14,503

BACWA EXECUTIVE BOARD MEETING

Thursday, March 24 2011, 9:00 a.m. – 1:00 p.m.

HANDOUTS

Handout Packet is available on the BACWA website (www.BACWA.org).

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8 – 9	Recycled Water Committee Report	1
10	Collection Systems Committee Report	1
1M	Prop 50 Grant Disbursement Summary, February 201л	2
12 – 13	Executive Director Report	3
14 – 17	Meeting Minutes from BACWA Executive Board Meeting of February 24, 2011, File 14,502	6
18 – 23	Board Action Request – Authorize Contribution to WateReuse to Support Development of the Bay Area Recycled Water Landscape Guide; $40,000; File 12,388.	8
24 – 25	Board Action Request – Authorize Contract with EPC Consultants, Inc. for Recycled Water Committee Technical Support; $24,000; File 12,389.	9
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32	Board Action Request – Approve Guidelines for Arleen Navarret Leadership Award, File 12,315.	11
33	Comparison of POTW Annual Hg Mass Load to Effluent Volume	12
34 – 44	DRAFT BACWA 2010 Mercury Group Report	12
45	DRAFT Issue Paper – Planned Federal Dental Amalgam Regulations	13
46 – 50	Board Authorization Request – Authorize Contribution to San Francisco Estuary Institute to Support Development of a Regional Monitoring Program Nutrient Strategy; $20,000; File 12,390.	14

Pages	Handout Title	Agenda Item #
51– 53	PCB TMDL Implementation Memorandum from BACWA Executive Director to BACWA Executive Board, March 16, 2011	16
54 – 55	DRAFT FY2011-12 BACWA Budget	17

ROLL CALL AND INTRODUCTIONS (9:00 a.m. – 9:05 a.m.)

PUBLIC COMMENT (9:05 a.m. – 9:10 a.m.)

REPORTS (9:10 a.m. – 10:15 a.m.)

1. Committee Reports Question and Answers.
2. Proposition 50 Grant Disbursements Status Report.
3. Executive Director Report.
4. Executive Board Reports.
    a. Summit Partners Meeting (2/28/11)
    b. Aquatic Science Center Meeting (3/3/11)
    c. Regional Water Board Meeting (3/9/11)
    d. RMP Technical Review Committee Meeting (3/23/11)
    e. Other
5. Chair & Executive Director Authorized Actions
    a. Executive Director authorization to utilize RMC As Needed Technical Support Contract for Enterococcus Basin Plan Amendment Comments; $2,000; File 12,162.
    b. Chair authorization to utilize LWA As Needed Technical Support Contract for Assistance with PCB Permit Adoption Hearing and Preparation of PCB Sampling and Analysis Plan; $17,500; File 12,163.
    c. Executive Director authorization for Chinook Book baywise.org advertisement; $2,400; File 12,387.
    d. Executive Director authorization to utilize Downey Brand As Needed Support for PCBs-related matters; $5,000; File 12,166.
    e. Executive Director authorization for website support from Adammer; $1,500; File 12,380.

CONSENT CALENDAR (10:15 a.m. – 10:20 a.m.)

6. Minutes from February 24, 2011 BACWA Executive Board Meeting.
7. January 2011 Treasurer's Report.
8. Authorize contribution to WateReuse for Irrigation Guide; $40,000 (FY 10-11).
9. Authorize contract with EPC Consultants, Inc., to assist the Recycled Water Committee with administrative and technical support, in an amount not to exceed $24,000 (FY 10-12).

OTHER BUSINESS (10:20 a.m. – 1:00 p.m.)

10. Summary & Discussion of March 4, 2011 **Strass Workshop** (J. Kepke).
11. Approval of Guidelines for the **Arleen Navarret Leadership Award**.
12. Approval of **2010 Mercury Watershed Permit Group Report** (RMC).
13. Discussion of **National Dental Amalgam Effluent Guidelines Rulemaking** (T. Potter, CCCSD).
14. Approval of SFEI request for support for **Nutrient Strategy Development**
15. Presentation & Discussion of the **Test of Significant Toxicity** Presentation (CCCSD).
16. Discussion of **PCB Permit Implementation Plan**.
17. Discussion of **Fiscal Year 2011-2012 Budget & Workplan.**

NEXT REGULAR MEETING

The next regular meeting is scheduled for **Monday, April 25, 2011**, 11:30 a.m. to 3:30 p.m., meeting location to be determined.

ADJOURNMENT (1:00 p.m.)

Handout Packet will be available by noon on March 23, 2011 on the BACWA website (www.BACWA.org).

BAPPG Committee Report to BACWA Board

Meeting Date: March 24, 2011
Prepared By: Sharon Newton, City of San Jose
BAPPG Committee Chair

Project Updates

Project	Update	Completion Date
Spring Cleaning Campaign	BAPPG's Spring Cleaning Campaign includes the re-launch of a new Baywise.org website, and media relations and advertising to drive users to the new website. The website launched on March 14, and will be promoted through the coming weeks. The new website features an opt-in newsletter and an interactive "Eco-Home" house with tips and resources for protecting the Bay. O'Rorke and BAPPG developed a press release (attached) that will circulate to Bay Area media outlets, and a similar long-lead press release was issued in January to target monthly magazines and other publications. The ads will push the "Eco-Home" interactive house on the new website, The committee also secured use of an unbranded Earth911 search engine tool for use on Baywise.org. Project Leads: Jen Jackson (EBMUD), Karin North (Palo Alto), Melody LaBella (Central San).	April 2011
Chinook Book Ads	The Chinook Book is an annual green coupon book published in two editions: one for the South Bay and one for the East Bay. BAPPG will insert an ad to promote pharmaceutical collection opportunities. The coupons last a year, providing numerous opportunities for users to see our ad. The new books will be released in the fall, but ads are purchased and placed in the spring. Project Lead: Karin North (Palo Alto)	Fall 2011
Dental Amalgam	BAPPG is assisting with development of an op ed that credits the Bay Area's successful dental amalgam program model in light of the EPA's announcement that national rules requiring such programs will be forthcoming. BAPPG will be monitoring the EPA rule development process closely in order to guard against additional requirements for Bay Area programs that will not make a difference. Project Lead: Melody LaBella (Central San)	Ongoing

Next BAPPG Meeting

April 6, 2011, 10am – 12 pm, 1515 Clay Street, Oakland, CA, Second Floor, Room 12

Attachments

- BAPPG Spring Campaign Press Release

FOR IMMEDIATE RELEASE
March 8, 2011

Contact: Meagan Miller
(415) 543-5280

Put the "Clean" Back into Spring Cleaning

Regional campaign offers tips to jazz up the home and garden that are good for the body, abode and Bay

Bay Area, CA – Ready to purge your piles, wash your windows, or tackle the garden? Check out Baywise.org for an easy how-to for your spring refresh.

The Bay Area Pollution Prevention Group (BAPPG) is launching the "Put the 'Clean' Back into Spring Cleaning" Campaign to encourage residents to choose non-toxic cleaning and pesticide products, identify simple water-saving opportunities in their home and garden, and locate nearby drop-off sites for hazardous materials such as old paint, motor oil and unused medicine.

To get the word out, BAPPG is showcasing a virtual home on its Baywise.org website with easy-to-reference, room-by-room tips. In addition, they are utilizing online ads, e-newsletters, social networking sites and activities, and advocating word-of-mouth among friends, neighbors and peers as they share home and garden tips with one another.

As Baywise.org illustrates, there are environmentally-friendly remedies to many of the disposal dilemmas we all face.

"Daily activities like cooking, gardening, tossing out old medicine, and even sprucing up your garage can take their toll on our families and communities if the right products or disposal practices aren't used," said Sharon Newton, BAPPG Chair. "This year, we want families to be informed about environmentally-friendly options, so we've provided a few tips that will help keep pollutants out of the Bay—and toxic cleaners out of the home."

Every drop of water we flush, rinse or wash down toilets or indoor drains or allow into storm drains makes its way into San Francisco Bay either directly or via the sewer system. Wastewater travels from kitchens and bathrooms to treatment plants before being discharged to the Bay; however treatment processes cannot remove all the myriad chemicals found in toxic cleaning products, medication, paint, and other consumer products that are all too often flushed down drains. Furthermore, in most Bay Area municipalities stormwater from garden runoff and car-washing, enters creeks and the Bay directly, without treatment.

Cleaning products may help you tidy up your home and reduce germs, but they can also present several health concerns if they contain chemicals that can cause eye, skin, or respiratory irritation, or other immune system and health impacts. Choosing cleaning products that have positive environmental attributes (e.g., biodegradability, low toxicity, low volatile organic compound (VOC) content) – or even making your own home-made cleaners – can minimize harmful health impacts and help keep the Bay thriving as well.

"We have a vision for our San Francisco Bay-Delta regional communities that is clean, healthy, environmentally responsible and economically resilient," said Alexis Strauss, Water Division director for EPA's Pacific Southwest region. "We applaud BAPPG's work to get the word out to residents that before they shop, scrub, mulch, and discard this spring-cleaning season, they will know there are a variety of cost-effective, easy-to-use, and environmentally-friendly product and disposal options that make everyday sense."

Check Baywise.org for easy home and garden tips and drop-off locations near you.

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Permits Committee – Report to BACWA Board

Reporting Date: 3/17/11
Executive Board Meeting Date: 3/24/2011
Committee Chair: Jim Ervin

Committee Request for Board Action: None.

Upcoming Permits/Permit Amendments –

Mar – PCBs Permit Amendment
Mar – Attachment H Permit Amendment (Pretreatment)
Apr – Livermore-Amador Valley Water Management Agency Wet Weather Discharge

PCBs TMDL: The PCBs amendment was adopted by the Regional Water Board on 9 March and is effective on 1 April. Lila Tang discussed the late addition of provisions requiring risk reduction implementation and annual PCBs source evaluations. Water Board staff will also discuss these added requirements at BAPPG as well.

Permits committee members discussed with Lila the need to develop standard PCBs 209 congener reporting rules using Method 1668C. At this point, analytical laboratories do not report co-eluting congeners in a standard way. Water Board intends to have PCBs congeners reported electronically to the CIWQS database if the State can accommodate this. BACWA permits committee recommends having the discharger community develop standard reporting rules before the data is reported and compiled into the database. At this point, as long as the State CIWQS database is not formatted for PCBs congener data, the SMR data must be submitted via attached file.

eSMR: Regional Water Board staff, with State Board staff, scheduled eSMR training on 14, 22, and 29 March for the larger agencies that will begin reporting to eSMR during April. The first group of agencies must submit monthly SMR reports via both ERS and eSMR by 30 April.

The larger agencies in the first group all intend to develop their own software solutions for reporting via eSMR. The following smaller discharging agencies expressed concern that they do not have capability to make this change other than by hand entry of data: CMSA, DDSD, LGVSD, VSFCD, and Sunnyvale. This list may grow.

Numeric Nutrient Endpoint: A BACWA Nutrient Strategy Development Kick-Off Meeting with HDR One Company will be held at the end of BACWA Executive Committee meeting on 24 March, 11:00 to 1:00. The RMP Nutrient Strategy Team plans to meet at SFEI on 22 April and that will be followed by an RMP nutrient outreach education meeting on 29 June.

Sediment Quality Objectives: The State Water Board has proposed amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries Plan for sediment quality objectives (SQOs). The amendment adds objectives to protect wildlife and resident fish populations from toxic pollutants in sediments. Adoption hearing will be 6 April.

Pretreatment Reporting Requirements. The new Attachment H was adopted by Water Board on March 9th thanks in large part to efforts by Tim Potter from CCCSD and Michael Chee on Water Board staff.

Next BACWA Permits Committee Meeting

Tuesday, April 12th, 2011, at EBMUD Wastewater Treatment Plant Library.

Recycled Water Committee Report to BACWA Board

March 10, 2011

Prepared By: Cheryl Muñoz
Committee Chair

Committee Requests for Board Action:

1. Authorize a $24,000 contract with EPC Consultants, Inc. for Committee Support (FY 2011 & FY 2012.

2. Authorize a $40,000 contribution towards the development of a Recycled Water Landscape Guide (FY 2011).

Business Discussed and Action Items:

Business	Discussion
BAIRWMP Updates	Prop. 84 - The Prop. 84 Grant application was submitted in January that included $10 M for Bay Area recycled water projects. We don't expect to hear of the draft results until April 2011 at the earliest. At that time, there will be a series of financial steps that will then need to be taken including drafting agreements with participants and funds to BACWA for administration. Updating the BAIRWMP – The schedule for this project hasn't yet been finalized. Marin Municipal Water District received an $800,000 DWR grant to help with the project.
Legislation Updates	Title XVI – The Bay Area Recycled Water Coalition is working on drafting a loan bill that would require an authorization.
Regulatory Updates	Title 22 - The WateReuse CA Section is working with the SWRCB and CDPH to discuss a revised comprehensive draft of the Title 22 rules and regulations. The BACWA representative to the WateReuse Leg/Reg Committee will forward any comments that BACWA agencies may have.
FY 10-11 Committee Projects	Recycled Water Landscape Guide - The WateResue Foundation has agreed to partner on the project. The Foundation would provide in-kind services and act as the fiscal agent. Current project contributions total $100,000. This amount includes $40,000 that has been included in the FY 10-11 BACWA budget, but Board approval for the funds is needed. Other contributors include additional funds from some of the BACWA agencies, San Jose State University, Google, San Jose Water Company, and some Bay Area landscape firms. The project is scheduled to begin in June 2011, with HortScience, Inc. as the consultant. Bay Area Recycled Water Use and Uses in the Bay Area – The Committee plans to begin work on this project within the next two months. A request for consultant assistance for this project as well as additional administrative and technical Committee support will be made to the BACWA Board in March.
Other Items	Regional Recycled Water Outreach Project - Eric Rosenblum from South Bay Water Recycling spoke with staff at the RWQCB about contributing $100,000 towards the project. He stated that those funds will probably not be available this year. He is working with staff to include funds in their 2012 budget. He

	plans to discuss the project with the No CA Chapter of WateReuse to help with interagency collaboration. RWQCB Recycled Water White Paper - Vince Christian from the RWQCB (Region 2) is preparing a paper to inform the SWRCB about the current status of recycled water in the region, and to project how much recycled water will be produced in the next five to ten years. Vince sent out e-mails to agencies to get updates on their recycled water projects in relation to the BAIRWP Tier 1, 2 and 3 projects. Data form this report may be used and an information source for the Committee's "Bay Area Recycled Water Use and Uses in the Bay Area" project. Guidelines for Preparing Economic Analysis for Recycled Water Projects - This document was put together by students at Davis for the SWRCB with the purpose of providing uniform guidance for preparing economic analyses for recycled water projects. The Committee does not have any issues with the document.
Next RW Committee Meeting	Wednesday, April 6, 2011 from 10:00 am to 12:00 pm EBMUD Headquarters, 4th Floor Conference Room

Collection Systems Committee Report to BACWA Board

March 17, 2011
From: Andy Morrison, Committee Chair
Prepared By: Monica Oakley

Committee Request for Board Action:

None.

Highlights of New Items Discussed and Action Items

Regional Water Board Staff Share Collection Systems Priorities

A total of 51 committee members turned out to hear Lila Tang and Claudia Villacorta, Regional Water Board staff, share information about their operations and priorities at the March 3 BACWA Collection Systems Committee meeting. Lila and Claudia also answered a variety of questions from committee members. Lila Tang is Chief of the NPDES Permits Division, and Claudia is the Collection Systems Program Manager. Claudia is the main contact regionally for the State Water Board's general permit for collection systems. She is involved in forming strategy and priorities for the Regional Water Board's collection system activities, is involved in enforcement of collection system (especially sanitary sewer overflows, SSOs), and interacts with State Water Board staff on implementation of the State Water Board general permit for collection systems.

For the past couple of years, the regional enforcement priority for collection systems has been focused on SSOs greater than 50,000 gallons. In the future, Regional Water Board staff will be looking at smaller SSOs, however Lila acknowledged that different SSOs with the same volume may have different impacts. They are looking at other benchmarks also, such as number of SSOs per 100 miles per year, and the number due to grease blockages, for example. In addition, when considering the funds spent on the collection system, they are looking at the age of the system also. Regional Water Board staff are also working with State Water Board staff on priority setting.

Lila indicated that they struggle with inconsistent reporting. For example, she indicated that some agencies report every single drop, and acknowledged that these agencies would get targeted for more enforcement action. She wants to prioritize on what's really a problem. Regional Water Board staff are also interested in making the methods for estimating volume for each SSO reported more consistent throughout the region.

Easement Maintenance Issues

Committee members shared their experiences with easement maintenance at the March 3 committee meeting. About 15 different agencies talked about their challenges and successes. The information is currently being compiled as a resource for committee members in the future.

Changes to State-wide SSO WDR

Revisions to the state-wide SSO Waste Discharge Requirements (WDR) are currently expected to be released in a draft form in the near future. A revised version was briefly posted on the State Water Board website, but was quickly taken off the site. Committee members were later told it had not undergone full internal review. This was good, since the revised version that was posted contained significant new requirements. An official revised general permit has still not been released as of the date of this report.

Next BACWA Collection Systems Committee Meeting

The next committee meeting is scheduled for April 7 at the Boy Scouts facility in San Leandro.

Grant Disbursement Summary to Date (Mar. 17, 2011) Bay Area Integrated Regional Water Management (IRWM) Prop 50 Grant											
Agr. No.	**Implementing Agency**	**Project Title**	**DWR Proj. No.**	**Max. State Grant Funds by Project**	**Grant Funds Invoiced to date**	**Paid by DWR to date**	**DWR Retention**	**Admin[2] Funds Rec'd by BACWA**	**Funds paid out to date**	**Payable as of this date**	**Total Paid and Payable**
1	Contra Costa Water District	Regional Intertie (VFDs)	1	**500,000.00**	**500,000.00**	181,397.33	(50,000.00)		176,731.44	0.00	176,731.44
		BACWA Admin	16	15,625.00	7,142.85	5,959.11	(662.12)	15,625.00			
2	East Bay Municipal Utility District	Reg. Conservation Outreach	2	**250,000.00**	**250,000.00**	250,000.00	0.00		1,889,049.85	2,340.41	1,891,390.26
		California WaterStar Initiative -	3	525,000.00	0.00	0.00	0.00				
		New Business Guidebook Pilot	4	75,000.00	0.00	0.00	0.00				
		Richmond Adv Recycling	8	**2,127,600.00**	**2,127,600.00**	1,648,512.93	(183,168.10)				
		BACWA Admin	16	46,875.00	21,428.55	17,877.33	(1,986.37)	46,875.00			
3	City of Redwood City	Redwood City Recycled WP	5	**972,800.00**	**972,800.00**	**972,800.00**	**0.00**		978,759.11	0.00	978,759.11
		BACWA Admin	16	15,625.00	7,142.85	5,959.11	(662.12)	15,625.00			
4	City of Palo Alto	Mt.View-Moffett Recycl WP	6	**972,800.00**	**972,800.00**	**972,800.00**	**0.00**		965,858.13	2,275.98	968,134.11
		BACWA Admin	16	15,625.00	7,142.85	5,959.11	(662.12)	15,625.00			
5	Santa Clara Valley Water District	Reg. Conservation Outreach	2	**125,000.00**	**125,000.00**	125,000.00	0.00		80,625.00	4,377.33	85,002.33
		South Bay Adv Recycl WTP	7	2,934,600.00	0.00	0.00	0.00				
	(& San Jose)	BACWA Admin[3]	16	31,875.00	6,428.55	4,377.33	(486.37)	31,875.00			
SJ	City of San Jose	BACWA Admin for SCVWD[3]	16	**15,000.00**	**15,000.00**	13,500.00	(1,500.00)	15,000.00	7,000.00	6,500.00	13,500.00
6	North Coast County WD	Pacifica Recycled Water Proj	9	744,400.00	0.00	0.00	0.00		0.00	1,459.11	1,459.11
	(& SFPUC)	BACWA Admin[3]	16	10,625.00	2,142.85	1,459.11	(162.12)	10,625.00			
SF	S.F. Public Utilities Comm	Reg. Conservation Outreach	2	**297,550.00**	**297,550.00**	297,550.00	0.00		242,045.00	20,918.22	262,963.22
		BACWA Adm for Reg.Consrv	16	31,250.00	14,285.70	11,918.22	(1,324.25)	31,250.00			
		BACWA Admin for NCCWD[3]	16	**5,000.00**	**5,000.00**	4,500.00	(500.00)	5,000.00			
SOL	Solano Co. Water Agency	Reg. Conservation Outreach	2	**50,000.00**	**50,000.00**	50,000.00	0.00		45,000.00	0.00	45,000.00
7	North Marin Water District	North Marin Recycled Water	10	**244,550.00**	**244,550.00**	**244,550.00**	**(0.00)**		241,750.47	0.00	241,750.47
		BACWA Admin	16	9,375.00	4,285.71	3,575.47	(397.27)	9,375.00			
8	Zone 7 Water Agency	Reg. Conservation Outreach	2	**60,000.00**	**60,000.00**	60,000.00	0.00		720,000.00	5,959.11	725,959.11
		Mocho GW Demin Project	11	**740,000.00**	**740,000.00**	740,000.00	0.00				
		BACWA Admin	16	15,625.00	7,142.85	5,959.11	(662.12)	15,625.00			
9	Marin Municipal Water District	Reg. Conservation Outreach	2	**200,000.00**	**200,000.00**	200,000.00	0.00		374,451.90	468.08	374,919.98
		Direct Installation HET Prog	12	366,800.00	311,894.35	197,719.52	(21,968.84)				
		BACWA Admin	16	9,375.00	4,285.71	3,575.47	(397.27)	9,375.00			
10	Montara Water & Sanitary District	Groundwater Exploration Project	13	**37,100.00**	**37,100.00**	33,390.00	(3,710.00)		33,390.00	1,191.82	34,581.82
		BACWA Admin	16	3,125.00	1,428.57	1,191.82	(132.42)	3,125.00			
11	Alameda County Water District	Reg. Conservation Outreach	2	**60,000.00**	**60,000.00**	60,000.00	0.00		589,334.11	0.00	589,334.11
		Alameda Creek Phase 2 Fish	14	**600,000.00**	**600,000.00**	540,000.00	(60,000.00)				
		BACWA Admin	16	15,625.00	7,142.85	5,959.11	(662.12)	15,625.00			
12	Sonoma Valley County Sanit. Dist.	Sonoma-Napa Marsh RWP	15	366,800.00	269,332.62	0.00	0.00		0.00	3,575.47	3,575.47
		BACWA Admin	16	9,375.00	4,285.71	3,575.47	(397.27)	9,375.00			
Grand Total				**12,500,000.00**	**7,932,912.56**	**6,669,065.56**	**(329,440.91)**	**250,000.00**	**6,343,995.01**	**49,065.55**	**6,393,060.56**

Notes: 1. BACWA Administration Costs invoiced, paid and retained to date: 114,285.59 95,345.78 (10,593.98)

3. Reimburse SFPUC and San Jose for Admin Costs until reimbursement = $80k then pay SCVWD & NCCWD

2.Admin funding = $152,250 in upfront funding plus grant check deductions.

3/17/2011

Director's Report to the Board

February 18, 2011 – March 18, 2011
Prepared for the March 24, 2011 Executive Board meeting

A. Organizational Developments

- ***Accounting.*** The Executive Director (ED) and Assistant Executive Director (AED) continue to make progress in automating generation of the monthly Treasurers Report (TR). Currently the TR is populated entirely by data generated from the new system, but the formatting of the TR is being automated to reduce errors and ensure readability. In April, BACWA will begin preparing contracts for the coming fiscal year and we anticipate bringing these to the Board for approval in May and June.
- ***Budget Development.*** A revised draft budget for the Fiscal Year 2011- 2012 was prepared for the March Executive Board meeting, and is included in the meeting materials. Notice of member dues was sent to all participating agencies in March.
- ***Ethics.*** Statements of Economic Interest (Form 700) must be submitted to the Assistant Executive Director by April 1, 2011. All designated Board members and alternates must complete a Form 700 (available at www.fppc.ca.gov). Those Board members also serving on the Aquatic Science Center Board may complete a single form.
- ***Communications.*** The March BACWA e-newsletter was sent; website improvements are ongoing.

B. Regulatory Affairs

- ***Mercury.*** The 2011 draft Annual Report is included in this month's Board packet. On March 17, 2011, the Regional Water Board formally approved BACWA's proposed metrics for evaluating compliance with the watershed permit's dental program requirements.
- ***PCB TMDL Implementation.*** On March 9, the Regional Water Board adopted a permit for municipal and industrial discharges of PCBs; a related memorandum with more information is included in this month's Board packet.
- ***Bacteria.*** On March 3, BACWA submitted comments on the State Board resolution approving the Regional Water Board's April 15, 2010 Basin Plan Amendment establishing bacterial objectives for waters designated for contact recreation
- ***Selenium.*** The ED worked with EBMUD and SFEI to organize the selenium sampling effort. All participating agencies have been notified and wet weather sampling is expected to begin shortly.
- ***Nutrients.*** The HDR meeting has been rescheduled for Monday, April 25. On March 16, 2011, EPA released a policy document titled "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions," which is available at http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/.
- ***e-SMR Transition.*** The ED participated in discussions with Tri-TAC representatives about e-SMR, and authorized consultant assistance to represent BACWA at upcoming e-SMR user groups. Available information indicates that none of the agencies that must comply with the April 1 reporting deadline are seeking to use ERS as a transition tool.

- ***EPA's Advanced Notice of Proposed Rulemaking.*** Tri-TAC/CASA is developing comments on the ANPR, with which the ED is assisting.
- ***Sanitary Sewer Overflow Waste Discharge Requirements.*** The draft WDR for SSOs was expected to be issued in March (and was, very briefly), but is now not expected until later in the year.

C. COLLABORATIONS

- ***Energy.*** BACWA will be co-sponsoring an energy efficiency seminar with the CWEA San Francisco Bay Section Professional Development Committee. The seminar is currently scheduled for May 19.

D. MEETINGS

March 23, 2011: RMP Technical Review Committee Meeting
March 25, 2011: RMP Emerging Contaminants Workgroup Meeting
April 6, 2011: BAPPG Meeting
April 7, 2011: Collection Systems Committee Meeting
April 12, 2011: Permits Committee Meeting
April 13, 2011: Laboratory Committee Meeting
April 13, 2011: San Francisco Bay Regional Water Board Meeting
April 20, 2011: AIR Committee Meeting
April 25, 2011: BACWA Executive Board Meeting

Executive Board Meeting Minutes

Thursday, February 24, 2011, 9:00 a.m. – 2:00 p.m.
EBMUD, 2020 Wake Ave, Oakland, CA

ROLL CALL AND INTRODUCTIONS

Executive Board Representatives: Ben Horenstein, Chair (East Bay Municipal Utility District); Laura Pagano (San Francisco Public Utilities Commission); Margaret Orr (Central Contra Costa Sanitary District); Mike Connor (East Bay Dischargers Authority); Kirsten Struve (City of San Jose).

Other Attendees: Stephanie Cheng (East Bay Municipal Utility District); Natalie Sierra (San Francisco Public Utilities Commission); Jim Ervin (City of San Jose); Andy Morrison (Union Sanitary District); Tom Hall (Sunnyvale/Eisenberg Olivieri Associates, Inc.);Monica Oakley (RMC Environmental); Denise Conners (Larry Walker Associates); Kevin Kennedy (HDR Engineering); David Reardon (HDR Engineering); Michael Falk (HDR Engineering); Amy Chastain (BACWA); Alexandra Gunnell (BACWA).

PUBLIC COMMENT

There were no public comments.

REPORTS

Committee Reports, agenda item 1, were included in the meeting handout packet attendees were invited to elaborate on their reports or field questions.

Monica Oakley distributed a preliminary assessment of Bay Area POTW mercury mass loading trends from 2008 - 2010. Of those agencies who have submitted their data 70% appear to have reduced their mercury mass loading during 2010. Information about flows for the year is still under review. The final report must be submitted by April 1. A draft will be circulated, finalized and included on the March Executive Board (EB) meeting agenda for approval. It was suggested that BACWA should discuss revising reporting requirements with the Regional Water Quality Control Board (RWQCB) when the permit is renewed.

The Collection Systems report included a list of ranked tech topics. Committee Chair, Andy Morrison mentioned that some lower ranking items have already been addressed with previous workshops and trainings. In response to inquiry from the EB about plans for the coming year, the following items were mention: updating Best Management Practices for SSO Reduction manual; responding to revised statewide Wastewater Discharge Requirements for Sanitary Sewer Systems (WDR); addressing electronic reporting requirements.

The ED will continue to work with CASA and Tri-TAC to address concerns about the Test of Significant Toxicity (TST) and add this as a discussion topic on the March EB agenda, possibly including a presentation from Dan Gallagher. The Permits committee will also include this topic and possibly scheduling a presentation for discussion at their upcoming meeting. Tom Hall and Margaret Orr would like to be included in the CASA/Tri-TAC subgroup working on this issue.

For **agenda item 2**, the **Proposition 50 Grant Disbursements Status Report** was included in the meeting handout packet.

Under **agenda item 3**, the Amy Chastain responded to questions about the **Executive Director's Report,** included in the meeting handout packet. It was mentioned that the report did not include information about a request from SFEI to contribute to their June 29, 2011 nutrient workshop. This may be brought back to the EB for approval in the future.

The ED continues to work with SFEI for Selenium analyses assistance and will contact Bhupinder Dhaliwal (CCCSD) to determine if consultant support is needed to summarize his research. The ED is also working on finalizing a contract for Suisun Bay Monitoring support, and may include a discussion of TIE work on the March EB agenda.

Executive Board (Board) members were invited to share any items of interest under **agenda item 4**, **Executive Board Reports.**

a. At the **Aquatic Science Center Meeting (12/2/2010)** Mike Connor requested that ASC look into assisting Alameda and Contra Costa County flood districts, Alameda County Water, and Union Sanitary District with efforts to obtain real-time regional precipitation data to redirect flows around and reduce overflows. SFPUC expressed interest in being included in this dialog.

b. Discussions at the **Regional Monitoring Program Steering Committee Meeting (2/7/2011)** focused on determining which special studies to pursue over next few years in light of limited funding, and the possibility of leveraging outside resources. The ED will circulate a draft summary of the meeting.

c. Key issues discussed **Tri-TAC Meeting (2/20/2011)** are addressed under other EB agenda items.

d. Mike Connor met with the Water Board Staff Meetings regarding eSMR. The ED is working on finding a date in April for next BACWA/RWQCB meeting and will proceed even if some EB members are not able to attend. EB board members will send their standing meeting dates to ED and Assistant Executive Director (AED).

e. There were no other items to report from the Executive Board members.

The following **Chair and Executive Director Authorized Actions** were listed under agenda **item 4**.

a. Executive Director authorization of agreement with Adammer to support the BAPPG Spring Cleaning Campaign; $4,999; File 12,352.
b. Executive Director authorization of agreement with Tom Barron to support the BAPPG Amalgam Separator Update; $2,500; File 12,328.
c. Chair authorization of catering costs for the Strass Energy Workshop; $3,200; File 12,366.

CONSENT CALENDAR

*Consent calendar **agenda items 6 and 7** were approved in a motion made by Margaret Orr and seconded by Ben Horenstein. The motion carried unanimously.*

6. Minutes from January 27, 2011 BACWA Executive Board Meeting.
7. December 2010 Treasurer's Report.

BOARD DISCUSSION ITEMS

Agenda item 8, HDR Nutrients Scope of Work Review & Discussion, included a presentation from HDR project team members. The kick-off meeting has been scheduled for March 14, 2011 from 1:00 until 3:00 p.m. The contract scope will be edited to include drafting of a response to the literature review and EB members will contact the ED with any concerns about the contract scope before the end of the day.

For **agenda item 9**, **EPA's Advanced Notice of Proposed Rulemaking Regarding the Bay Delta,** was discussed. Comments are due by April 25, 2011. The ED will prepare potential key points to circulate to the Board and determine whether to utilize consultant support. The ED recommended obtaining the entire document, EPA Water Quality Challenges in the SF Bay/ Sacramento-San Joaquin Delta Estuary - Unabridged Advance Notice of Proposed Rulemaking Feb 2011, from the EPA website because the Federal Register version does not include the bibliography.

For **agenda item 10, PCBS Source Control & Permit Discussion,** the ED noted that she will be attending the upcoming hearing and requested that those BACWA agencies planning to comment contact her.

For **agenda item 11, e-SMR Transition Update & Discussion** was discussed. ED met with Johnson Lam and he provided concept and budget. Johnson will put scope together, figure out licensing piece and budget estimate, hopefully in time for April 1 deadline. SFPUC will keep EB informed about how they are dealing with their reporting concerns.

Under **agenda item 12, Solano County E Measure: Amicus & Legislative Support,** *Margaret Orr made a motion to support drafting an amicus brief. It was seconded by Laura Pagano and passed unanimously.* Natalie Sierra will determine the next steps, including whether BACWA needs to retain counsel to prepare the amicus brief.

Under **agenda item 13, WERF Biosolids Trace Organics Collaborative Research Effort Support,** was discussed. *Mike Connor made a motion to contribute $5,000 on behalf of BACWA. It was seconded by Margaret Orr and passed unanimously.* The ED will investigate opportunities for BACWA to work together with WERF and add it to the March EB agenda for discussion.

CCSD noted that EPA has finalized new source performance standards and emission guidelines for incinerators which appear to take into account concerns raised by NACWA.

Under **agenda item 14, Fiscal Year 2011 – 2012 BACWA Revenue & Expense Budget Discussion,** the EB provided feedback to the ED for continuing work on a draft budget, to be approved at an upcoming EB meeting.

The next regular meeting is scheduled for **March 24, 2011**, **9:00 a.m. to 12:00 p.m.** at the EBMUD Plant **Lab Library** in Oakland.

The meeting adjourned at 2:00 p.m.

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 8

FILE NO.: 12,388

MEETING DATE: March 24, 2011

TITLE: Bay Area Recycled Water Landscape Guide Development

☒ **MOTION** ☐ **RESOLUTION**

RECOMMENDED ACTION

Authorize BACWA to contribute $40,000 to WateReuse California to partially fund a Bay Area Recycled Water Landscape Guide (FY 2010-2011) to provide developers and landscape professional with information to design, retrofit, and manage landscapes using recycled water.

SUMMARY

In an effort to promote and facilitate the use of recycled water for landscape irrigation in the Bay Area, and assist the State of California in meeting their goal of increasing the use of recycled water over 2002 levels by at least one-million acre-feet per year (afy) by 2020 and by at least two million afy by 2030, the BACWA Recycled Water Committee is requesting the BACWA Board authorize a contribution of $40,000 to WateReuse California to administer the development of a Bay Area Recycled Water Landscape Guide. The purpose of this project is to produce a practical and scientifically-sound document that provides new development and retrofit specifications for planning, designing, and managing landscapes in the Bay Area climate region that can be used by developers and landscape professionals.

WateReuse California has agreed to partner on the project, and will serve as the project administrator, the fiscal agent, and provide in-kind services. Current project commitments total $100,000. This amount includes $40,000 that has been included in the Fiscal Year 2010-2011 BACWA budget for this project. Other contributors include additional funds from some of the BACWA agencies, Santa Clara Valley Water District, retailers, Stanford University, San José State University, Google, and some Bay Area landscape firms.

The project is scheduled to begin in June 2011, with HortScience, Inc. as the consultant. The Guide will include sections on:

- Site evaluation to determine opportunities and constraints of using recycled water
- Criteria to evaluate a site for recycled water use (test water and soils, and interpret data)
- Listings of suitable plant material specific to the various microclimates in the Bay Area
- Examples of successful recycled water landscapes
- Specifications for landscape design, irrigation conveyance and management, and soils

FISCAL IMPACT

The Fiscal Year 2010-2011 budget and workplan allocated $40,000 for the development of a Bay Area Recycled Water Landscape Guide.

Submitted: Cheryl Munoz, RWC Chair **Executive Director Approval:** /s/ Amy Chastain

ALTERNATIVES

This action does not require consideration of alternatives.

Attachments:
1. Project Description: “Bay Area Guide to Designing and Managing Landscapes Irrigated with Recycled Water”

WateReuse California

Project title **Bay Area Guide to Designing and Managing Landscapes Irrigated with Recycled Water**

Submitted by Eric Hansen, South Bay Water Recycling
Phone: (408) 363-4714 Address: 3025 Tuers Rd. San José CA, 95121

Research Objective This project will address the need for recycled water irrigation standards/construction specifications for new development and retrofit landscapes, and create an easy to read "go-to" guide for routine landscape care on the use of recycled water. In addition, the guide will address regional outreach on the acceptance of recycled water for landscapes.

Technical Approach This project will produce a document that provides a practical and scientifically sound, recycled water landscape guide with new development and retrofit specifications for planning, designing, and managing landscapes in the San Francisco Bay Area climate region. The goal is to develop regionally acceptable guidance that agencies can cite for development and retrofit of recycled water irrigation projects using an approach and format that will allow for adaptation and use in cities and regions throughout the Bay Area.

This publication will provide developers and landscape professionals with the tools they need to design new landscapes, retrofit landscapes, and manage existing landscapes using recycled water. It will include sections on:

- site evaluation to determine opportunities and constraints to using recycled water;
- Develop criteria to evaluate a site for recycled water (test water and soils and interpret);
- lists of suitable plant materials, specific to various microclimates within the Bay Area;
- examples of successful recycled water landscapes;
- specifications for: landscape design; irrigation conveyance and management, and soils.

The document will be written by horticulturists and authors Nelda Matheny, HortScience, Inc., and Dr. Laurence Costello, University of California Cooperative Extension. Both have been leaders in the Bay Area in helping landscape professionals incorporate recycled water. They have authored many successful publications for landscape professionals and present technical, scientifically sound information in an easily understood and applied format. The Guide will be approximately 125 pages in length, and contain approximately 150 photographs, tables, charts and line drawings. It will be available in both printed and electronic formats. The Guide will undergo peer review by city planners, water retailers, developers, park managers, landscape professionals, and academics prior to distribution.

Originality and Innovation of the Research There is no comprehensive, practical, publication targeted to development professionals and landscape professionals providing planning specifications specific to soils, conveyance, and design of recycled water landscapes.

Potential Relevance and Future Applications To meet California's Recycled Water Policy of 20% by 2020, Bay Area cities will need the tools and specifications to assure the public/owner's landscape investment is protected to promote recycled water use. Historically, landscapes have been designed based on existing site conditions leveraging on the favorable climate and exceptional water quality available in the Bay Area with little restriction on plants and trees selected. However, changing the water quality from the legendary Hetch Hetchy

quality or similar groundwater quality to recycled water reduces the tolerance of many plant species already out of their native habitat. In some cases, property values and businesses have relied on flourishing landscapes as the very hallmark of a business's success.
To help cities provide prosperous environments for communities and businesses striving towards "green" and sustainable practices using recycled water, it is critical that information about successful recycled water landscape practices be communicated effectively. As our knowledge of recycled water irrigation has increased over the last 20 years, it has been realized that there are landscape design differences to accommodate water qualities and quantities.

Current city development practices/specifications impose little to no criterion for soils and irrigation design/conveyance with respect to the quality or quantity of irrigation water (recycled or conservation). Furthermore, as is too often the case, many developers fill landscapes with the cheapest most readily available fill, which in most cases will be incompatible with recycled water irrigation. In fact, in many cases, USGS soil maps provide little value and do not reflect the characteristics of the developed landscape. Furthermore, landscapes that convert to recycled water from drought tolerant conveyance "drip irrigation" devices find that these devices are not suitable for recycled water irrigation. Just as many city planning departments have design specifications for drought tolerant landscapes, we are recommending the development of this guide that will contain specifications for landscape design, irrigation conveyance and management, and soils.

Table 1. illustrates the benefits this publication will have on the 09-10 Key Research Challenges in Water Reuse and Desalination as identified by subscribers:

09-10 Key Research Challenges in Water Reuse	**This proposal directly addresses challenge by…**
1. Addressing known & unknown contaminants that persist in recycled water	evaluating constituents affecting landscape irrigation
2. Defining the risks of recycled water (risk assessment)	defining risk criteria used to assess landscape conversion
3. Defining environmental benefits/drawbacks of recycled water	enhancing landscape env. benefits
4. Inland salt management	"direct application"
5. Energy-water nexus for recycled water	promoting reuse to reduce energy demand
6. Project implementation issues (e.g. public acceptance, financing)	securing public acceptance of landscape application
7. Data/approaches to support development of end use/performance criteria for recycled water	practical application of science using simple data communication
8. Energy-water nexus for desalination	reducing pressure on need for desalination

Budget WateReuse will manage the work schedule and distribution of budgeted funds. We have received interest to fund and participate from South Bay Water Recycling, Santa Clara Valley Water District, Bay Area Clean Water Agencies (BACWA), Northern California Golf Association, Google, local landscape companies, universities, and regional agencies and retailers. Invoices have been sent as of 3/18/2011.

		Schedule	
Text preparation	$50,000	Kickoff Meeting	April 5, 2011
Graphics, illustrations	10,000	Start writing guide	June 2011
Design, layout, prod.	10,000	Draft sent to reviewers	June 2012
Printing, dist.	25,000	Graphics sent to reviewers	June 2012
Total	**$100,000**	Reviewers responses received	August 2012
		Final text completed	September 2012
		Publication design, layout	November 2012
		Copyedit page proofs, printer	December 2012
Provided by others	$60,000	Completion (electronic and printed)	February 2013
Requested from BACWA	**$40,000**		

Qualifications

Eric Hansen is a licensed Civil Engineer in the state of California and a manager with South Bay Water Recycling, one of the largest recycled water purveyors in California. With over 600 customers and approximately 10,000 acre-feet per year, the majority using recycled water for landscape irrigation, Eric's 10 years of experience in recycled water provides first hand knowledge of the issues affecting landscapers and developers converting to recycled water for irrigation. Eric was also project engineer for a water quality pilot with the Bureau of Reclamation investigating the cost and energy demands of advanced treatment for recycled water. Eric also holds a B.S. degree in Chemistry from UC Davis and an M.S. degree in Engineering from Stanford University. Eric is also President of the Northern California Section of WateReuse for 2009-2010. Eric Hansen will not receive compensation for this work and will only provide input as an author and advisor.

Nelda Matheny is president of HortScience, Inc. in Pleasanton CA, a horticultural, arboricultural and urban forestry consulting firm that she started in 1983. Nelda received a B.S. degree in plant science and an M.S. degree in horticulture at the University of California at Davis.

Ms. Matheny has been involved in site evaluation and landscape management using recycled and desalinated water in California since the early 1980's. Over the last 20 years she has helped developers, landscape professionals, and water agencies successfully incorporate recycled water into San Francisco Bay Area landscapes. She has presented on the subject throughout the U.S. and in Australia.

Ms. Matheny is a prolific writer, having co-authored five books and dozens of articles focused on subjects of interest and value to arborists and landscape professionals. She excels at applying scientific research to professional practice and developing clear and concise technical guidelines. A partial list of publications follows. For further information, visit the website at www.hortscience.com.

Matheny, N., A. Jain, and J. Ezell. 2010. Manating salinity through site management in Redwood City. Proceedings, WateReuse California 2010 Conference. San Diego, CA.

Matheny, N. and J. Clark. 1999. Managing landscapes using recycled water. *Arborist News*. 8(6): 37-43.

Matheny, N. and J. Clark. 1998. Managing landscapes using recycled water. In: The *Landscape Below Ground II*. D. Neely and G. Watson, editors. International Society of Arboriculture. Champaign IL. Pp 246 – 265.

Harris, R. W., J. Clark and N. Matheny. 2004. *Arboriculture – Care of landscape trees, shrubs and vines*. 4th Ed. Prentice Hall Inc. Upper Saddle River NJ.

Costello, L.C., E. Perry, N. Matheny, J.M. Henry and P. Geisel. 2003. *Abiotic disorders of landscape plants: A diagnostic guide*. Pub. 3420. University of California Ag and Natural Resources, Oakland CA.

Costello, L.R., N. Matheny and J. Clark. 2000. *The landscape coefficient method. In A guide to estimating irrigation water needs of landscape plantings in California.* Dept. of Water Resources, Sacramento, CA.

Dr. Laurence Costello Environmental Horticulture Advisor, University of California Cooperative Extension, San Mateo and San Francisco Counties.

Principal Responsibilities: Conduct an education and applied-research program in landscape horticulture and urban forestry in San Mateo and San Francisco Counties.

Education: PhD, Plant Physiology, University of California, Berkeley, 1981; MS, Horticulture, University of California, Davis, 1975; BS, Plant Science, University of California, Davis, 1972.

Affiliations: International Society of Arboriculture (Western Chapter), Arboricultural Research and Education Association (ISA), American Society for Horticultural Science, San Francisco Urban Forest Council.

Awards: Alex Shigo Award for Excellence in Education, 2009; L.C. Chadwick Award of Arboricultural Research, International Society of Arboriculture, 2002; ISA Western Chapter Research Award, 1997; International Society of Arboriculture Western Chapter Honorary Member Award, 1994; Northern California Turf and Landscape Council Research Award, 1991; International Society of Arboriculture Western Chapter Research Award, 1990.

Relevant Publications

Costello, L. R., B. Hagen, K. A. Jones. (In press). *Oaks in the Urban Landscape: Selection, Care, and Preservation*. University of California Agriculture and Natural Resources, Publication 3518, Oakland, CA.

Costello, L.R. and L.R. Oki. 2008. *Trees in containers: a water management challenge.* Arborist News 17 (3): 60-63.

Costello, L.R., K.S. Jones, and D.D. McCreary. 2005. *Irrigation effects on the growth of newly planted oaks (Quercus spp.)*. J. of Arboriculture 31(2):83-88.

MacDonald, J.D., L.R. Costello, J.M. Lichter, and D. Quickert. 2004. *Fill soil effects on soil aeration and tree growth*. J. of Arboriculture 30(1):19-26.

Costello, L.C., E. Perry, N. Matheny, J.M. Henry and P. Geisel. 2003. *Abiotic disorders of landscape plants: A diagnostic guide*. Pub. 3420. University of California Ag and Natural Resources, Oakland CA.

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Randrup, T.B., E.G. McPherson, and L.R. Costello. 2001. *Tree root intrusion in sewer systems: a review of extent and costs*. Journal of Infrastructure Systems 7(1) 26-31.

Costello, L.R., C.L. Elmore, and S. Steinmaus. 1997. *Tree root response to circling root barriers*. J. of Arboriculture. 23(6): 211-218.

Costello, L.R., D. Thomas, and J. DeVries. 1996. *Plant water loss in a shaded environment*. J. of Arboriculture 22(2):106-108.

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BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 9
FILE NO.: 12,381
MEETING DATE: March 24, 2011

TITLE: Recycled Water Committee Administrative and Technical Assistance

☒ **MOTION** ☐ **RESOLUTION**

RECOMMENDED ACTION

Authorize the BACWA Recycled Water Committee to contract with EPC Consultants, Inc., to assist the Recycled Water Committee with administrative and technical support, in an amount not to exceed $24,000 (FY 10-12).

SUMMARY

The Recycled Water Committee is requesting funds for consultant assistance with administrative and technical tasks. The purpose of this request is to provide the Committee with support that will allow the Committee to expand its work on recycled water issues of importance to the BACWA agencies. A considerable amount of committee member time is spent coordinating activities, researching issues, conducting analyses and preparing documents related to local, regional, state-wide and federal recycled water issues. In 2010-11, the Committee was responsible for coordinating the recycled water Prop. 84 grant submittal for the entire Bay Area including the North Bay. This task required numerous hours of Committee members' time over several months, in addition to their agency responsibilities, performing administrative and technical work that could have been eased with consultant assistance.

The committee would like to enter into a Professional Services Agreement with EPC Consultants, Inc. to provide administrative and technical services. The consultant's Scope of Work includes:

Task 1: Recycled Water Committee Support ($9,000)
Task 2: Develop Table of Bay Area Recycled Use and Uses ($8,000)
Task 3: As-Needed Technical Services ($7,000)

This contract will be managed by the Recycled Water Committee Chair.

FISCAL IMPACT

The Fiscal Year 2010-2011 budget and workplan allocated $11,000 for this project and the remaining $13,000 will comprise the Recycled Water Committee budget for the Fiscal Year 2011-2012.

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 and Budget

Submitted: Cheryl Munoz, RWC Chair **Executive Director Approval:** /s/ Amy Chastain

SCOPE OF WORK

Professional Services by EPC Consultants, Inc.
Fiscal Years 2010-11 and 2011-2012

EPC consultants, Inc. will provide the following professional services to BACWA, the costs of which are **not to exceed $24,000**:

Task 1: Recycled Water Committee Support ($9,000)

Assist the Committee Chair with general meeting planning, preparation of meeting notes and Committee reports, and other administrative tasks; includes travel to and meeting attendance.

Task 2: Bay Area Recycled Use and Uses ($8,000)

Prepare a table depicting current recycled water use (mgd/AFY) and uses, and future use and uses of BACWA member agencies. The purpose of the table is to track recycled water implementation, and would be updated on an annual basis.

Task 3: As-Needed Technical Services ($7,000)

Provide additional technical services as needed. Such services may include, but is not limited to the following:

- Assist with updating the Bay Area Integrated Water Management Plan recycled water project information
- Assist with updating the BACWA recycled water white paper “Importance of Recycled Water to the San Francisco Bay Area”
- Prepare or assist with the preparation of technical data analyses
- Prepare or assist with the preparation of comments, issue summaries, position papers, program strategies, white papers, of other written documents

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

Sustainable Treatment Workshop
March 4, 2011
Discussion Notes

The following tables present lessons learned from the Strass WWTP Case Study and ideas on broader application of the concepts:

Organizational		
Strass Key Feature	**Lesson Learned**	**Broader Examples**
Mgt and ops desired a sustainable organization and jointly defined their objective to be cost and energy neutral	Define, and align, your organizational behavior	Define organizational objectives. Objective could be GHG-neutral, energy-neutral, cost-neutral, no increase in GHG, minimize Carbon Footprint, etc.
Rates are considered to be a temporary subsidy – plant should be cost-neutral!	Consider the customer's perspective	Watershed approach is needed for related W and WW utilities.
Employee empowerment	Educate and train operating staff Streamline accountability structure Manager has to let go	Continuous benchmarking. Well paid work force.
Management set objectives based upon kWh per kg COD removed, or per capita	Use the right metrics	Not $/MG, rather kWh per kg BOD, N treated, and per ton DS. Both plant-wide as well as process-based metrics.
Employed Swiss and German approaches, not just Austrian practices	Try to do the right thing, even if beyond current regulations	Public involvement. Carbon footprint objectives.
Culture influences what "do the right thing" means	Not wasting is part of the culture in Austria. Important to create a culture that places value on the right things	Public and employee education to get beyond external motivation to intrinsic motivation
Used a continuous improvement approach	Success came from continual tweaking, not overnight. Incremental changes add up	Continuous internal benchmarking. No incremental gain is too small

Organizational		
Strass Key Feature	**Lesson Learned**	**Broader Examples**
Compliance based on probabilistic analysis, not single exceedance	Regulatory flexibility allows for greater technical innovation and better overall outcomes	Opportunity to partner with Regional Water Board to explore approaches
Highly educated, well-paid, motivated workforce	Develop job description based on value you want to extract	Challenge in Bay Area to find qualified staff - BayWorks and BACWA are working on this
Active engagement with local universities and thought leaders	Take advantage of existing economic clusters and the community knowledge-base	Collaboration with Stanford, UC Berkeley and other local universities, as well as other community resources

Technical		
Strass Key Feature	**Lesson Learned**	**Broader Examples**
Two stage CAS minimizes energy requirements while maximizing digester gas production	Plan long term; implement short term (aka ensure each step takes you toward a long term goal)	Create a vision of your future plant on your existing site
Short SRT first stage CAS, particulate, colloidal and soluble organics capture with little endogenous decay	Conserve COD for diversion to digestion and biogas	CEPT, DAF, short SRT first stage
1. High efficiency strip aeration 2. DO setpoint control	Minimize aeration costs for BOD and ammonia oxidation	Diffusers, blowers. Denitrification helps! Understand the plant's diurnal loading
Whole plant energy balances used for decision analysis	Use tools that allow comparison of alternatives	CHEApet, LCAMER, etc
1. Screw press instead of centrifuge for dewatering 2. CHP generator replaced with higher efficiency units	Select equipment and controls with the overall objective in mind	Pumping, mixing, aeration, thickening, dewatering
1. Grease waste augmentation. 2. Also glycerol from biodiesel and select pharmaceuticals. 3. Minimal/No Cost to High value waste contributors	1. Maximize COD to digestion and biogas – codigestion. 2. Partner with industry!	Import grease, rendering wastes, food wastes
Anammox on hot high-N sidestream	Treat wastes at their highest concentration to unlock additional cost savings	Eliminate ammonia in recycle stream, which may reduce main plant's removal requirements

The following notes summarize the group's responses to discussion questions posed at the workshop:

Of all the ideas you've heard today, what approach or technology has the greatest potential for application at Bay Area utilities?

- Automation
- Measurement
- Every increment counts
- It's a process without an end point—continuous improvement
- Public education
- Employee incentives/valuation
- Incentives not just for employees, but all WWTP parties
- Management vision
- Working through risk management
- Listen to community
- Using resources
- Benchmarking (against your own metrics)
- Opportunities on pumping (industrial program thru PG&E)
- Create a vision of your future plant on your site

How can we partner with others (Water Board, EPA, BAAQMD, PG&E, Universities) to advance the ideas discussed today?

- Common definition and vision for sustainability
- BACWA as a champion
- Balance multiple objectives
- Flexibility for risk taking
- Large costs associated with last increment of compliance reliability
- Share info on university relationships
- Legislative education

How do we educate the public about the importance of energy management and the wastewater industry's role?

- Message should describe cradle-to-grave of water resources, e.g. conservation messages
- Incorporating into school curriculum standards, starting from low grades
- Focus on modern hydrologic cycle
- Utilize WEF materials
- Depends on agency's reputation in the community

Is energy management the right objective? Should it be carbon footprint? GHG emissions? Triple bottom line?

- All of the above
- Cost neutrality
- Legal obligations for certain metrics

What are the technical gaps that are preventing Bay Area agencies from achieving Strass' success?

- Measurement technologies to the level of precision we need
- Nurturing of manufacturers (SoCal example)

The "early adopters", ie the first utilities that try new technologies, usually bear the risk. To accelerate the use of new technologies, who should participate in the risk (utilities, regulators, vendors, consultants, PPPs) and how do we incentivize use of new technology?

- Consortium to test new equipment
- Co-funding of pilots by PG&E, agencies, CEC
- Flexibility in incentive programs
- Applied research collaborations
- PG&E incentives are for "non-standard" measures

What are the policy gaps that are preventing Bay Area agencies from achieving Strass' success?

- Receiving value for energy produced
- Engaging in policy discussion that will allow for R&D, emerging technology, risk tolerance
- Constraints of competitive procurement policies
- "What's in it for me?" mentality

What types of programs (future workshops, advocacy, info sharing forums) would be most helpful to BACWA members in furthering energy management and sustainability goals?

- Technology incubation/pilot program

- Note that EPA region IX is launching an energy effort partnering program – opportunity for BACWA agencies to participate
- Website bulletin board/info sharing
- Advocacy on making incentive programs most effective
- Best practice/information sharing workshop, vision sharing
- White paper on net environmental impact of regulations

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 11

FILE NO.: 12,315

MEETING DATE: March 24, 2011

TITLE: Guidelines for Implementation of the Arleen Navarret Leadership Award

☒ **MOTION** ☐ **RESOLUTION**

RECOMMENDED ACTION

Approve the guidelines for eligibility and administration of the Arleen Navarret Leadership Award.

SUMMARY

On December 16, 2010 the BACWA Executive Board approved a resolution establishing the Arleen Navarret Leadership Award in honor of former Board member and San Francisco Public Utilities Commission (SFPUC) employee Arleen Navarret. The Executive Director solicited input from various Board representatives and SFPUC employees to develop the following guidelines for administration of the award, the first of which will be presented in January 2012.

Purpose: To recognize and encourage emerging leaders in the BACWA community who exhibit the characteristics possessed by former BACWA Chair, Arleen Navarret:

- Leadership in the workplace and wastewater community
- Commitment to environmental protection
- Mentorship of and compassion for others
- Technical expertise
- Ability to communicate effectively with myriad people
- Exemplary public service

Eligibility: All current employees of BACWA member agencies are eligible for this award.

Nominations: Any current employee of a BACWA member agency may nominate any employee of any BACWA member agency.

Selection: A committee of no more than five members comprised of the BACWA Executive Director, SFPUC and other designated BACWA representatives shall review nominations and select the awardee. No more than two BACWA Board members shall serve on this committee.

Award: The awardee shall receive $1,000 to be applied to a professional development opportunity related to leadership, environmental protection, or technical skills development. The award shall be presented biennially at the BACWA Annual Meeting.

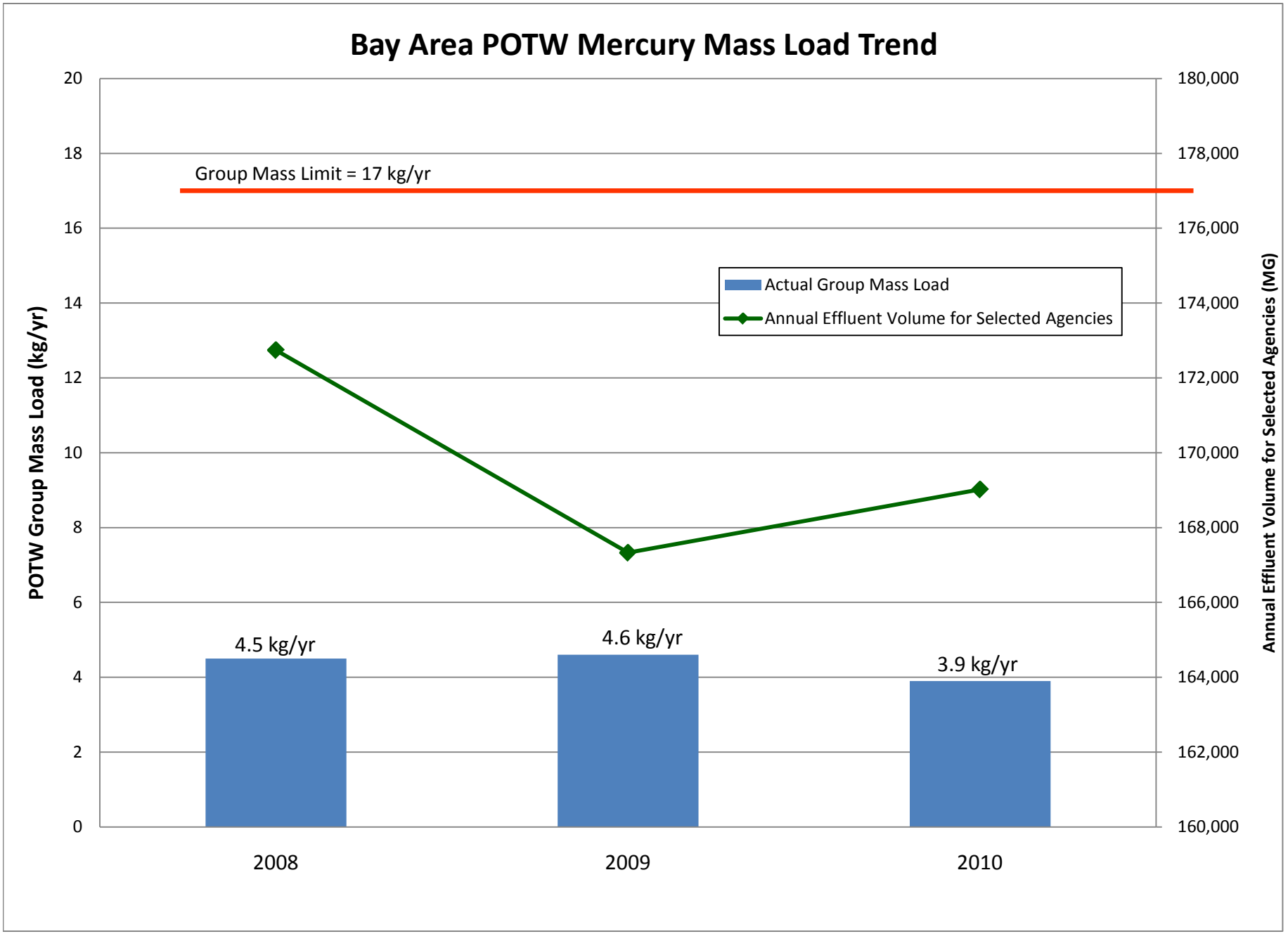
FISCAL IMPACT

This action will not have any fiscal impact for the current year, but will require $1,000 in the Fiscal Year 2011-2012.

ALTERNATIVES

This action does not require consideration of alternatives.

Submitted: Amy Chastain **Executive Director Approval:** /s/ Amy Chastain


Bay Area POTW Mercury Mass Load Trend
POTW Group Mass Load (kg/yr)
Annual Effluent Volume for Selected Agencies (MG)
Group Mass Limit = 17 kg/yr
Actual Group Mass Load
Annual Effluent Volume for Selected Agencies
4.5 kg/yr
4.6 kg/yr
3.9 kg/yr
2008
2009
2010
0
2
4
6
8
10
12
14
16
18
20
160,000
162,000
164,000
166,000
168,000
170,000
172,000
174,000
176,000
178,000
180,000

Bay Area Clean Water Agencies

2010 Mercury Watershed Permit Group Report

April 1, 2011

DRAFT
March 17, 2011

Prepared by RMC Water and Environment

Bay Area Clean Water Agencies

2010 Mercury Watershed Permit Group Report
April 1, 2011

Introduction

On November 1, 2007 the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) adopted the Mercury Watershed Permit, also known as National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038849, Regional Water Board Order No. R2-2007-0077. The purpose of the mercury watershed permit was to implement requirements associated with the mercury Total Maximum Daily Load (TMDL), which was adopted by the Regional Water Board in August 2006, approved by the State Water Resources Control Board (State Water Board) in July 2007, and approved by the United States Environmental Protection Agency (USEPA) in February 2008.

The Mercury Watershed Permit became effective on March 1, 2008 and established limitations and requirements on the discharge of mercury from current municipal and industrial NPDES permittees which discharge treated wastewater to San Francisco Bay or its tributaries. The permit superseded all existing mercury requirements in existing individual wastewater permits to ensure consistent, complete, and coordinated implementation of the TMDL's requirements. This group report is submitted on behalf of municipal permittees associated with the watershed permit.

Watershed Permit Group Reporting Requirements

One of the requirements indicated in the watershed permit was for agencies to report mercury mass loads and source control activities on an annual basis. The permit allowed permittees to report this and other information either individually, or as part of a group. The Bay Area Clean Water Agencies (BACWA) opted to form a group and invite municipal permittees to participate. If permittees desired to participate in a group process, they needed to notify the Regional Water Board by February 1, 2010 (deadline for annual Self-Monitoring Report, or SMR) of this intent.

Electronic forms for BACWA group participants were prepared to facilitate the reporting process for both participants and the organizer. These electronic forms were developed in MS Excel based on the forms in the watershed permit, and were emailed to potential group participants with a readily available email address on January 6, 2011. The due date for submittal of data under the group reporting program was February 15, 2010.

Data Collection and Compilation

The annual reporting forms were organized into three parts as follows:

- Part 1 – Basic Information
- Part 2 – Mercury Data
- Part 3A – Source Control Information
- Part 3B – Specific Source Control Checklist

Reporting forms for Part 1 and Part 2 were drawn directly from the mercury watershed permit. The reporting form for Part 3A is identical to mercury watershed permit Part 3. This form was re-numbered in order to incorporate an additional form (Part 3B), which was developed by BACWA and distributed to permittees for the 2010 report in order to obtain more consistent and complete information about source control. The need for this additional form was identified during compilation of the first BACWA Group Report in 2008

Completed forms were received on time from all 37 of the municipal agencies included in the mercury watershed permit. Data were received from group participants by email, fax, and regular mail. Data received by email were in a PDF or MS Excel format. Signed certification pages (in Part 1) were received from all participating agencies. The forms received are shown in **Appendix A**. The distribution of participating municipal permittees in the BACWA group is shown in **Table 1**.

Table 1. BACWA Group Participants

Municipal Permittees Participating in BACWA Group	Municipal Permittees Not Participating in BACWA Group
• American Canyon, City of • Benicia, City of • Burlingame, City of • Calistoga, City of • Central Contra Costa Sanitary District • Central Marin Sanitation Agency • Crockett Community Services District – Port Costa • Delta Diablo Sanitation District • East Bay Dischargers Authority • East Bay Municipal Utilities District • Fairfield-Suisun Sewer District • Las Gallinas Valley Sanitary District • Marin County (Paradise Cove), Sanitary District No. 5 of • Marin County (Tiburon), Sanitary District No. 5 of • Millbrae, City of • Mt. View Sanitary District • Napa Sanitation District • Novato Sanitary District • Palo Alto, City of • Petaluma, City of • Pinole, City of • Rodeo Sanitary District • Saint Helena, City of • San Francisco, City and County of, SF Int'l Airport (sanitary plant) • San Francisco (Southeast Plant), City and County of • San Jose/Santa Clara, Cities of • San Mateo, City of • Sausalito-Marin City Sanitary District • Sewerage Agency of Southern Marin • Sonoma Valley County Sanitation District • South Bayside System Authority • South San Francisco and San Bruno, Cities of • Sunnyvale, City of • US Naval Support Activity, Treasure Island • Vallejo Sanitation and Flood Control District • West County Agency • Yountville, Town of	None

Although most Bay Area municipal permittees normally report data electronically through the Electronic Reporting System (ERS), most agencies provided flow data and mercury concentrations rather than checking the box that data are reported through the ERS without supplying data.

Data submitted by BACWA group participants included all mercury concentration data collected throughout the 2010 calendar year, which were also averaged by month, as well as daily flow rates for sampling days, and a computed annual mass emission. All computations for group participants were checked for accuracy and usage of proper formulas for calculations, at a minimum. As indicated in the mercury watershed permit, if data were not available for every month that discharge occurred, an estimated annual mass emission was computed by normalizing the available data over applicable discharge months.

Estimated Mercury Mass Loads for 2010

The estimated annual mercury mass emission was determined for all municipal permittees listed in the mercury watershed permit. Results for each permittee and the sum for the group are shown in **Table 2**.

Table 2. Estimated Weighted 2010 Annual Mass Emission for Municipal Permittees

Municipal Permittee	2010 Annual Mass Emission (kg/yr)	Notes on Computations of Mass Emission for This Report
American Canyon, City of	0.0044	Used agency data and calculations.
Benicia, City of	0.0227	Used agency data and calculations.
Burlingame, City of	0.0127	Used agency data and calculations.
Calistoga, City of	0.0013	Used agency data and calculations.
Central Contra Costa Sanitary District	0.4342	Used agency data and calculations.
Central Marin Sanitation Agency	0.0750	Used agency data and calculations.
Crockett Community Services District - Port Costa	0.0001	Computed weighted annual mass emission from data provided.
Delta Diablo Sanitation District	0.0503	Used agency data and calculations.
East Bay Dischargers Authority	0.7977	Used agency data and calculations.
East Bay Municipal Utility District	0.6733	Used agency data and calculations.
Fairfield-Suisun Sewer District	0.03447	Used agency data and calculations.
Las Gallinas Valley Sanitary District	0.0522	Used agency data and calculations.
Marin County (Paradise Cove), Sanitary District No. 5	0.0000624	Used agency data and calculations.
Marin County (Tiburon), Sanitary District No. 5	0.00397	Used agency data and calculations.
Millbrae, City of	0.0155	Used agency data and calculations.
Mt. View Sanitary District	0.0115	Used agency data and calculations.
Napa Sanitation District	0.0159	Used agency data and calculations.
Novato Sanitary District	0.0723	Used agency data and calculations
Palo Alto, City of	0.0633	Used agency data and calculations.
Petaluma, City of	0.0109	Used agency data and calculations.
Pinole, City of	0.0330	Used agency data and calculations.
Rodeo Sanitary District	0.0177	Computed weighted annual mass emission from data provided.
Saint Helena, City of	0.0004	Used agency data and calculations.
San Francisco, City and County of, SF Int'l Airport	0.0022	Used agency data and calculations.
San Francisco (Southeast Plant), City and County of	0.3976	Used agency data and calculations.
San Jose/Santa Clara, Cities of	0.2211	Used agency data and calculations.

Municipal Permittee	2010 Annual Mass Emission (kg/yr)	Notes on Computations of Mass Emission for This Report
San Mateo, City of	0.1758	Used agency data and calculations.
Sausalito-Marin City Sanitary District	0.0248	Used agency data and calculations.
Sewerage Agency of Southern Marin	0.1077	Used agency data and calculations.
Sonoma Valley County Sanitation District	0.0063	Used agency data and calculations.
South Bayside System Authority	0.0927	Used agency data and calculations.
South San Francisco and San Bruno, Cities of	0.0522	Used agency data and calculations.
Sunnyvale, City of	0.0389	Used agency data and calculations.
US Naval Support Activity, Treasure Island	0.0038	Used agency data and calculations.
Vallejo Sanitation and Flood Control District	0.2256	Used agency data and calculations.
West County Agency	0.1599	Computed weighted annual mass emission from data provided.
Yountville, Town of	0.0039	Computed weighted annual mass emission from data provided.
TOTAL	**3.9**	

Interpretation of Estimated Mass Load Results

The estimated annual mass emission for 2010 is 3.9 kg/yr, which is lower than previous two years and lower than the mass limit of 17 kg/yr. The estimated group emission was 4.6 kg/yr for 2009 and 4.5 kg/yr for 2008. These results are illustrated in **Figure 1**, below.

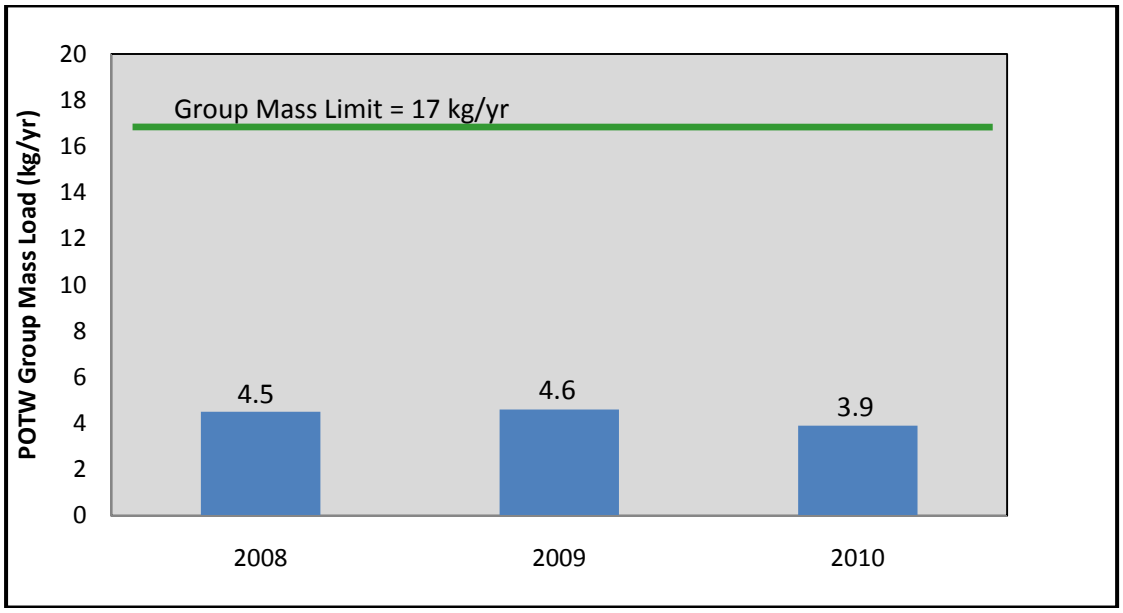


Figure 1. Trend in Estimated Annual Mercury Mass Emissions for Municipal Dischargers to San Francisco Bay Compared to Annual Mass Limit

Although the total group mass emission for 2010 is lower than the last two years, the difference may be related to the estimation process, and is not necessarily representative of any particular trend in mercury emissions to the Bay. Several additional years of data are needed to accurately identify mass loading trends.

Annual wastewater flows could potentially affect the mass emissions, however, a sampling of selected agency flows for 2010 did not result in any correlation between total volume discharged and total mass emission.

No agencies indicated any unusual events that would have contributed to higher than average mercury mass loads. Several agencies indicated they had implemented dental amalgam separator programs. One agency indicated that increased use of ferric chloride in an enhanced chemical treatment process for primary sedimentation could have contributed to a reduction in mass load.

The average of all mercury concentrations reported by BACWA group participants in the 2010 reporting period was approximately 19% lower than the average of those reported by participants in the 2009 reporting period, a significant reduction. By comparison, the reduction from 2008 to 2009 was only 5%. Overall, the estimated annual flow for all municipal agencies in 2010 was approximately equal to the estimated flow for these agencies in 2009.

Approximately 67% of municipal agencies had a lower mercury mass emission and approximately 33% had a higher mass emission, compared to 2009. For mercury concentration, 78% reported lower average concentrations, while only 22% of participating agencies reported higher average concentrations than 2009.

Based on the comparisons of 2009 and 2010 data, it is expected that mercury loads will continue to be variable among agencies from year to year. A number of additional years of data will be needed in order to identify specific trends. It is also of note that of the estimated 1,220 kg/yr of mercury discharged to San Francisco Bay[1], the municipal agency contribution is 3.9 kg/yr, or 0.3% of the total mass emission to the Bay.

Source Control Activities

Permittees participating in the BACWA group conducted numerous source control activities during the reporting period, as shown in **Table 3** on the following page. Highlights of the source control activities are as follows:

- Dental Amalgam Programs
- Thermometer and/or Thermostat Exchanges
- Fluorescent Light Recycling
- Household Hazardous Waste Collection
- Public Outreach/ Education
- Controls for Vehicle Service Facilities
- Battery Recycling
- Reduction of Mercury in Laboratory Waste
- Hospital/Medical Clinic Mercury Inspections and/or Related Source Reduction Activities

A checklist of possible source control activities was developed and provided to group participants as Part 3B of the reporting forms (as described above) in January 2011. This checklist resulted in more consistent reporting of source control activities. A detailed summary of Bay Area municipal mercury reduction activities in 2010 is follows **Table 3**.

[1] Source: *Mercury in San Francisco Bay, Total Maximum Daily Load (TMDL) Proposed Basin Plan Amendment and Staff Report*, California Regional Water Quality Control Board, San Francisco Bay Region, September 2004.

Table 3. Mercury Source Control Activities By Agency for 2010

Municipal Agency Listed in Watershed Permit	Mercury Source Control Projects Underway or Planned, as Reported by Agencies to BACWA **a = project was completed or underway in 2010 (and may be continuing)** **b = project is planned for the near future**					
	Dental Amalgam Program	Fluorescent Light Recycling	Household Hazardous Waste Collection	Public Outreach/ Education	Thermometer and/or Thermostat Exchange	Vehicle Service Facilities
American Canyon, City of	a,b	a	a	a,b	a	a,b
Benicia, City of	a	a	a	a	a,b	
Burlingame, City of	a	a	a	a	a	a
Calistoga, City of	a					
Central Contra Costa Sanitary District	a,b	a,b	a,b	a,b	a,b	a,b
Central Marin Sanitation Agency	a,b	a,b		a,b	a	a
Crockett Community Services District (Port Costa)		a	a	a	a	
Delta Diablo Sanitation District	a,b	a	a	a	a	a
East Bay Dischargers Authority	a	a	a,b	a	a	b
East Bay Municipal Utility District	a,b			a	a	a
Fairfield-Suisun Sewer District	a,b	a	a,b	a,b		a
Las Gallinas Valley Sanitary District	a,b	a,b		a,b	a	
Marin County (Paradise Cove), San. District No. 5 of	a,b	a	a	a	a	
Marin County (Tiburon), San. District No. 5	a,b	a	a	a	a	
Millbrae, City of	a,b	a	a	a,b	a	a
Mt. View Sanitary District	a,b	a,b	a,b	a,b	a,b	a
Napa Sanitation District	a,b			a	a	
Novato Sanitary District	a,b	a	a	a	a	b
Palo Alto, City of	a,b	a,b	a,b	a,b	a,b	a,b
Petaluma, City of	a,b	a	a	a		a
Pinole, City of	a,b		a,b	a,b	a,b	a,b
Rodeo Sanitary District	a	a	a,b	a	a	
Saint Helena, City of	b				b	
San Francisco, City and County of, SF Int'l Airport		a	a		a	
San Francisco (Southeast Plant), City and County of	a	a	a,b	a,b	a,b	
San Jose/Santa Clara, Cities of	a	a	a	a	a	
San Mateo, City of	a,b	a	a	a,b	a	
Sausalito-Marin City Sanitary District	a,b	a,b		a,b		
Sewerage Agency of Southern Marin	a,b	a,b		a,b	a	a
Sonoma Valley County Sanitation District	a,b		a	a,b		a

Municipal Agency Listed in Watershed Permit	Mercury Source Control Projects Underway or Planned, as Reported by Agencies to BACWA **a = project was completed or underway in 2010 (and may be continuing)** **b = project is planned for the near future**					
	Dental Amalgam Program	Fluorescent Light Recycling	Household Hazardous Waste Collection	Public Outreach/ Education	Thermometer and/or Thermostat Exchange	Vehicle Service Facilities
South Bayside System Authority	a,b			a	a	
South San Francisco and San Bruno, Cities of	a,b	a		a		a
Sunnyvale, City of	a	a	a	a,b	a,b	a
US Naval Support Activity, Treasure Island		a	a	a	a	
Vallejo Sanitation and Flood Control District	a,b	a,b		a,b	a,b	a
West County Agency	a	a	a	a	a	
Yountville, Town of		a	a	a		a

Dental Amalgam Programs

BACWA is in the process of estimating dental amalgam collected by dentists in the service areas of municipal NPDES permittees which discharge treated wastewater to San Francisco Bay or its tributaries and will have final results from that work effort by 2012. In the meantime, many agencies reported on the continuing development of their dental amalgam programs in 2010 -- details are provided on the original forms received as shown in **Appendix A**. Some preliminary quantitative information was also reported this year. For example, the Central Contra Costa County Sanitary District reported a 70% reduction of mercury observed in the treatment plant influent since 2004, prior to implementing the Dental Amalgam Program. In addition, the Union Sanitary District observed a measurable decrease in mercury of more than 50% in wastewater flow monitored at a particular sewer manhole following the installation of amalgam separators and the adoption of best management practices at dentist offices.

Also during 2010, BACWA compiled the results of a survey completed at the end of 2009 designed to evaluate, at a preliminary stage, the collective efforts of Bay Area municipal agencies with respect to the two metrics identified in the mercury watershed permit (the percent of dental offices participating in a dental program, and the quantity of dental amalgam collected). The survey data showed that, as of December 2009, an estimated 76% of dental practitioners who handle mercury amalgam were participating in their local wastewater agency's mercury source control program. Of those agencies participating, 67% were either self-certified/permitted or had been inspected by their local agency. The survey also indicated that mercury discharges to wastewater agencies' influent from regional dental offices was estimated to have decreased by an average of 48%. This decrease was attributed to dental offices implementing best management practices (BMPs) and installing amalgam separators. Stephanie Hughes is assisting BACWA in the regional dental amalgam program for municipal wastewater treatment facilities.

Collection of Other Mercury-Containing Wastes

Many agencies in the Bay Area were involved in the collection of household hazardous and other wastes in 2010, and some were able to quantify the mass of mercury collected. Examples of the specific estimates are as follows:

- The Napa-Vallejo Household Hazardous Waste Collection Facility collected 110 lbs (51 kg) of mercury during 2010 (according to the Napa Sanitation District as reported by Napa County).
- The Central Contra Costa Sanitation District collected 50.7 lbs (23.0 kg) of mercury, including 33.5 lbs (15.2 kg) of elemental mercury, during 2010, and annual mercury collection is more than seven times the amount of mercury that enters the wastewater treatment plant. In addition, the District has collected an estimated 1,760 lbs (798 kg) of mercury since 2004.
- The Delta Diablo Sanitation District collected an estimated 68.22 lbs (30.94 kg) of mercury through its household hazardous waste and retail take-back activities.
- The City of Palo Alto collected approximately 63.5 lbs (28.8 kg) of devices such as thermometers and thermostats and 5,890 lbs (2,672 kg) of fluorescent lamps during Fiscal Year 2009-10.

- The City of Sunnyvale recycled approximately 16,783 fluorescent and compact fluorescent lamps; 1,036 high intensity discharge (HID), metal halide, and mercury vapor lamps; and 28 lbs (13 kg) of laboratory waste and mercury switches from City operations.
- The City of American Canyon received a 10-lb (4.5-kg) bottle of mercury at a take-back event.

Public Outreach and Education

Significant public education also occurred during 2010 throughout the Bay Area. As an example, the City of American Canyon estimated that about 5,000 residents were reached through outreach mailing, mercury take-back events, or household hazardous waste events. Also, during the year, agencies used multi-media formats including television and social media such as Twitter, to announce events and inform the public about the importance of mercury pollution prevention.

In addition to efforts by individual agencies, the Bay Area Pollution Prevention Group (BAPPG), a committee of BACWA, continued its coordinated regional dental outreach pollution prevention activities. BAPPG presented mercury pollution prevention information to 372 dental assistant or dental hygiene students at 10 schools around the Bay Area. Also, on January 13, 2010, BAPPG partnered with the California Water Environment Association (CWEA) Santa Clara Valley Section to offer a one-day training workshop on Dental Amalgam Programs which was attended by approximately 55 Bay Area agency staff. The workshop content was expanded from a previous workshop and included: mercury reporting requirements, public outreach, data management, compliance/enforcement, dental office inspection and general dental amalgam program information.

Other Mercury Reduction Activities

In addition to the reported source control activities described above, many agencies in the Bay Area recycled their wastewater for irrigation of turf and landscaping, industrial uses, and agriculture. This recycled water does not enter San Francisco Bay, yet most agencies didn't consider this specifically as a source control program in their individual reports.

Mercury Special Studies

The Mercury Watershed Permit requires that permittees conduct or cause to be conducted "studies aimed at better understanding mercury fate, transport, the conditions under which mercury methylation occurs, and biological uptake in San Francisco Bay, its contiguous segments, and tidal areas," and "studies to evaluate the presence of, or potential for, local effects on fish, wildlife, and rare and endangered species in the vicinity of wastewater discharges." [2]

BACWA member agencies have met and continue to meet these requirements through support of and participation in the RMP Mercury Strategy, developed in 2007, which articulates a five-year plan for mercury studies and identifies them as a top priority for the RMP.[3] To date, the RMP Mercury Strategy has resulted in a substantial body of work that includes three years of intensive

[2] Waste Discharge Requirements for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay (Order No. R2-2007-0077, NPDES No. CA0038849, Provision V.C.3.).

[3] More detailed information about the Mercury Strategy is available on the San Francisco Estuary Institute's RMP webpage at http://www.sfei.org/rmp/rmp_minutes_agendas.html.

spatial and temporal monitoring in small fish; a two-year study of mercury isotopes; a two-year study of passive samplers for aqueous methylmercury; analysis of sediment cores; development of a mechanistic model that relates mercury in the sediment and water column to fish and wildlife exposure; and modeling of sources, pathways and loadings.[4] In the coming year the RMP will be synthesizing the findings from this and related work – including the Water Environment Research Federation study on the bioavailability potential of mercury in wastewater, funded by BACWA – and updating the conceptual understanding of mercury and mercury processes.

Risk Reduction

Activities that have occurred since the BACWA March 1, 2010 progress report include the following: a preliminary needs assessment completed in July 2010; the first Stakeholder Advisory Group (SAG) meeting held on December 7, 2010; multiple teleconferences with stakeholders to discuss timing and funding for risk reduction projects; and preparation of a draft Request for Proposals (RFP). The next SAG meeting will be held on February 14, 2011, at which time the RFP will be issued. Proposals are expected to be selected in later part of April 2011, with projects beginning in June of 2011.

Summary and Conclusions

The weighted annual average mercury mass load for all municipal permittees to San Francisco Bay for 2010 is calculated to be 3.9 kg/yr. This mass load is 15% lower than the mass load estimated for the 2009 calendar year, 4.6 kg/yr. The mass load in 2008 was estimated to be 4.5 kg/yr. The 2010 estimated annual mercury mass emission is lower than the 17 kg/yr limit.

Agencies participating in the BACWA group conducted many mercury source control programs, and in some cases quantified the amount of mercury collected. For the collections that were quantified, more than 239 lbs (108 kg) of mercury were collected at household hazardous waste disposal facilities around the region.

In 2010, BACWA worked with its member agencies to continue development of the dental amalgam programs around the San Francisco Bay Area. On January 13, 2010, BAPPG partnered with the California Water Environment Association (CWEA) Santa Clara Valley Section to offer a one-day training workshop on Dental Amalgam Programs which was attended by approximately 55 Bay Area agency staff. The workshop content was expanded from a previous workshop and included: mercury reporting requirements, public outreach, data management, compliance/enforcement, dental office inspection and general dental amalgam program information.

BAPPG also continued its coordinated regional dental outreach pollution prevention activities by presenting mercury pollution prevention information to 372 dental assistant or dental hygiene students at 10 schools around the Bay Area.

Individual dischargers as well as BAPPG plan to continue to increase mercury pollution prevention activities throughout 2011.

[4] http://www.sfei.org/sites/default/files/2011%20Program%20Plan.pdf

Issue Paper
Planned Federal Dental Amalgam Regulations
Prepared by: Tim Potter
(rev: 3/17/11)

ISSUE: EPA has formally noticed their intention to start a process to establish federal standards to regulate dental amalgam. The standards could be established in a manner that could significantly impact wastewater agencies' pretreatment programs in California and nationally.

BACKGROUND: During a luncheon presentation at the CWEA P3S Conference on 3/2/11, Alexis Strauss invited comments from pretreatment programs on this developing program saying it would be better to comment early in the process before the EPA headquarters got too far into the project (e.g. don't wait until the regulations are drafted). While not discouraging individual agencies' comments, she did encourage comments from associations such as BACWA or statewide associations because they carry more weight.

PROPOSED PROJECT: Develop a comment letter that can be sent by one or more associations representing California wastewater agencies' pretreatment programs to be sent to the USEPA with an objective to positively influence the drafting of the proposed regulations to create standards that are effective in achieving national standards to control dental amalgam discharged to wastewater systems while not unnecessarily burdening local agencies to enforce standards that may not be appropriate to the dental community. Major issues to be addressed:

- Standards should only require BMPs and not sampling/analysis to comply with numeric limits.
- Traditional Enforcement Response Plan (ERP) used for other categorically regulated facilities should not be employed for the dentists. Standards should be set to ensure effectiveness but flexibility to account for local implementation strategies.
- Recordkeeping and reporting for both the dentists and the POTW should be flexible to account for local implementation priorities.
- Existing programs that meet minimum standards should be allowed to continue.

The content of the draft letter would be broadly distributed among wastewater agencies in the SF Bay Area for BACWA to consider submitting a letter, and statewide using appropriate group lists.

Initial project champion: Tim Potter, CCCSD

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 14

FILE NO.: 12,390

MEETING DATE: March 24, 2011

TITLE: Regional Monitoring Program Nutrient Strategy Support: South Bay Loading Update & Workshop Support.

☐ **MOTION** _____ ☐ **RESOLUTION** _____

RECOMMENDED ACTION

Authorize $20,000 contribution to the San Francisco Estuary Institute to support development of a Regional Monitoring Program nutrient strategy for San Francisco Bay, FY 2010-2011.

SUMMARY

The Regional Monitoring Program (RMP) addresses new monitoring needs through a formal strategy development process that has been tested for mercury, dioxins, and PCBs. It is a transparent, peer-reviewed process that ensures that all the stakeholders in Bay Area water quality (dischargers, regulators, and environmentalists) reach consensus on what information is essential to distinguish between regulatory alternatives.

While this process can potentially be accomplished with the regular RMP funding, it is important for BACWA to seed this process with some initial funding to ensure a timely input from the RMP into the ongoing interest in this issue from the stakeholders. The estimates of loadings provided by Dr. Lester McKee will put a scientifically-accepted perspective on the sources of nutrients into the Bay that will spread the responsibility for addressing loads to the entire community of dischargers to the Bay. The funding of the workshop will ensure the participation of the widest coverage of independent scientists, regulators, and stakeholders who are knowledgeable about Bay water quality. Funding will allow the participation of some national expert peer reviewers who will not stand to gain personally from any of the decisions that are made about this issue.

FISCAL IMPACT

This project is not included in the Fiscal Year 2010-2011 Budget and Workplan, but could be funded by the WQAC/CBC Other budget line item, which has over $70,000 remaining in unobligated funds.

ALTERNATIVES

This action does not require consideration of alternatives.

Attachments:

1. Draft Agenda for June 29, 2011 RMP Strategy Meeting.
2. SFEI Request for funding to support improved South Bay nutrient load estimates.
3. SFEI Request for meeting support for the June 29, 2011 RMP Strategy Meeting

Submitted: Amy Chastain **Executive Director Approval:** /s/ Amy Chastain

Workshop on Nutrients Enrichment of San Francisco Bay
June 29, 2010
David Brower Center, Berkeley

Purpose: To kick-off the RMP Nutrients Strategy by developing a clear understanding of the potential questions and hypotheses that the RMP's ongoing nutrients monitoring, modeling, and special studies should address.

Introduction and Overview of the Issue (9:00-12:00)

Jay Davis, SFEI, *Why This Workshop? How it Fits in the RMP Process.*

Inspirational Speaker: Walter Boynton, Chesapeake Biological Laboratory, *The Coastal Eutrophication Problem: Its manifestations in Chesapeake Bay, and design and value of the Chesapeake Bay Monitoring Program*

Jim Cloern, USGS, *USGS/ RMP Monitoring: Why has San Francisco Bay been resilient to the harmful effects of nutrient enrichment; Are there signs that the resilience is weakening; What Might Our Future Hold?*

Dick Dugdale, SFSU, *Suisun Bay Monitoring: Does Ammonia Have a Different Impact than Nitrate on the Bay's Ecosystems?*

Lester McKee, SFEI, *Sources of Nitrogen to the Bay*

Martha Sutula, SCCWRP, *What measures of Bay heath capture the ecological impacts of nutrients that would be important to the public and the regulatory community?*

Jim Kuwabara, Jim Cloern, Dave Schoellhamer USGS, *Using a simple model to project phytoplankton responses to (a) increasing clarity of SF Bay waters and (b) scenarios of reduced nutrient inputs*

Kevin Kennedy, HDR, *What's our first estimate of the costs of reducing nutrient loadings to the Bay?*

Jim Fitzpatrick, HDR/Hydroqual, *Have water quality models been successful in developing management plans: how do they affect monitoring planning? What important data are we missing?*

LUNCH

Discussion (1:00-3:00) facilitated by Mike Connor, EBDA
What are the priority management questions to be addressed by an RMP nutrients program? Are there management options that we would like the RMP Nutrients Program to address?

Next Steps (3:00-4:00)

Tom Mumley, Regional Water Board, *How could an RMP Nutrients Strategy Be Integrated into the Regional Regulatory Planning Process?*

Jay Davis, SFEI, *The process for future RMP consideration of this issue*

Request for funding support to generate improved nutrient load estimates for wastewater, stormwater and atmospheric deposition to South San Francisco Bay

Amount requested: $10,000

Proponent: San Francisco Estuary Institute (in collaboration with USGS)

Product: <5 page technical memo outlining methods and loads results

Time line: March – July 2011

Background: Phytoplankton based primary productivity accounts for 80% of the organic carbon generation in South San Francisco Bay. Phytoplankton therefore provides the basic food that fuels the production of the invertebrates, zooplankton, small fish, and sportfish that wildlife and humans rely on for sustenance and recreation. Recent evidence indicates that the resilience of the South Bay to high nutrient loads is decreasing and that phytoplankton productivity is increasing indicated by increased spring bloom production and the appearance of a fall bloom. There are a number of hypotheses that together might explain the cause of productivity trends such as changes to predation, water clarity, climate, and nutrient loads, however, at this time it is difficult to tease out the importance of each of these factors. Also it cannot be predicted if this trend will continue and what the ramifications might be for the periodicity of harmful algal blooms or low dissolved oxygen events.

In addition to irradiance, nutrient inputs to the water column (both autochthonous and allochthonous) are poorly characterized. USGS and SFEI scientists (Cloern, Kuwabara and McKee), recognizing the need for nutrient monitoring in the estuary as surrounding urbanization intensifies, have begun to synthesize nutrient-cycling information without specific funding. This synthesis has, thus far, identified the advection terms for wastewater, stormwater, and atmospheric deposition as poorly constrained; data have not been updated in 15+ years since the paper by Smith and Hollibaugh (2006) in Limnology and Oceanography which collated data from 1990-95. Yet since that time there have been population and treatment technology trends that have undoubtedly impacted loads. There are a number of data sets to support improved loads calculations, but to-date we have not had the resources to support an update. Given the recent interest to develop an RMP nutrient strategy, improved data on nutrient loads would be timely to support prioritization of work elements and provide immediate critical information for improved water-quality-management in the estuary.

Proposal: We propose to compile recent data on dissolved inorganic nitrogen (nitrate+ nitrite+ ammonia/ium) concentrations in wastewater, stormwater and atmospheric deposition and combine these data with water flow data to generate first order estimates of loads and confidence indicators for the period 1991-2010 (20 years).

Budget detail:

Task	Activity	Budget ($)	SFEI staff
1. Finalize methods, compile data, and calculate loads	Outreach to Water Board, BACWA agencies, UC Davis (doing a similar exercise for the state), ABAG (population trends)	$5000	McKee overseeing analyst
2. Report results and received peer-review	Write draft technical memo and email out for review; address review comments and finalize memo	$3,000	McKee overseeing analyst
3. Communicate results	Meet with USGS (Cloern, Kuwabara) to review outcomes; present at June nutrient workshop	$2,000	McKee

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March 15th, 2011

To: Amy Chastain, Director of BACWA

From: Meg Sedlak, RMP Program Manager

Re: **Request for Financial Support for the RMP Nutrients Workshop on June 29th, 2011**

Background
Much of the work that the USGS has conducted in recent years suggests that there are fundamental changes occurring in San Francisco Bay. Dr. Jim Cloern and his colleagues at USGS have shown an increase in the frequency and strength of phytoplankton blooms in the Bay. Although San Francisco Bay has nutrient concentrations that are on par with highly productive east coast estuaries such as the Chesapeake Bay, San Francisco Bay has historically been considered resilient to the effects of heavy nutrient loads. In part, this is attributable to the Bay being light-limited as a result of the fine sediments and highly dynamic environment. However, recent work by Dr. Schoelhammer and his colleagues has shown a decrease in suspended sediment concentrations in the Bay. In addition to changes in suspended sediment, the USGS has shown changes in the Bay's ecology as a result of ocean currents, a decline in herbivores and an increase in predators. There is some concern that in the future, the San Francisco Bay may be unable to sustain its resiliency to the adverse impacts of heavy nutrient loads.

There is much to be learned about the nutrients and the management of nutrients in the Bay. As a first step, the RMP is convening a workshop of national and local experts to discuss this issue on June 29th. A preliminary agenda is attached. A RMP planning meeting will occur on April 22nd to outline the high priority management questions regarding nutrients and to discuss the workshop.

Cost
The RMP is requesting funds from BACWA to help defer some of the costs associated with this workshop. At present, we estimate that it will cost $4,000 for the rental of the

David Brower Center in Berkeley and lunch for approximately 100 people. We would like the meeting to be no larger than 100 people to facilitate discussions among attendees and the expert panel members.

We are also requesting $5,000 to help defer SFEI staff member cost associated with convening the meeting and preparing presentations for the meeting.

MEMORANDUM

TO: BACWA Executive Board

FROM: Amy Chastain, Executive Director

SUBJECT: **PCB TMDL Implementation**

DATE: March 16, 2011

PERMIT OVERVIEW

On March 9, 2011, the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) adopted a permit for municipal and industrial wastewater discharges of PCBs to San Francisco Bay (Permit). This Permit partially implements the Total Maximum Daily Load (TMDL) adopted by the Regional Water Board in 2008, approved by the State Water Resources Control Board in 2009, and approved by the US Environmental Protection Agency (EPA) in 2010. It amends the current permit for discharges of mercury, and is set to expire in 2012.

The Permit contains numeric effluent limits (with compliance to be demonstrated using Method 608), a requirement for low detection limit method monitoring (1668c), source identification and control requirements, and allows for adjustments to limits for recycled water and stormwater diversions. The Permit does not impose new or expanded risk reduction requirements.

At the March 9 hearing Tim Potter, from Central Contra Costa Sanitary District, offered testimony outlining concerns about the source control requirements, and I testified generally about our concerns regarding numeric limits. The Western States Petroleum Association testified in favor of the Permit. The Regional Water Board members discussed the permit and asked members of staff, including whether agencies could be liable if the 1668c monitoring revealed that concentrations exceeded effluent limits and the extent to which the low detection method is subject to variability.

1. Compliance Monitoring & Reporting

The Permit imposes numeric Maximum Daily Effluent Limits (MDELs) and Average Monthly Effluent Limits (AMELs). Compliance with these limits is to be determined using Method 608, with sampling of effluent to occur semi-annually for major

dischargers and annually for minor dischargers. Non-detected and/or estimated values shall be treated as zeros in the calculation of Total PCBs.

Type of Discharger	AMEL (ug/L)	MDEL (ug/L)
Secondary	0.00039	0.00049
Advanced	0.012	0.017

2. Method 1668c Monitoring & Reporting

The permit also requires each discharger to analyze their effluent using Method 1668c. Major dischargers with design flows greater than 5 MGD must monitor quarterly, major dischargers with design flows less than or equal to 5 MGD must monitor semi-annually, and minor dischargers must monitor annually. The permit specifies that "[t]his monitoring is for informational purposes," and that "[a] summation for Total PCBs is not required."

3. Reporting

Data must be submitted as part of each discharger's regular monthly or quarterly self-monitoring reports and must include detection limits, reporting levels, estimated values, and quantified values for all Aroclors using EPA Method 608, and for all 209 PCB congeners using USEPA Proposed Method 1668c.

In preliminary discussions, Regional Water Board staff has suggested that they prefer all dischargers submit this information electronically via either e-SMR or ERS, whichever is applicable. Concern has been expressed about the challenges of entering data consistently and accurately for all 209 congeners.

4. Source Control

The Permit states that, by February 28, 2012, and every year afterwards, each discharger must do the following:

> "[E]valuate and identify controllable sources of PCBs to its treatment system. These sources consist of PCBs contributions to wastewater from industrial equipment and PCBs contributions to wastewater from buildings with PCB containing sealants that are scheduled for remodeling or demolition and identified as pilot projects required by Provision C.12.b of the Municipal Regional Stormwater Permit Order No. R2-2009-0074."

Dischargers must identify industrial equipment that may be contributing PCBs to wastewater, and implement control measures in a "timely manner." According to Regional Water Board staff, the intent to control PCBs from building

remodel/demolition is for dischargers to identify only those buildings scheduled for remodeling or demolition that are within the sewershed of a stormwater diversion project, not to impose such a requirement across all of the discharger's jurisdiction. The pilot project results may be used to identify candidate BMPs and future permit revisions.

NEXT STEPS

1. **Develop Standardized Sampling, Analysis and Reporting Protocol.**

BACWA has engaged the consultant to assist in the development of a sampling, analysis and reporting protocol to help ensure consistent and comparable data are collected. The consultant will work closely with EBMUD and Regional Water Board staff to develop this protocol in advance of June 1, 2011. BACWA is also considering coordinating a group report, similar to that currently prepared for mercury.

2. **Clarify Source Control Requirements**

Regional Water Board staff will be attending the April 6, 2011 BAPPG meeting to discuss source control requirements. BACWA and BAPPG will work to develop a template for reporting – if possible – and to communicate this to member agencies in time for preparation of their 2011 pollution prevention reports (due February 28, 2012).

3. **Petition Permit & Put in Abeyance**

As a cautionary measure BACWA will petition the State Water Resources Control Board for review of the permit, but will keep the permit in abeyance unless data demonstrate that the numeric limits are not reflective of current performance as required by the TMDL.

BAY AREA CLEAN WATER AGENCIES BUDGET

DRAFT, March 2011

REVENUE	**$624,000**	
Principals	450,000	
Associates	97,500	
Affiliates	61,500	
Interest	5,000	
Special Prog. Costs	10,000	AIR, BAPPG, WOT indirect costs
EXPENSES	**$624,000**	
Committees	**147,000**	
Collections System	25,000	
Permit Committee	25,000	
Water Recycling	13,000	
Biosolids	5,000	
InfoShare Groups	25,000	
Laboratory	7,000	
Misc. Support	47,000	Unaticipated trainings, workshops, etc.
Legal Support	**8,000**	
Regulatory	6,000	
Org. Support	2,000	
Collaborations/Sponsorships	**45,500**	
CWAA	10,000	
CPSC	5,000	
PSI	500	
State of the Estuary	0	$20k every other year
Other	30,000	Unanticipated non-tech, non-rsch sponsorships
Communications	**75,000**	
Annual Report	15,000	
Website Dev. & Maint.	55,000	
Newsletter/Other	5,000	
Special Programs	**50,000**	
Pollution Prevention	50,000	
General Support	**33,000**	
Meeting Expenses	17,000	Annual and manager's meeting
Contingency	16,000	
General Support	**265,500**	
Executive Director	135,500	
Ass't Executive Director	70,000	
Accounting	40,000	
Administrative Expenses	15,000	
Insurance	5,000	

WQAS/CBC Budget
DRAFT, March 2011

REVENUE	**$451,600**	
Principals	300,000	30k EBMUD in-kind (reflected in expenses)
Assoc. & Affiliates	150,000	
Interest	1,600	
EXPENSES	**$451,600**	
Technical Assistance	**294,600**	
Regulatory Tracking & Response	75,000	Respond to unanticipated regulatory developments and data needs.
Energy	45,000	$15k infoshare, $20k wkshops, $10k agency summary of current & planned projects
Nutrients	100,000	Strategy implementation
PCBs	15,000	Data analysis & reporting, incl. EBMUD in-kind lab services ($15k report & analyses?)
Selenium	35,000	$20k TMDL review, $15k EBMUD in-kind lab services
Bacteria	0	
SQOs	0	
Recycled Water	0	
Wet Weather Issues	0	
Infrastructure	3,600	Lateral line fact/summary sheet
Biosolids	0	
WW as a Resource	11,000	Strategy Development
Risk Reduction	0	
CIWQS	10,000	Transition response, User Group participation
Reporting	**65,000**	
Mercury Mass	20,000	
Mercury Dental	20,000	
CECs	5,000	Compile agency-specific data from RW and other sources, fact sheet for managers based on RMP EC fact sheet
Rate Database	20,000	Maintenance of databse, analyses and reports
Collaborations/Sponsorships	**87,000**	
CWCCG	50,000	
CASA Pesticides	20,000	
Other (Rsch Opps)	17,000	Unanticipted opportunities
Contingency	**5,000**	