerns to healthcare workers and the patient when commercial bleach is used for this application. Bleach is a strongly corrosive agent and it may react chemically with organic compounds to produce harmful vapors.¹⁰ Use in this application would require additional ventilation of the patient's room. Our current recommendations are consistent with the expert opinion contained in the WHO guidance.

Although CDC does not recommend disinfecting patient waste in the toilet, our facility may be asked to disinfect before discharge. What procedures have been used by other facilities to treat Ebola virus-contaminated waste prior to discharge into the sanitary sewer?

CDC recognizes that the wastewater treatment community and other stakeholders have concerns allowing waste to enter the sanitary sewer system. Wastewater treatment plant processes are designed to inactivate or remove pathogens; however, some wastewater treatment systems may require hospitals caring for patients with Ebola to treat the waste before discharge into sanitary sewers.

Various sources have used different approaches to treat waste before discharge in the U.S. based on their experience treating Ebola patients, including:

- Use portable toilets and add solidifying agents to the patient's waste before disposal as Ebola-associated solid waste.
- Add a hospital grade disinfectant at the manufacturer's recommended concentration to the toilet containing the patient's waste, then hold the waste in the toilet for 2.5 times the recommended contact time before flushing.¹¹
- Add bleach or quaternary ammonium compounds to the toilet containing the patient's waste for 5 minutes before flushing (type and concentration of disinfectants used in this protocol were not provided to CDC).¹²

If you are a plumber or other facility worker responsible for addressing plumbing issues, you should be instructed by your employer if such pretreatment practices are used in your workplace. Please contact your employer if not provided.

What can healthcare facilities do to minimize the risk of Ebola exposure to facility workers responsible for addressing plumbing issues?

Healthcare facilities should minimize flushing of excess toilet paper or flushable wipes to prevent clogging, which can result in sewer backups. Routine maintenance on relevant sanitary sewer lines should be postponed until after the discharge of patients with Ebola from the hospital.

Survival in Wastewater

How effective are wastewater treatment processes at removing or inactivating Ebola?

Information is limited about the survival of Ebola in water and wastewater systems. However, there are abundant data about the survival of similar enveloped viruses in the environment. Ebola would be expected to respond similarly to other enveloped viruses, and would be inactivated more rapidly than the non-enveloped viruses. Dilution of the viruses in the wastewater system will reduce their concentration. In addition, the combination of virucidal agents and the biological, chemical, and physical properties of wastewater, such as pH, temperature, and the presence of predatory microorganisms that could breakdown the virus, are expected to effectively inactivate and remove enveloped viruses from wastewater.⁸

Source water from wastewater treatment plant discharges or runoff from waste-related biosolids pose minimal risk of Ebola exposure when applied to land in compliance with EPA requirements (http://water.epa.gov/scitech/wastetech/biosolids/503pe_index.cfm).¹³

How effective are septic systems at removing or inactivating Ebola?

Septic systems are onsite, clustered and decentralized wastewater treatment systems. Viruses are not significantly inactivated in septic tanks¹⁴ and septic tank effluents (liquid waste) may contaminate groundwater with enteric viruses that can affect the gastrointestinal tract (stomach).^{15,16} As the effluent from septic tanks percolates through the soil to groundwater, viruses and other pathogenic microorganisms are removed. To prevent contamination of the drinking water supply, septic systems should be situated to provide appropriate setback distances from groundwater supply wells.^{17,18}

Survival in Drinking Water

How effective are drinking water treatment processes at removing or inactivating Ebola?

Notably, there are no case reports or epidemiologic data that Ebola can be transmitted through exposure to or consuming treated drinking water from surface water sources. If Ebola were present in surface water supplies used for public consumption, it would likely be destroyed by chemical disinfection methods used at water treatment plants. Although there are no published scientific studies on the detection of Ebola virus in water sources used for public drinking water, enveloped viruses like Ebola are more susceptible to chlorine disinfection than non-enveloped viruses.^{19,20} The required concentration of disinfectant with the proper contact time needed to achieve an EPA compliant 4-log₁₀ virus inactivation (99.99%) using free chlorine are sufficient to inactivate non-enveloped viruses in drinking water, including rotaviruses, adenoviruses, and polioviruses. Chlorine dioxide and ozone disinfection are also effective for inactivating viruses.²¹ In addition, Ebola is more susceptible to UV radiation than other non-enveloped viruses.²²

Can Ebola be spread through untreated public and private drinking water from ground water sources?

Under normal circumstances, the Ebola virus would be destroyed naturally before reaching any aquifer. The biological, chemical, and physical properties of the soil (such as pH, temperature, adsorption to surfaces, and predation by other microorganisms) would inactivate and remove the virus during transit through the soil and groundwater. Ebola is not expected to be found in untreated groundwater supplies in the absence of high levels of Ebola-contaminated sewage leaking directly into underground aquifers.

With regard to septic systems, the required setback distances between groundwater supply wells and potential sources of contamination (e.g., leaking septic systems) are expected to provide inactivation during virus transit through the soil.^{17,18} If there are cases of concern that untreated groundwater may have become contaminated with Ebola, public water suppliers and private well users should contact their local and state drinking water and health experts to determine if precautions are needed before the well water is used for drinking.

References

1. World Health Organization. [2014]. Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola.
2. World Health Organization. [2014]. Ebola Virus Disease (EVD). Key Questions and Answers Concerning Water, Sanitation, and Hygiene.
3. Weber DJ, Rutala WA. [2001]. Risks and Prevention of Nosocomial Transmission of Rare Zoonotic Diseases. *Clin Infect Dis* 32:446-456.
4. Avanitidou M, Constantinidis TC, Doutsos J, Mandraveli K, Katsouyannopoulos V. [1998]. Occupational hepatitis B virus infection in sewage workers. *Med Lav* 89:437-444.
5. Avanitidou M, Mamassi P, Vayona A. [2004]. Epidemiological evidence for vaccinating wastewater treatment plant workers against hepatitis A and hepatitis B virus. *Eur J Epidemiol* 19:259-262.
6. Iftimovici R, Iacobescu V, Copelovici Y, Dinca A, Iordan L, Niculescu R, Teleguta L, Chelaru M. [1980]. *Virologie* 31:187-189.
7. Brautbar N, Navizadeh N. [1999]. Brief communication: sewer workers: occupational risk for hepatitis C – report of two cases and review of literature. *Archives of Environ Health: An International Journal*

Sherry Hull

From: Dave Williams
Sent: Wednesday, December 17, 2014 8:32 AM
To: Sherry Hull
Subject: agenda item #16b
Attachments: ATT00001.txt

Please include the email below in the packet under 16 b.

David R. Williams
Executive Director
Bay Area Clean Water Agencies (BACWA)
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From: Biosolids [mailto:biosolids-bounces@lists.casaweb.org] **On Behalf Of** Greg Kester via Biosolids
Sent: Wednesday, December 17, 2014 8:28 AM
To: 'biosolids@lists.casaweb.org'
Subject: [CASA Biosolids] FW: Proposed Ebola surrogate study

Hello everyone – I wanted to send out a reminder request for funding the Ebola research project referenced below. So far, we have commitments for contributions from the following:

The City of San Diego, Public Utilities Department
Victor Valley Water Reclamation Authority
Encina JPA
Sacramento Regional San
Water ReUse
Orange County SD
The City of Los Angeles, Bureau of Sanitation
The Water Environment Research Foundation

I am also attaching the link to a presentation which provides further information on the project and the choice of surrogates. The primary intent is to evaluate the survivability of surrogate virus' (explained in the link) in wastewater with and without pretreatment. They will also evaluate survivability in sewage sludge via anaerobic digestion (bench scale). The budget has increased slightly from what is shown (\$35,000 vs \$28,000) but they also expect to have results within six months. We continue to partner with WERF and the other expert virologists and will maintain open communication with them. If you working through your channels to gain concurrence on a contribution it would be most helpful to know that. Please let me know if you have any questions or comments. Thanks very much! - Greg
http://www.casaweb.org/documents/ua-p01-f2014_ebola_gerba.pdf

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From: Greg Kester
Sent: Monday, December 08, 2014 12:03 PM
To: 'research@lists.casaweb.org'
Subject: Proposed Ebola surrogate study

Hello everyone – CASA is a member of the Water and Environmental Technology Center at the University of Arizona (sponsored, and funded in part, by the National Science Foundation and in partnership with Arizona State and Temple University's). Dr. Chuck Gerba is one of the expert virologists on whom we relied for our recent guidance on the proper management of Ebola wastewater at hospitals and is a co-lead on the attached research proposal. They are seeking a total of \$35,000 to evaluate the survivability of surrogate virus' in wastewater. The surrogates will provide an excellent correlation to Ebola and must be used since Ebola is considered a highly dangerous pathogen and only allowed to be used in research by a very few government approved facilities. While this is not a normal function of the Science and Research workgroup, the Ebola crisis has held an unusually high level of interest by CASA members and we therefore want to help get this important project funded as soon as possible. We are seeking contributions in the \$1,000 - \$2,000 level, though any amount is welcome. Other similar projects have been planned by WERF and the US Army Research division and we will be tracking those and updating you on their progress as well. Please let me know if your agency might be interested in contributing to this research project. Thanks very much! -Greg

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SURVIVAL OF EBOLA IN SEWAGE AND DURING WASTEWATER TREATMENT: EVALUATION USING A VIRAL SURROGATE

Charles Gerba, Luisa Ikner, and Ian Pepper



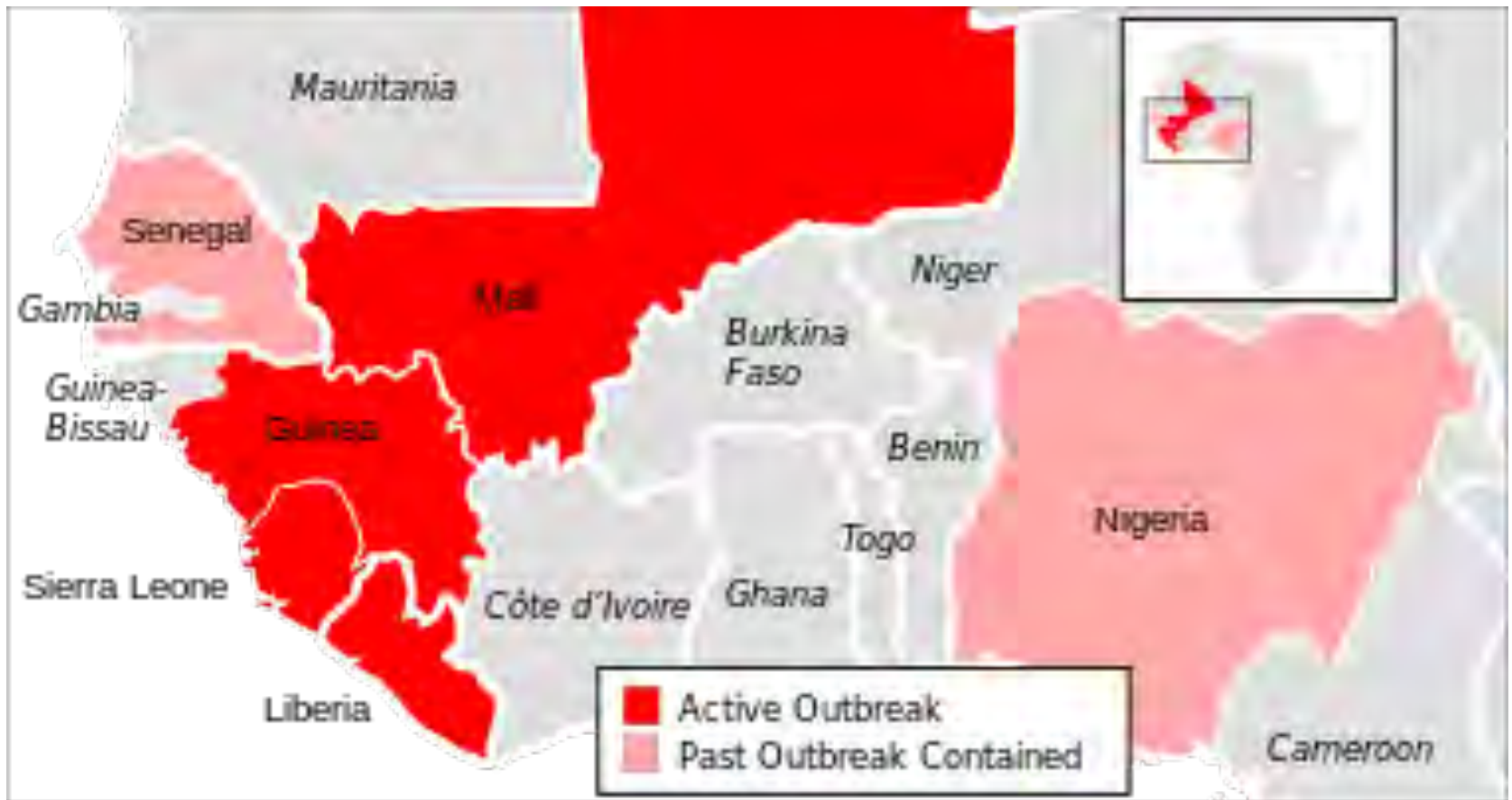
BACKGROUND

- Ebola is a member of the *Filoviridae* family
- First member of *Filoviridae* encountered was The Marburg virus in 1967 (appeared in Marbury Germany)
- Ebola virus encountered in late 1970s in Democratic Republic of the Congo (DRC)
- Ebola “disappeared” for 15 years, then reappeared in 1994-1996
 - Côte d’Ivoire (1994)
 - DRC (1995)
 - Gabon (1994, 1995, 1996)
- Outbreaks led to the best seller “The Hot Zone” by Richard Preston

EBOLA

- Filovirus
- Causes Ebola Hemorrhagic Fever (EHF)
- Causes disease in humans and primates (monkeys and chimpanzees)
- High mortality rate $\approx 50\%$
- Preliminary estimate ID_{50} of three viruses
- The current epidemic in Africa largest outbreak ever

2014 OUTBREAK



WEST AFRICA

2014 OUTBREAK

Country	Cases	Deaths	Last update 6 December 2014
 Liberia	7,690	3,161	2 December 2014 ^[4]
 Sierra Leone	7,676	2,014	4 December 2014 ^[5]
 Guinea	2,192	1,366	3 December 2014 ^[4]
 Nigeria	20	8	outbreak ended 20 October 2014 ^[6]
 Mali	8	6	23 November 2014 ^[7]
 United States	4	1	16 November 2014 ^[8]
 Senegal	1	0	outbreak ended 17 October 2014 ^[9]
 Spain	1	0	outbreak ended 2 December 2014 ^[4]
Total	17,590	6,556	as of 3 December 2014

FATE OF EBOLA IN THE ENVIRONMENT

- Virtually no information
- Can survive for 30 to 40 days (time for 99.9% decrease in infectivity) in serum and culture at 4°C
- Concern over exposure via contaminated sewage
- Need to determine fate of Ebola during wastewater/biosolids treatment

OBJECTIVE

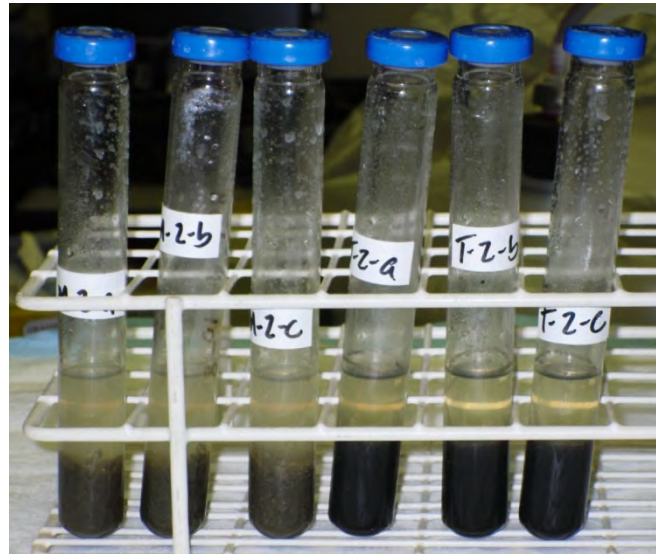
Utilize a viral surrogate for Ebola to evaluate its survival in sewage and during wastewater treatment

APPROACH

- Survival in medical waste that could be flushed down the toilet with and without disinfection
- Survival during mesophilic and thermophilic anaerobic digestion of sewage sludge – tests done in miniature anaerobic digesters. Also, lime treatment to produce Class A biosolids from Class B

SURVIVAL DURING WASTEWATER TREATMENT

- Miniature Anaerobic Digestors
 - Test tubes



- Add 1° sludge + activated sludge inoculant
- Validated in previous study with prions by monitoring VOCs
- Add virus and allow to digest anaerobically at mesophilic and thermophilic temperatures

VIRUS ASSAYS

- Cell culture – to determine loss of infectivity
- qPCR – to determine breakdown of nucleic acid

POTENTIAL SURROGATES FOR EBOLA AND OTHER EMERGING VIRUSES

- Parainfluenza
 - -in the same order as Ebola virus
 - Related to other emerging viruses (Hendra and Nipagh viruses)
- Corona virus
 - In the same order as Ebola virus
 - SARS is a coronavirus
- Murine norovirus (tough virus) – worst case for virus survival

RATIONALE FOR SURROGATE

- Biosafety – level 4 required for Ebola
- Surrogates selected based on similarity to Ebola
 - In the same viral order
 - nucleic acid type
 - contain lipids
 - replication
 - Easy to grow in cell culture
 - Require only a biosafety level 2
 - Related to other emerging viruses

KEY DELIVERABLES

- Key information on potential routes of exposure via sewage and sewage treatment
- Progress reports
- Peer-review publications

BUDGET REQUESTED

- Personnel \$18,000
- Operations \$10,000

PERIOD OF PERFORMANCE

- January 15, 2015 – December 31, 2015