



**BACWA Executive Board Meeting
AGENDA
April 17, 2026 9:00 AM - 12:30 PM (PDT)**

EBMUD
375 11th Street Oakland, CA 94607
To attend the meeting via Zoom or submit a comment please [request access](#).

<u>Agenda Item</u>	<u>Time</u>	
ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE	9:00 AM	
PUBLIC COMMENT	9:05 AM	Guidelines
CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER	9:06 AM	
CONSENT CALENDAR	9:07 AM	
1 March 20, 2026 BACWA Executive Board meeting minutes		3-7
2 February 2026 Treasurer's Report		8-16
APPROVALS AND AUTHORIZATIONS	9:15 AM	
3 <u>Approval:</u> FY26 AIR Committee Support Amendment #3, to \$120,741		17-28
4 <u>Approval:</u> FY27 Budget and Work Plan		29-46
OPERATIONAL	9:30 AM	
5 <u>Discussion:</u> Regulatory Program Manager Transition and Recruitment		
6 <u>Discussion:</u> Incorporation of AQPI as a Project of Special Benefit - Draft approval and proposal		47-84
7 <u>Discussion:</u> May 15 Annual Meeting Program		85
8 <u>Discussion:</u> Recognition of committee chairs at Annual Meeting		
9 <u>Discussion:</u> Draft Amendments to Contracting Policy		86-90
10 <u>Discussion:</u> Staffing Model Updates		
POLICY/STRATEGIC	10:15 AM	
11 <u>Presentation:</u> Air Committee update		
12 <u>Discussion:</u> Air District Engineering Program Manager beta period update		Link to Air District Webinar
BREAK	10:40 AM	
13 <u>Discussion:</u> Draft meeting agenda for 5/22 Joint meeting with R2		91
14 <u>Informational:</u> Compliance Schedule Basin Plan Amendment Update		
15 <u>Informational:</u> GAR Submitted to Water Board		Link to GAR
16 <u>Informational:</u> TFT Trading update		92-105
17 <u>Discussion:</u> Nutrient infoshare - 1st meeting		
18 <u>Informational:</u> Statewide PFAS Strategy Update		106
19 <u>Informational:</u> PFAS Contract with updated schedule		
20 <u>Informational:</u> EPA Region IX SF Bay Program Office proposal - available upon request		
21 <u>Discussion:</u> Procurement for BAPPG Pesticide Regulatory Support		Link to 2021 RFQ
REPORTS	12:10 AM	
22 Committee Reports		107-125
23 Member highlights		
24 Executive Director Report		126-128
25 Board Calendar and Action Items		129-130
26 Regulatory Program Manager Report		131
27 Other BACWA Representative Reports		
a. RMP Technical Review Committee	Samantha Engelage, Alicia Chakrabarti, Blake Brown	
b. RMP Steering Committee	Karin North; Amanda Roa; Eric Dunlavey	
c. Summit Partners	Lorien Fono; Jackie Zipkin	
d. ASC/SFEI	Lorien Fono; Amit Mutsuddy; Lori Schectel AMIT MUTSUDDY, ERIC DUNLAVEY; alternates: Lori Schectel, Jackie Zipkin	
e. Nutrient Governance Steering Committee	Eric Dunlavey	
e.i Nutrient Planning Subcommittee	Amit Mutsuddy	
e.ii MERHAB MaTAG	Lorien Fono Cheryl Munoz; Florence Wedington; Jackie Zipkin	
f. SWRCB Nutrient SAG	Lori Schectel	
g. BAIRWMP		
h. CASA State Legislative Committee		

i. CASA Regulatory Workgroup	Lorien Fono; Mary Cousins	
j. RMP Microplastics Liaison	Jesse McDermott	
k. Bay Area Regional Reliability Project	Jackie Zipkin	
l. San Francisco Estuary Partnership	Lorien Fono; Jackie Zipkin	
m. CPSC Policy Education Advisory Committee	Colleen Henry	
n. California Ocean Protection Council	Lorien Fono	
o. California Water Quality Monitoring Council	Lorien Fono	
p. CASA Air Toxics Steering Committee	Lorien Fono, Jason Nettleton	
28 SUGGESTIONS FOR FUTURE AGENDA ITEMS		12:25 PM
NEXT MEETING		
The next regular meeting of the Board is scheduled for June 5 at SFPUC		
ADJOURNMENT		12:30 PM



Executive Board Meeting Minutes

Friday March 20, 2026, 9:00 AM - 12:30 PM (PDT)

Executive Board Representatives: Amy Chastain (San Francisco Public Utilities Commission); Amit Mutsuddy (East Bay Municipal Utility District); Eric Dunlavy (City of San Jose); Jackie Zipkin (East Bay Dischargers Authority); Lori Schectel (Central Contra Costa Sanitary District).

Attendees

Name	Agency/Company
Alicia Chakrabarti	EBMUD
Amanda Roa	FSSD
Andy Morris	City of Benicia
Autumn Ross	SFPUC
Brian Thomas	Delta Diablo
David Donovan	City of Hayward
David Primozich	The Freshwater Trust
Emily Corwin	SFEI
Francis Rooney	SVCW
Irene Chu	Hazen & Sawyer
Jennie Pang	SFPUC
Jessica Fox	The Freshwater Trust
Lorien Fono	BACWA
Mary Cousins	BACWA
Matt Zucca	SVCW
Mike Falk	HDR
Tim Lewis	Dublin San Ramon Services District
Tom Hall	EOA

Jackie Zipkin called the meeting to order at 9:03 am.

Agenda Item

ROLL CALL, INTRODUCTIONS, AND TELECONFERENCE ETIQUETTE

PUBLIC COMMENT None

CONSIDERATION TO TAKE AGENDA ITEMS OUT OF ORDER None

CONSENT CALENDAR

- 1 February 20, 2026 BACWA Executive Board meeting minutes
- 2 March 4, 2026 BACWA Special Joint meeting with Water Board minutes
- 3 January 2026 Treasurer's Report

Consent Calendar Items 1 through 3: A motion to approve was made by Lori Schectel (Central Contra Costa Sanitary District) and seconded by Amit Mutsuddy (EBMUD). All were in favor. None opposed.

APPROVALS AND AUTHORIZATIONS

- 4 Approval: Extend Bruce Wolfe Memorial Scholarship to FY31 – BACWA ED explained the rationale for the scholarship, which goes to a Bay Area high school student.

Approvals and Authorizations Item 4: A motion to approve was made by Lori Schectel (Central Contra Costa Sanitary District) and seconded by Eric Dunlavey (City of San Jose). All were in favor. None opposed.

- 5 Approval: MOU with Water Board for CEQA support – BACWA ED provided an update on the Water Board and BACWA’s plan to hire a CEQA consultant to assist with preparing environmental documentation for a Basin Plan Amendment. Three firms submitted Statements of Qualification, and the selection committee selected AECOM. There was a review of the MOU, which gives oversight of the SED to the Water Board, but requires payment by BACWA. Terminating the MOU is the only recourse if BACWA objects to elements of the work plan or future changes in scope. The Executive Board is being asked to delegate signing authority to the Executive Board Chair, assuming there are no substantive changes to the draft MOU.

Action Item: Board Chair to execute the MOU once the Water Board, consultant, and BACWA are confident that the consultant’s contract can be signed within 30 days.

Approvals and Authorizations Item 5: A motion to approve was made by Amy Chastain (San Francisco Public Utilities Commission) and seconded by Eric Dunlavey (City of San Jose). All were in favor. None opposed.

POLICY/STRATEGIC

- 6 Presentation: BAPPG Update and budget overview – Autum Ross (SFPUC), co-chair of BAPPG, shared the committee’s FY27 budget request and work plan, which includes coordination among BACWA members, regulatory outreach on pesticides and other pollutants, and public outreach. Attendees strategized on making the committee’s pesticide regulatory work more of a statewide effort.

7 Discussion: Debrief from 3/4 Joint meeting with R2 – BACWA ED led group discussion regarding the planned Basin Plan Amendment to provide more than 10 years for compliance with the Nutrients Watershed Permit. There was unanimous support for continued dialogue with Water Board staff about the content of the Basin Plan Amendment and related practical considerations for the next permit.

8 Informational: GAR Update – BACWA RPM shared that HDR has received comments from BACWA members on the draft GAR and is working on a final version to submit by April 1st.

Action Item: BACWA RPM to finalize and submit 2026 Group Annual Report for the Nutrients Watershed Permit by April 1.

9 Informational: Trading update – Jessica Fox (The Freshwater Trust) shared an update on BACWA member responses to a recent survey on water quality trading for the Nutrients Watershed Permit. Member agencies are interested in participating as buyers or sellers, but would like more information. TFT staff are scheduling interviews with individual member agencies, and are tentatively planning a workshop for later in 2026.

10 Discussion: Nutrient Infoshare - 1st meeting – BACWA ED shared a conceptual draft agenda for a Nutrient Strategy Team meeting that would include a few presentations on plant optimization. Future sessions could focus on process intensification, large-scale plant upgrades, recycled water, or nature-based solutions.

Action Item: BACWA ED to determine speaker availability for a Nutrient Infoshare workshop focused on optimization, then schedule the meeting.

BREAK

11 Discussion: Air District Engineering Program Manager beta period update – BACWA ED shared updates on several initiatives related to permit streamlining at the Air District. For the Engineering Program Manager pilot phase, BACWA now has an executed MOU with the Bay Area Air District that was crafted to avoid conflicts of interest. For the next phase of work, the intent is to sign an MOU in June with an effective date of July 1.

12 Informational: PFAS Phase 3 Study Questions – BACWA RPM shared updates on the schedule for the Phase 3 study. BACWA RPM also noted ongoing discussions with Clean Water SoCal and Water Boards staff related to PFAS source control.

13 Informational: EPA Region IX SF Bay Program Office proposal - available upon request – BACWA ED shared information about the Clean Water Together coalition grant funding proposal recently submitted to USEPA. BACWA anticipates that USEPA staff will notify selected applicants in April 2026 and issue awards in June 2026. BACWA members may request a copy of the proposal from the ED.

14 Discussion: Strategic Plan Evaluation/ED Performance Plan – Attendees discussed logistics for conducting the BACWA ED performance evaluation.

Action Item: BACWA ED to circulate a strategic plan evaluation to the Executive Board. Board Chair to schedule a special closed session meeting to conduct the BACWA ED performance evaluation.

15 Informational: Second draft of FY27 Budget, and draft workplan – BACWA ED shared highlights of the draft budget, noting significant differences with previous budgets.

Action Item: BACWA ED to propose revisions to BACWA’s Contracting Policy to allow great flexibility for consultant contract amendments.

16 Discussion: May 15 Annual Meeting Preliminary Program – BACWA ED shared a draft program for the 2026 Annual Members Meeting and a general discussion followed. Board members were assigned to moderate specific sessions of the meeting.

Action Item: BACWA ED to invite member agency speakers for resiliency and communications sessions.

17 Discussion: BACWA spirit and leadership award – BACWA ED shared that the award application is in the packet. Attendees noted that they are interested in hearing how previous award winners used the award funds.

18 Informational: Netfile reminder – BACWA ED shared a reminder to complete Form 700.

19 Informational: BACC Update – BACWA ED shared a summary of BACC’s bid results FY27 bid results and comparison of prices to previous years.

REPORTS

20 Committee Reports - in the packet

21 Member highlights - SFPUC shared that they have approved a design-build contract for nutrient removal at the Southeast plant. EBDA provided a progress update on agreements needed to make AQPI a BACWA project of special benefit; the goal is to have agreements in place with participating agencies and CW3E for FY27. San Jose plans to celebrate their 70th anniversary in November 2026, and Central San will host an anniversary celebration on June 13th. EBMUD provided a cybersecurity update.

22 Executive Director Report - in the packet

23 Board Calendar and Action Items - in the packet

24 Regulatory Program Manager Report

25 Other BACWA Representative Reports

- a. RMP Technical Review Committee Samantha Engelage, Alicia Chakrabarti, Blake Brown
- b. RMP Steering Committee Karin North; Amanda Roa; Eric Dunlavey
- c. Summit Partners Lorien Fono; Jackie Zipkin
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- e. Nutrient Governance Steering Committee Amit Mutsuddy, Eric Dunlavey; alternates: Lori Schectel, Jackie Zipkin
 - e.i Nutrient Planning Subcommittee Eric Dunlavey
 - e.ii MERHAB MaTAG Amit Mutsuddy
- f. SWRCB Nutrient SAG Lorien Fono
- g. BAIRWMP Cheryl Munoz; Florence Wedington; Jackie Zipkin
- h. CASA State Legislative Committee Lori Schectel
- i. CASA Regulatory Workgroup Lorien Fono; Mary Cousins
- j. RMP Microplastics Liaison Jesse McDermott
- k. Bay Area Regional Reliability Project Jackie Zipkin
- l. San Francisco Estuary Partnership Lorien Fono; Jackie Zipkin
- m. CPSC Policy Education Advisory Committee Colleen Henry
- n. California Ocean Protection Council Lorien Fono
- o. California Water Quality Monitoring Council Lorien Fono
- p. CASA Air Toxics Steering Committee Lorien Fono, Jason Nettleton

26 SUGGESTIONS FOR FUTURE AGENDA ITEMS - None

NEXT MEETING

The next regular meeting of the Board is scheduled for April 17 at EBMUD, Oakland

27 CLOSED SESSION to discuss personnel matters pursuant to California Government Code Section 54957 12:30 PM

28 Report-out from closed session - There was no report-out from the closed session.

ADJOURNMENT 1:34 PM



B A C W A B A Y A R E A C L E A N W A T E R A G E N C I E S

March 16, 2026

MEMO TO: Bay Area Clean Water Agencies Executive Board
MEMO FROM: Phoebe Grow, Treasurer, East Bay Municipal Utility District
SUBJECT: Eighth Month FY 2026 Treasurer's Report

As required by section eight of the Joint Powers Agreement establishing the Bay Area Clean Water Agencies (BACWA) and California Government Code Sections 6500 et seq., attached is the BACWA Treasurer's Report for the period covering **July 1, 2025 through February 28, 2026** (Eight months of Fiscal Year 2026). This report covers expenditures, cash receipts, and cash transfers for the following BACWA funds:

- Bay Area Clean Water Agencies (BACWA),
- BACWA Legal Reserve Fund (Legal Rsrv),
- Water Quality Attainment Strategy (WQA CBC),
- Bay Area Biosolids Coalition (BABC),
- Bay Area Chemical Consortium (BACC),
- BACC Legal Reserve Fund (BACC Legal Rsrv),
- Water/Wastewater Operator Training (WOT),

Houck, Matt

From: Grow, Phoebe
Sent: Tuesday, March 17, 2026 9:57 AM
To: Houck, Matt
Subject: Re: February 2026 Treasurer's Report

Approved. Thanks Matt!

Phoebe Grow, P.E. (she/her) | Principal Management Analyst | 510.287.0205 | phoebe.grow@ebmud.com

From: Houck, Matt <matt.houck@ebmud.com>
Sent: Monday, March 16, 2026 3:05 PM
To: Grow, Phoebe <phoebe.grow@ebmud.com>
Subject: February 2026 Treasurer's Report

Hi Phoebe,

Please approve BACWA - February 2026 Treasurer's Report for distribution.

Let me know if you have any questions.

Thanks,

Matt Houck

Accountant III
East Bay Municipal Utility District
375 11TH St, MS 402, Oakland, CA 94607
P 510-287-0238



MONTHLY FINANCIAL SUMMARY REPORT

February 2026

Fund Balances

In FY26 BACWA has three operating funds (BACWA, Legal, and CBC) and one pass-through fund for which BACWA provides only contract administration services (BACC). As of October 2021, revenues are recognized when billed, not when payments are received.

BACWA Fund: This fund provides resources for BACWA staff, its committees, and other administrative needs. The ending fund balance on February 28, 2026, was \$484,342, which is significantly higher than the target reserve of \$280,414 which is intended to cover 3 months of normal operating expenses based on the BACWA FY26 budget. \$445,440 is encumbered to meet ongoing operating line-item expenses for BAPPG Committee Support, Legal services, IT services, Board meeting expenses, accounting services and BACWA staff support, which leaves \$38,902 unobligated.

CBC Fund: This fund provides the resources for completing special investigations as well as meeting regulatory requirements. The ending fund balance on February 28, 2026, was \$2,065,854 which is higher than the target reserve of \$1,000,000. \$647,316 of the ending fund balance is encumbered to meet line-item expenses for completion of the Group Annual Report contract, completion of the NBS Study, Recycled Water Evaluation, and the PFAS Regional Study. This leaves an actual unencumbered reserve balance of \$418,538 (i.e., actual fund balance of \$1,418,538 less target reserves) as of February 28, 2026. As directed by the BACWA Executive Board, the CBC fund has diminished over time due to BACWA's ongoing funding of the NMS program to comply with the Nutrient Watershed Permit.

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


Budget to Actual

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

Revenues as of February 28, 2026 (66% of the FY) are at 97%

Expenses as of February 28, 2026 (66% of the FY) are at 81%

FY 2026 Budget

							
<u>BACWA FY26 BUDGET</u>	<u>Line Item Description</u>	<u>FY26 Budget</u>	<u>Projected Rev as of February 2026</u>	<u>Actual February 2026</u>	<u>Actual % of Budget February 2026</u>	<u>Variance</u>	<u>FY26 NOTES</u>
REVENUES & FUNDING							
Dues	Principals' Contributions	\$581,626	\$581,626	\$581,626	100%	\$0	FY26: 5% increase 5 @ \$116,325
	Associate & Affiliate Contributions	\$260,064	\$218,910	\$218,910	100%	-\$41,154	FY26: 5% increase. 12 Assoc: \$9599.47 Affiliate: \$1922.55; UC Berkeley \$515, BAWSCA, rev Oct 2025
Fees	Clean Bay Collaborative	\$675,000	\$674,250	\$674,250	100%	-\$750	Same as FY25. Prin: \$450,000; Assoc/Affil: \$225,000
	Nutrient Surcharge	\$1,750,000	\$1,747,955	\$1,747,955	100%	-\$2,045	See Nutrient Surcharge Spreadsheet
	Member Voluntary Nutrient Contributions						
Other Receipts	Non R2 Affiliate Members	\$5,768	\$5,768	\$5,768	100%	\$0	Santa Rosa, Sac Reg'l, Vacaville, Ironhouse \$1922.55 / each
	BACC Admin Fees	\$40,468	\$40,468	\$0	0%	-\$40,468	400 hours of AED support \$101.17/hr
Air Toxics	CASA Passthrough	\$620,125	\$620,125	\$620,125	100%	\$0	New in FY25
Interest Income	LAIF	\$160,000	\$160,000	\$135,190	84%	-\$24,810	BACWA, Legal, & CBC Funds invested in LAIF
	Total Revenue	\$4,093,051	\$4,049,102	\$3,983,824	97%	-\$109,227	
EXPENSES							
Labor							
	Executive Director	\$229,612	\$233,199	\$136,033	58%	-\$93,579	(incl 2.4% CPI SF Bay Metro Area Dec 2024), updated to 4% in May 2025
	Assistant Executive Director	\$96,682	\$98,193	\$50,149	51%	-\$46,533	(incl 2.4% CPI SF Bay Metro Area Dec 2024); \$81/hour; Reflects 1200 hours, updated to 4% in May 2025
	BACC Administrator	\$40,468	\$40,468	\$29,053	72%	-\$11,415	400 hrs AED support at \$101.17 per hr
	Regulatory Program Manager	\$159,875	\$162,373	\$93,698	58%	-\$66,177	(2.4% CPI SF Bay Metro Area Dec 2024); \$118.43/hour, Reflects 1350 hours, updated to 4% in May 2025
	Total	\$526,636	\$534,233	\$308,933	59%	-\$217,704	
Administration							
	EBMUD Financial Services	\$44,596	\$44,596	\$23,013	52%	-\$21,583	3% increase in FY26
	Auditing Services	\$5,672	\$5,672	\$0	0%	-\$5,672	Financial Auditors through EBMUD; per auditor rate schedule
	Administrative Expenses	\$4,059	\$4,059	\$742	18%	-\$3,317	No change from FY25
	Insurance	\$12,366	\$12,366	\$8,949	72%	-\$3,417	15% increase from FY25 (10-15% est. increase per Alliant)
	Total	\$66,693	\$66,693	\$32,704	49%	-\$33,989	
Meetings							
	EB Meetings	\$4,200	\$4,200	\$1,465	35%	-\$2,735	20% increase from FY25
	Annual Meeting	\$14,369	\$14,369	\$1,918	13%	-\$12,452	No change from FY25
	Pardee	\$4,000	\$4,000	\$2,353	59%	-\$1,647	reduced from FY25 to align with actual expenses
	Misc. Meetings and conferences	\$10,000	\$10,000	\$4,746	47%	-\$5,254	No change from FY25
	Total	\$32,569	\$32,569	\$10,481	32%	-\$22,088	
Communication				\$1,568			
	Website Hosting / Domain registration	\$758	\$758	\$432	57%	-\$326	2% increase from FY25, Go Daddy website hosting and domain registration

FY 2026 Budget

EXPENSES							
	File Storage	\$828	\$828	\$0	0%	-\$828	2% increase from FY25, box.net
	Website Development/Maintenance	\$1,656	\$1,656	\$76	5%	-\$1,580	2% increase from FY25
	IT Support (As Needed)	\$2,870	\$2,870	\$0	0%	-\$2,870	2% increase from FY25
	BACWA Value of Wastewater Communication	\$50,000	\$50,000	\$38,567	77%	-\$11,434	New line item in FY24, no change from FY24 - TBD
	Other Communication	\$1,932	\$1,932	\$724	37%	-\$1,208	2% increase from FY25; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile
	Total	\$58,044	\$58,044	\$39,798	69%	-\$18,246	
Legal							
	Regulatory Support	\$20,000	\$50,000	\$1,507	8%	-\$18,493	Decrease from FY25, Contract with Duane Morris - increased PO at Board's direction
	Executive Board Support	\$2,403	\$2,403	\$748	31%	-\$1,655	No increase from FY25
	Total	\$22,403	\$52,403	\$2,255	10%	-\$20,148	
Committees							
	AIR	\$94,750	\$94,750	\$57,391	61%	-\$37,359	\$93,750 consulting support, \$1k misc expenses - TBD
	BAPPG	\$148,060	\$148,060	\$86,336	58%	-\$61,724	Includes Pest. Reg Spt. @ \$70; Pest. Prof Outreach @ \$19K; Media Consultant @ \$50K; website/unplanned is
	Asset Management Committee	\$500	\$500	\$0	0%	-\$500	No change from FY25
	BABC	\$120,000	\$120,000	\$66,163	55%	-\$53,837	Formerly BACWA Biosolids, now BABC program management contract
	Collections System	\$1,000	\$1,000	\$0	0%	-\$1,000	SSS WDR Support
	O&M Committee	\$1,500	\$1,500	\$322	21%	-\$1,178	No change from FY25
	Laboratory Committee	\$500	\$500	\$327	65%	-\$173	No change from FY25
	Permits Committee	\$500	\$500	\$327	65%	-\$173	No change from FY25
	Pretreatment	\$500	\$500	\$0	0%	-\$500	No change from FY25
	Recycled Water Committee	\$500	\$500	\$0	0%	-\$500	No change from FY25
	Misc Committee Support	\$45,000	\$45,000	\$0	0%	-\$45,000	No change from FY25
	Manager's Roundtable	\$1,000	\$1,000	\$445	45%	-\$555	No change from FY25
	Total	\$413,810	\$413,810	\$211,311	51%	-\$202,499	
Collaboratives							
	Collaboratives						
	State of the Estuary (SFEP-biennial)	\$20,000	\$20,000	\$20,000	100%	\$0	Biennial in Even Fiscal Years
	Arleen Navarret Award	\$0	\$0	\$0		\$0	Next Award will be disbursed in FY27
	BayCAN	\$5,000	\$1,500	\$1,500	30%	-\$3,500	
	Bay Area One Water Network	\$5,000	\$2,000	\$2,000	40%	-\$3,000	Donation due in FY26 - Support for lunch at kickoff meeting
	Bruce Wolfe Scholarship	\$4,000	\$4,000	\$0	0%	-\$4,000	FY22, FY23, FY24, FY25 FY26
	Our Water Our World Program	\$10,000	\$10,000	\$10,000	100%	\$0	Previously included in BAPPG Budget
	National Stewardship Action Council	\$10,000	\$10,000	\$10,000	100%	\$0	Previously included in BAPPG Budget
	California Product Stewardship Council	\$10,000	\$10,000	\$10,000	100%	\$0	Previously included in BAPPG Budget
	Passthrough to CASA for air toxics	\$620,125	\$620,125	\$619,125	100%	-\$1,000	New line item in FY24
	Misc	\$1,500	\$1,500	\$1,500	100%	\$0	NBWA
	Total	\$685,625	\$679,125	\$674,125	98%	-\$11,500	
Other							
	Unbudgeted Items						
	Other						
Tech Support							
	Technical Support						
	Nutrients						
	Watershed Permit NMS Contribution	\$2,200,000	\$2,200,000	\$2,200,000	100%	\$0	Permit required funding for 3rd Watershed Permit Science Studies
	NMS Voluntary Contributions			\$0	12		

FY 2026 Budget

EXPENSES							
	Additional work under permit	\$100,000	\$100,000	\$9,890	10%	-\$90,110	Discretionary work including trading
	Nutrient Workshop(s)	\$0	\$0	\$0			Pilot Studies/Plant Review/Innovative Technologies; Might change
	NMS Reviewer	\$50,000	\$50,000	\$2,063	4%	-\$47,938	No change from FY25 - will need new contractor
	Regional Nutrient Compliance Support	\$250,000	\$250,000	\$180,849	72%	-\$69,151	New item in FY25
	General Tech Support	\$100,000	\$100,000	\$35,000	35%	-\$65,000	Eg. Nutrients, biosolids
	CEC Investigations	\$50,000	\$50,000	\$0	0%	-\$50,000	PFAS Study Phase 3
	Risk Reduction	\$12,500	\$12,500	\$19,823	159%	\$7,323	Will plan new risk reduction tasks for current Hg/PCB Watershed Permit
	Total	\$2,762,500	\$2,762,500	\$2,447,625	89%	-\$314,876	
	TOTAL EXPENSES	\$4,568,281	\$4,599,377	\$3,727,231	81%	-\$872,146	
	NET INCOME BEFORE TRANSFERS	-\$475,230					
	TRANSFERS FROM RESERVES	\$475,230					aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS	\$0					
	TOTAL OPERATING BUDGET	\$1,121,656					
	OPERATING RESERVE	\$280,414					

BACWA Fund Report as of February 28, 2026

BACWA FUND BALANCES - DATA PROVIDED BY ACCOUNTING DEPT.

DEPTID	DESCRIPTION	FISCAL YEAR BEGINNING FUND BALANCE	TOTAL BILLED REVENUE TO-DATE	TOTAL DISBURSEMENTS TO-DATE	MONTH-ENDING FUND BALANCE	OUTSTANDING ENCUMBRANCES	MONTH-END UNOBLIGATED FUND BALANCE
600	BACWA	242,041	873,757	631,456	484,342	445,440	38,902
604	LEGAL RSRV	300,000	-	-	300,000	-	300,000
605	CBC	2,024,054	2,489,426	2,447,626	2,065,854	647,316	1,418,538
	SUBTOTAL 1	2,566,095	3,363,183	3,079,082	2,850,196	1,092,756	1,757,440
602	BABC	293,689	10,092	70,000	233,781	-	233,781
606	BACC	42,532	53,713	60,922	35,323	11,635	23,688
607	BACC LEGAL RSRV	120,000	30,000	-	150,000	-	150,000
610	WOT	259,176	-	25	259,151	-	259,151
612	CASA Air Toxics	-	620,125	619,125	1,000	-	1,000
	SUBTOTAL 2	715,397	713,930	750,072	679,255	11,635	667,620
	GRAND TOTAL	3,281,492	4,077,113	3,829,154	3,529,451	1,104,391	2,425,060

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

BACWA INVESTMENTS BALANCES - DATA PROVIDED BY TREASURY DEPT.

DEPTID	DESCRIPTION	FISCAL YEAR BEGINNING FUND BALANCE	TOTAL BILLED REVENUE TO-DATE	TOTAL DISBURSEMENTS TO-DATE	MONTH-ENDING FUND BALANCE	RECONCILIATION TO FINANCIAL STATEMENTS A/R	RECONCILIATION TO FINANCIAL STATEMENTS A/P	MONTH-END RECONCILED FUND BALANCE	UNINVESTED CASH BALANCES	LAIF INVESTMENTS AMOUNTS	LAIF INVESTMENTS PERCENTAGE	ALTERNATIVE INVESTMENTS AMOUNTS	ALTERNATIVE INVESTMENTS IDENTIFIERS	ALTERNATIVE INVESTMENT INSTRUCTIONS AND NOTES
600	BACWA	242,041	873,757	631,456	484,342	(25,181)	12,627	471,788	471,788	-	0%	-	-	priority # 6 for allocation
604	LEGAL RSRV	300,000	-	-	300,000	-	-	300,000	-	300,000	12%	-	-	priority # 1 for allocation
605	CBC	2,024,054	2,489,426	2,447,626	2,065,854	(68,863)	-	1,996,991	-	1,996,991	77%	-	-	priority # 3 for allocation
	SUBTOTAL 1	2,566,095	3,363,183	3,079,082	2,850,196	(94,044)	12,627	2,768,779	471,788	2,296,991	89%	-	-	
602	BABC	293,689	10,092	70,000	233,781	-	-	233,781	96,792	136,989	5%	-	-	priority # 4 for allocation
606	BACC	42,532	53,713	60,922	35,323	(49,061)	-	(13,738)	(13,738)	-	0%	-	-	
607	BACC LEGAL RSRV	120,000	30,000	-	150,000	-	-	150,000	-	150,000	6%	-	-	priority # 2 for allocation
610	WOT	259,176	-	25	259,151	-	-	259,151	259,151	-	0%	-	-	priority # 5 for allocation
612	CASA Air Toxics	-	620,125	619,125	1,000	(16,125)	-	(15,125)	(15,125)	-	0%	-	-	
	SUBTOTAL 2	715,397	713,930	750,072	679,255	(65,186)	12,627	614,069	327,080	286,989	11%	-	-	
	GRAND TOTAL	3,281,492	4,077,113	3,829,154	3,529,451	(159,230)	12,627	3,382,848	798,868	2,583,980	100%	-	-	

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

Reconciliation to Trial Balance		STB	29020	-	
Per Report above:		STB	14930	2,583,980	
General	3,363,183	STB	15050	798,868	
WOT, BABC, & BACC	713,930			3,382,848	-
PROP	-	STB	16300	159,230	
subtotal	4,077,113	STB	21350	(12,627)	
				3,529,451	-

Trial Balance Revenue Accounts

40100	Interest	(139,934)
40101	Mem Contrib	(1,935,061)
40102	Transfer	(30,000)
40103	Assoc Contrib	(215,663)
40104	Other	(1,756,455)
47310	State Grant	-
47320	Grant Retention	-
subtotal		(4,077,113)
Difference		-

BACWA Revenue Report as of February 28, 2026

Cost Center Code	Cost Center Description	Program Segment Description	Program Segment Value	Amended Budget	Current Period	FY26 - Year to Date	Unobligated
600	Bay Area Clean Water Agencies	BABC - AED and RPM Support	6200	-	-	-	-
		BACC - AED Support	6199	(40,468.00)	-	-	40,468.00
		BDO Affil/CS/Assoc Dues	6104	-	-	(44,733.65)	(44,733.65)
		BDO Affiliate/Associate Dues	6103	-	-	(46,141.20)	(46,141.20)
		BDO Assoc.&Affiliate Contr	6102	(260,064.00)	-	(124,788.30)	135,275.70
		BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	(581,626.00)	-	(581,625.00)	1.00
		BDO Non-Member Contr AIR	6136	-	-	-	-
		BDO Other Receipts	6105	-	-	-	-
		BDO Other Receipts (Misc)	6140	-	-	(2,732.00)	(2,732.00)
		BDO- Interest Income from LAIF	6142	(160,000.00)	(4,311.00)	(67,969.24)	92,030.76
		BDO-Alternative Investment Inc	6143	-	-	-	-
		Non R2 Affiliate Members	6135	(5,768.00)	-	(5,767.65)	0.35
600 Total				(1,047,926.00)	(4,311.00)	(873,757.04)	174,168.96
602	Bay Area Biosolids Coalition	BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	-	-	(10,000.00)	(10,000.00)
		BDO- Interest Income from LAIF	6142	-	-	(92.11)	(92.11)
602 Total						(10,092.11)	(10,092.11)
605	Clean Bay Collaborative	BDO Fund Transfers	6141	-	-	-	-
		BDO Member Contributions	6101	(675,000.00)	-	(674,250.00)	750.00
		BDO Other Receipts	6105	(1,750,000.00)	-	(1,747,955.00)	2,045.00
		BDO- Interest Income from LAIF	6142	-	-	(67,221.29)	(67,221.29)
605 Total				(2,425,000.00)		(2,489,426.29)	(64,426.29)
606	Bay Area Chemical Consortium	BDO Member Contributions	6101	-	(49,061.32)	(49,061.32)	(49,061.32)
		BDO- Interest Income from LAIF	6142	-	-	(4,651.15)	(4,651.15)
606 Total					(49,061.32)	(53,712.47)	(53,712.47)
607	BACC Legal RSRV	BDO Fund Transfers	6141	-	-	(30,000.00)	(30,000.00)
607 Total						(30,000.00)	(30,000.00)
612	CASA Air Toxics	BDO Member Contributions	6101	(620,125.00)	-	(620,125.00)	-
612 Total				(620,125.00)		(620,125.00)	
Grand Total				(4,093,051.00)	(53,372.32)	(4,077,112.91)	15,938.09

BACWA Treasurer's Report Expenses and Encumbrances
 Period Covering July 1, 2025 through February 28, 2026

Cost Center Code	Program Segment Description	Program Segment Value	Amended Budget	Obligated Fiscal Year to Date	Unobligated
600	AIR-Air Issues&Regulation Grp	6153	94,750.00	98,250.74	(3,500.74)
	AS-Assistant Executive Directo	6175	98,193.00	98,193.00	-
	AS-Audit Services	6180	5,672.00	-	5,672.00
	AS-BACWA Admin Expense	6173	4,059.00	741.80	3,317.20
	AS-EBMUD Financial Services	6176	44,596.00	43,297.00	1,299.00
	AS-Executive Director	6174	233,199.00	233,199.00	-
	AS-Insurance	6177	12,366.00	8,949.35	3,416.65
	AS-Regulatory Program Manager	6179	162,373.00	162,373.00	-
	Administrative Support	6178	-	-	-
	Asset Management Committee	6213	500.00	-	500.00
	BABC	6147	120,000.00	120,000.00	-
	BACWA Value of Wastewater Communication	6211	50,000.00	43,020.48	6,979.52
	BC-BAPPG	6152	148,060.00	144,209.88	3,850.12
	BC-Collections System	6144	1,000.00	-	1,000.00
	BC-Laboratory Committee	6149	500.00	326.87	173.13
	BC-Manager's Roundtable	6154	1,000.00	445.00	555.00
	BC-Miscellaneous Committee Sup	6150	45,000.00	5,753.75	39,246.25
	BC-Permit Committee	6145	500.00	326.87	173.13
	BC-Pretreatment Committee	6151	500.00	-	500.00
	BC-Water Recycling Committee	6146	500.00	-	500.00
	Bay Area One Water Network	6209	5,000.00	2,000.00	3,000.00
	Bruce Wolf Scholarship	6210	4,000.00	-	4,000.00
	CAR-BACWA File Storage	6165	828.00	-	828.00
	CAR-BACWA IT Software	6167	1,932.00	723.54	1,208.46
	CAR-BACWA IT Support	6166	2,870.00	-	2,870.00
	CAR-BACWA Website Dev/Maint	6163	1,656.00	432.00	1,224.00
	CAR-BACWA Website Hosting	6164	758.00	-	758.00
	CAS-Arleen Navaret Award	6160	-	-	-
	CAS-BayCAN	6204	5,000.00	1,500.00	3,500.00
	CAS-Misc Collaborative Sup	6162	1,500.00	1,500.00	-
	CAS-PSSEP	6157	20,000.00	20,000.00	-
	CAS-Stanford ERC	6159	-	-	-
	California Product Stewardship Council	6216	-	10,000.00	(10,000.00)
	GBS-Meeting Support-Annual	6170	14,369.00	1,917.50	12,451.50
	GBS-Meeting Support-Exec Bd	6169	4,200.00	1,568.11	2,631.89
	GBS-Meeting Support-Misc	6172	10,000.00	4,745.73	5,254.27
	GBS-Meeting Support-Pardee	6171	4,000.00	2,353.11	1,646.89
	LS-Executive Board Support	6156	20,000.00	747.50	19,252.50
	LS-Regulatory Support	6155	2,403.00	50,000.00	(47,597.00)
	National Stewardship Action Council	6215	10,000.00	10,000.00	-
	O&M Committee	6148	1,500.00	321.88	1,178.12
	Our Water Our World Program	6214	10,000.00	10,000.00	-
	WQA-CE-Nature Based Solutions	6196	-	-	-
	Write-Off Doubtful Accounts	6208	-	-	-
600 Total			1,142,784.00	1,076,896.11	65,887.89
602	AS-Assistant Executive Directo	6175	-	-	-
	AS-Regulatory Program Manager	6179	-	-	-
	Academia Research & Development	6203	-	10,000.00	(10,000.00)
	Administrative Support	6178	-	60,000.00	(60,000.00)
	BDO Contract Expenses	6186	-	-	-
	Collateral Development	6197	-	-	-
	Program Manager Expense	6202	-	-	-
	Technology Research & Development	6206	-	-	-
602 Total			-	70,000.00	(70,000.00)
605	Recycled Water Evaluation	6198	-	-	-
	Regional Nutrient Compliance Support	6218	250,000.00	770,052.62	(520,052.62)
	WQA - CEC Investigations	6201	50,000.00	-	50,000.00
	WQA-CE Addl Work Under Permit	6191	100,000.00	9,890.00	90,110.00
	WQA-CE Risk Reduction	6190	12,500.00	50,000.00	(37,500.00)
	WQA-CE Voluntary Nutr Contrib	6193	-	-	-
	WQA-CE-Nature Based Solutions	6196	-	-	-
	WQA-CE-Nutrient WS Permit Comm	6188	2,200,000.00	2,200,000.00	-
	WQA-CE-Technical Support	6181	100,000.00	35,000.00	65,000.00
	WQA-NMSReviewer	6205	50,000.00	30,000.00	20,000.00
605 Total			2,762,500.00	3,094,942.62	(332,442.62)
606	AS-BACWA Admin Expense	6173	-	-	-
	AS-Regulatory Program Manager	6179	-	963.60	(963.60)
	Administrative Support	6178	40,468.00	40,687.60	(219.60)
	BDO Fund Transfers	6141	-	30,000.00	(30,000.00)
	CAR-BACWA IT Support	6166	-	-	-
	CAR-BACWA Website Hosting	6164	-	75.50	(75.50)
	GBS-Meeting Support-Misc	6172	-	829.85	(829.85)
606 Total			40,468.00	72,556.55	(32,088.55)
610	Administrative Support	6178	-	-	-
	BDO Contract Expenses	6186	-	25.00	(25.00)
610 Total			-	25.00	(25.00)
612	Passthrough to CASA for air toxics	6212	620,125.00	619,125.00	1,000.00
612 Total			620,125.00	619,125.00	1,000.00
Grand Total			4,565,877.00	4,933,545.28	(367,668.28)



BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 3

MEETING DATE: April 17, 2026

TITLE: Request for BACWA Executive Board Approval for Amendment #3 to the Agreement with Carollo Engineers for FY22 AIR Committee Support, Increase \$ 26,994 to \$120,741.

RECEIPT

DISCUSSION

RESOLUTION

APPROVAL

RECOMMENDED ACTION

Authorize Amendment #3 with Carollo Engineers to increase AIR Committee Support line to a not to exceed amount of \$120,741.

SUMMARY

The BACWA Air Issues and Regulations (AIR) committee is supported by a consultant who plans and manages meetings, provides regulatory and technical updates, and facilitates coordination between POTWs and regulators. BACWA engaged in a competitive solicitation for support beginning in FY25, and awarded the contract to Carollo Engineers, with Courtney Mizutani as a subconsultant. Per BACWA's Contracting Policy, contracts can be renewed up to four times, for a total of five years.

Since the approval of the FY26 Contract Amendment #2 in June 2025, the Bay Area Air District has expanded its requests for feedback, coordination, and participation from BACWA on multiple air permitting and regulatory initiatives. While Tasks 1–3 of the approved Scope of Work (meetings, tracking regulatory issues, and coordination with other organizations) remain unchanged, Task 4 (Response on Special Assignments) now requires far more effort than originally planned due to the opportunity to engage with the Engineering Program Manager and the Permit Efficiency Task Force. These new engagement opportunities include complex, time-intensive activities:

- Leading specialty workshops
- Reviewing documentation provided by the Air District
- Participating in AIR Committee strategy meetings
- Providing detailed verbal and written responses to regulators

These new initiatives provide a new opportunity to provide input that will improve the Air District's permitting process, but BACWA staff do not have the capacity or expertise to lead these efforts. It is recommended that the FY26 contract with Carollo Engineers be amended to cover these additional activities.

FISCAL IMPACT

The funding for this contract is consistent with the Fiscal Year 2022 workplans and budget for BACWA and Special Programs. The additional \$26,994 funding will be supplied through the Miscellaneous Committee support line item of the FY26 Budget.

ALTERNATIVES

1. Do not provide the enhanced support to engage with the Air District. This alternative is not recommended, since the BACWA community has a unique opportunity to influence the Air District permitting process.

Attachments: FY 26 Carollo Engineers Amendment #3
Carollo Engineers, Inc. Scope of Services for Enhanced Level of Support
FY25 Agreement with Carollo Engineers, Inc.

Approved: _____ Date: April 17, 2026
Jackie Zipkin, Chair,
BACWA Executive Board

AMENDMENT NO. 3
TO AGREEMENT BETWEEN
BAY AREA CLEAN WATER AGENCIES and
Carollo Engineers
FOR
AIR Committee Support FY26

This Amendment No. 3 is made on this 17th day of April 2025, in the City of Oakland and County of Alameda, State of California, to that certain agreement of July 5, 2024 by and between Carollo Engineers and Bay Area Clean Water Agencies, (BACWA) (the "Agreement") in consideration of the covenants hereinafter set forth.

1. BACWA and Carollo Engineers agree to a new contract amount of \$120,741 for AIR Committee Support for Fiscal Year 2026.
2. The period of the agreement is unchanged.
3. Except as herein expressly modified, the Agreement will remain in full force and effect.

BAY AREA CLEAN WATER AGENCIES

By _____
Jackie Zipkin, Chair
BACWA Executive Board

April 17, 2026
Date _____

By _____
Ray David
Carollo Engineers

Date _____



February 20, 2026

Ms. Lorien Fono
Regulatory Program Manager
Bay Area Clean Water Agencies (BACWA)
P.O. Box 24055, MS 702
Oakland, CA 94623

Subject: Proposal to Provide Scope of Services and Budget for Providing an Enhanced Level of Support for BACWA's Air Issues and Regulations (AIR) Committee during Fiscal Year 2026

Dear Ms. Fono:

We are pleased to share this scope of services and budget to provide an enhanced level of support to BACWA's Air Issues and Regulations (AIR) Committee through the end of this fiscal year (Fiscal Year 2026). As requested, Carollo Engineers (CONSULTANT) is submitting the following proposed scope of services for consideration.

SCOPE OF SERVICES

The Scope of Services, as summarized in tasks below, was originally developed for performing typical year-to-year activities in support of BACWA's AIR Committee. Task 1 (Meetings with the AIR Committee), Task 2 (Track and Communicate Regulatory Issues, Technical Resources, and Grant Opportunities), and Task 3 (Coordination and Communication with other POTW Organizations and Regulators) are unchanged with this proposal.

While the high-level task descriptions remain the same as presented in the current FY 26 AIR Committee Support Agreement, it is estimated that an additional \$26,994 is needed during fiscal year 2026 to provide the needed enhanced level of coordination, verbal and written responses, and engagement in workshops and hearings described below for Task 4 (Response on Special Assignments).

Task 4 - Response on Special Assignments

This optional task includes performing special technical assignments under the direction of the AIR Committee Chairs (i.e., as needed). Special technical assignments may include leading a specialty workshop for the AIR Committee or general BACWA members, participating in AIR Committee strategy meetings, or performing other activities not included in Tasks 1-3. The original budget for this task was 91 hours.

There continues to be significant increase in demand for support to adequately respond to the Bay Area Air District as it develops and requests feedback/responses from BACWA on a range of air issues, including:

- Engineering Program Manager – Review Bay Area Air District's Engineering Program Manager Process Flowchart diagram, coordinate and facilitate the BACWA Engineering Program Manager (EPM) Process Flowchart Review Subcommittee, summarize BACWA's EPM Process Flowchart comments, share consolidated BACWA comments with the Bay Area Air District, and participate in virtual EPM meetings as described in the pre-development EPM Memorandum of Understanding (MOU) between BACWA and the Bay Area Air District. This effort includes attendance at two, two-hour structured EPM meetings; two, two-hour meetings for the two-person CONSULTANT team to review the Process Flowchart with the BACWA EPM Process Flowchart Review

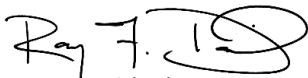
Subcommittee; and attendance at one site visit at the San Francisco Public Utilities Commission's Southeast Treatment Plant by the CONSULTANT team. This subtask includes 41 total additional hours.

- Permit Task Force – Participate in the Bay Area Air District's monthly Task Force Meetings and prepare for and facilitate BACWA Strategic Plan and Rule Making Subcommittee Meetings to review the Bay Area Air District's ongoing efforts to enhance and streamline the permitting process. The Bay Area Air District's Task Force Meetings will be monthly (six meetings planned through the end of June 2026) and will be attended in person by one person from the CONSULTANT team. The BACWA Strategic Plan and Rule Making Subcommittee Meetings will be monthly (five meetings planned through the end of June 2026) and will be held virtually and attended by the CONSULTANT team. This subtask includes 59 total additional hours.

The above items highlight high level of engagement with the Bay Area Air District that impacts BACWA members and the overall sector. The CONSULTANT team will continue to monitor the range of issues, attend related meeting/workshops, summarize contents of meetings/workshops, review and respond to the Bay Area Air District documentation/regulations/etc., and provide timely updates to BACWA members so BACWA can use the opportunities to collaborate with the Bay Area Air District to advocate for and implement changes that will support the health of the sector, support and inform BACWA members, and advocate for the protection of the San Francisco Bay environment and public health.

We appreciate your consideration on this scope of services and budget and look forward to working more closely with you and your staff. Please do not hesitate to contract us (rdavid@carollo.com (925-490-9046) and cmizutani@sbcglobal.net (925-286-4436)) if you have any questions or require additional information.

Sincerely,



Ray David, PhD, PE
Vice President, Carollo Engineers



Courtney Mizutani, PE
Principal, Mizutani Environmental

Budget, Including Billing Rates of Key Staff

The following fee schedule contains billing rates of the proposed key staff and items for which BACWA may be billed during the normal course of this contract. We can adjust the estimated labor and costs associated with optional tasks as needed during negotiations.

A. Labor Hours

Task	Task Description	RD \$284	CM \$261	Total Hours	Labor Cost
1	Meetings with the Air Committee (Quarterly AIR Committee meetings, monthly meetings with AIR Committee Chairs) Task 1 Total =	-	-	-	\$-
2	Track and Communicate Regulatory Issues, Technical Resources and Grant Opportunities Task 2 Total =	-	-	-	\$-
3	Coordination and Communication with other POTW Organizations and Regulators (Includes quarterly Implementation Workgroup meetings) Task 3 Total =	-	-	-	\$-
OT- 4	Optional Task – Response on Special Assignments (Optional/As Needed) <i>Engineering Program Manager</i> <i>Permit Task Force</i> Optional Task 4 Total =	34 19 15	66 22 44	100 41 59	\$26,882.00 \$26,882.00
Labor SUBTOTAL					
B. Travel/Other Direct Costs					
	Travel				\$112.00
Travel/ODCs SUBTOTAL =					\$112.00
TOTAL					\$26,994.00

Notes:

RD – Ray David

CM – Courtney Mizutani

BAY AREA CLEAN WATER AGENCIES
PROFESSIONAL SERVICES CONTRACT

This PROFESSIONAL SERVICES CONTRACT, effective 7/5/2024, is between Bay Area Clean Water Agencies (“BACWA”), a joint powers agency which exists as a public entity separate and apart from its Member Agencies, created January 4, 1984 by a Joint Powers Agreement between Central Contra Costa Sanitary District, East Bay Dischargers Association, East Bay Municipal Utility District, the City and County of San Francisco and the City of San Jose, with a mailing address of P.O. Box 24055, MS 702, Oakland, CA 94623, and Carollo Engineers, Inc. (“Consultant”), a private corporation doing business at 2795 Mitchell Drive, Walnut Creek, CA 94598 for professional services as described in any Exhibit A attached hereto.

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

Description and Standard of Services to be Performed

1. Consultant will perform the Services as described by and in accordance with Exhibit A in a manner acceptable to BACWA.
2. Consultant shall not contract with or otherwise use any subconsultants, subcontractors or other non-employee persons or entities (“Subconsultants”) other than those listed in Exhibit B to perform the Services without the prior written approval of BACWA. For the Subconsultants listed in Exhibit B, Consultant shall ensure Subconsultants’ compliance with all the terms and conditions of this agreement.
3. Consultant will exercise that degree of care in performing the Services in accordance with that prevailing among firms of comparable standing in the State of California (“Professional Standard”). Consultant will promptly correct or re-perform those Services not meeting the Professional Standard without additional compensation.
4. Consultant warrants that it is fully licensed, registered and otherwise fully authorized to perform the Services in the State of California to the extent applicable law requires such licensure, registration or authorization.
5. BACWA’s review, approval, acceptance, use, or payment for all or any part of the Services hereunder will not alter the Consultant’s obligations or BACWA’s rights hereunder, and will not excuse or diminish Consultant’s responsibility for performing all Services consistent with this Contract.

Payment for Services

6. BACWA will pay Consultant based on the rates in Exhibit B, up to a maximum amount payable of \$75,000. Consultant will not exceed the maximum amount payable without obtaining prior written approval from BACWA. This term of this agreement shall not extend beyond June 30, 2025 but may be extended for additional one-year terms at BACWA’s discretion for an additional four years, ending June 30, 2029. If, upon reaching the end of the term of the contract, the Board elects to extend the contract, the amount of the extended contract will be negotiated at the time the contract is extended.
7. Consultant shall submit invoices monthly. Invoices shall include the hours charged by each employee, a brief description of the work performed, and a description of costs for which Consultant seeks reimbursement and which are specified in Exhibit B.
8. Payments under this Contract will be due thirty (30) days after BACWA’s receipt of invoices. BACWA may withhold from any progress or final payment any damages, backcharges or claims incurred or anticipated by BACWA to the extent caused by Consultant.

Document Ownership and Retention

9. Consultant will maintain all financial records relating to this Contract in accordance with generally accepted accounting principles and for at least three years following termination of this Contract. Consultant will grant BACWA and its representatives access upon request to all such records and all other books, documents, papers, drawings, and writings of Consultant that refer or relate to this Contract.
10. All drawings, specifications, reports, programs, manuals, and other work product of Consultant that result from this Contract (“Work Product”) will be considered the exclusive property of BACWA. Consultant agrees that it will not use, disclose, communicate, publish or otherwise make available to third parties any products, analyses, data, compilations, studies, proposals, technical or business information, and any other information related to the Services provided to BACWA without BACWA’s prior written approval.

Indemnification

11. To the fullest extent allowed by law, Consultant will indemnify, hold harmless, reimburse and defend BACWA, its Member Agencies, and each of their officers, directors, employees and agents from, for and against any and all claims, demands, damages, losses, expenses, liabilities and penalties, including but not limited to reasonable attorneys’ and expert witnesses’ fees, arising out of or relating to the Services but only to the extent caused by the negligent or other wrongful acts or omissions of Consultant or any person or entity for whose acts or omissions any of them are responsible, or by the failure of any such party to perform as required by this Contract.

Insurance

12. Consultant will purchase and maintain, at Consultant’s expense, the following types of insurance, covering Consultant, its employees and agents:
 - a. Workers’ Compensation Insurance as required by law, subject to a waiver of subrogation in favor of BACWA.
 - b. Employers Liability Insurance with a per accident value at \$1,000,000, Policy Limit of \$1,000,000 and Each Employee of \$1,000,000, subject to a waiver of subrogation in favor of BACWA.
 - c. Comprehensive General Liability Insurance covering personal injury and property damage with a combined single limit, or the equivalent, of not less than \$1,000,000.00 each occurrence, \$2,000,000.00 general aggregate, and naming BACWA as an additional insured.
 - d. Business Automobile Liability Insurance with combined single limit coverage of not less than \$1,000,000.00 aggregate for each claim, incident, or occurrence; and naming BACWA as an additional insured.

Assignment

13. Consultant will not assign or transfer any of its interest in this Contract, in whole or in part, without the prior written consent of BACWA. BACWA may assign this Contract and any rights relating to this Contract (including but not limited to its right to assert claims and defenses against Consultant) at BACWA’s discretion.

Independent Contractor

14. Consultant will perform the Services as an independent contractor. Although Consultant will perform its Services for the benefit of BACWA, and although BACWA reserves the right to determine the schedule for the Services and to evaluate the quality of the completed performance, BACWA does not

control the means or methods of Consultant's performance. Consultant is solely responsible for determining the appropriate means and methods of performing the Services, and Consultant's liability will not be diminished by any review, approval, acceptance, use or payment for the same by BACWA or any other party.

Termination of Contract; Suspension of Services

15. This contract shall automatically terminate on June 30, 2025. Either party may also terminate this Contract in whole or in part at any time for its convenience. For a termination for convenience, the termination will be effective thirty (30) days following receipt of a written notice of termination by one party from the other. BACWA may terminate this Contract in whole or in part for cause, in which event the termination will be effective ten (10) days after Consultant's receipt of BACWA's written notice and Consultant's failure during that period to cure the default.

Dispute Resolution

16. Consultant will give prompt written notice to BACWA of any claim, dispute or other matter in question, but in no event will Consultant give such notice later than ten (10) days after Consultant's becoming aware of the event or circumstance giving rise to the claim, dispute or matter in question.
17. All claims, disputes and other matters in question between BACWA and Consultant arising out of or relating to this Contract will be subject to alternative dispute resolution. If both parties agree to arbitration it will be conducted in accordance with the Commercial Arbitration Rules of the American Arbitration Association then in effect. Notice of the demand for arbitration will be filed in writing with the other party to this Contract and with the American Arbitration Association. Any arbitration arising out of or relating to this Contract will include, by consolidation, joinder or joint filing, any other person or entity not a party to this Contract that is substantially involved in a common issue of law or fact and whose involvement in the consolidated arbitration is necessary to achieve a final resolution of a matter in controversy therein. This agreement to arbitrate will be specifically enforceable by any court with jurisdiction thereof.
18. A demand for dispute resolution by either party will be made within a reasonable time after the claim, dispute, or other matter in question has arisen, and in no event will it be made after the date when institution of court litigation based on such claim, dispute or other matter in question would be barred by the applicable period of limitations. For all claims by BACWA against Consultant, the applicable period of limitations will not commence to run, and any alleged cause of action will not be deemed to have accrued (whether such action is based on negligence, strict liability, indemnity, intentional tort or other tort, breach of contract, breach of implied or express warranty, or any other legal or equitable theory), unless and until BACWA is fully aware of all three of the following: (1) the identity of the party(ies) responsible, (2) the magnitude of the damage or injury and (3) the cause(s) of the damage or injury. The contractual limitations period and discovery rule provided herein applies in lieu of any otherwise applicable statute or related case law.
19. The failure of either party to enforce any provision of this Contract will not constitute a waiver by that party of that or any other provision of this Contract.

Severability

20. BACWA and Consultant agree that if any term or provision of this Contract is determined to be illegal, in conflict with any law, void or otherwise unenforceable, and if the essential terms and provisions of this Contract remain unaffected, then the validity of the remaining terms and provisions will not be affected and the offending provision will be given the fullest meaning and effect allowed by law.

Survival

21. All rights and obligations set out in this Contract and arising hereunder will survive the termination of this Contract (i) as to the parties' rights and obligations that arose prior to such termination and (ii) as is necessary to give effect to rights and obligations that arise after such termination but derive from a breach or performance failure that occurred prior to the termination.

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

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

- Exhibit A – Scope of Work
- Exhibit B – Hourly Rates

CONSULTANT: Carollo Engineers, Inc.
 2795 Mitchell Drive
 Walnut Creek, CA 94598
 Employer Identification No.: 86-0899222

Consultant Signature Carollo Engineers, Inc.	Date
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BACWA Signature Jacqueline Zipkin, BACWA Executive Board Chair	Date
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EXHIBIT A
SCOPE OF WORK

BACWA Air Issues & Regulations (AIR) Committee Support for Fiscal Year 2024-2025
Professional Services by Carollo Engineers

Task 1 - Meetings with the AIR Committee

Under this task, it is assumed we will organize quarterly meetings with the AIR Committee in each fiscal year. This includes coordination of four virtual or in-person meetings, preparation of agendas and meeting materials (e.g., handouts and presentation slides), and sharing meeting minutes following each meeting. We will support the AIR Committee members by presenting information on current air issues, facilitating discussions between members, and identifying follow-on action items. One of these meetings will be the annual BAAQMD-BACWA meeting to address issues of concern to AIR Committee members. We will meet with the AIR Committee Chairs to provide updates and develop the agenda for the aforementioned AIR Committee meetings.

Task 2 - Track and Communicate Regulatory Issues, Technical Resources, and Grant Opportunities

This task is to allow for continued monitoring of regulatory agencies involved in developing air quality and climate change regulations that may affect Bay Area POTWs, including but not limited to the BAAQMD, the San Francisco Bay Conservation and Development Commission, the California Air Resources Board, and the U.S. Environmental Protection Agency. We will also track related and relevant technical resources and grant opportunities of interest to BACWA AIR Committee member agencies.

This task also includes preparation and distribution of informational material via e-mail to members to keep them informed of the AIR Committee activities and future regulatory activities.

Task 3 - Coordination and Communication with other POTW Organizations and Regulators

When directed by the AIR Committee Chairs, we will participate in meetings with regulators, participate in member or regulator workshops and hearings, draft correspondence for AIR Committee member review and approval prior to submission, coordinate support for the Implementation Workgroup formed with BAAQMD in 2022 following amendments to Regulation 2, and perform other related activities. We will also coordinate with other POTW organizations on issues of common interest. The purpose of this coordination is to share/exchange useful information, identify areas of joint interest, and prepare consistent or complementary responses on key issues, where appropriate. POTW organizations whose objectives/interests coincide with the AIR Committee include Clean Water SoCal, CASA, WRF, and NACWA. Activities may include conference calls, meetings, and exchange of published information.

Task 4 - Response on Special Assignments (Optional)

This optional task includes performing special technical assignments under the direction of the AIR Committee Chairs (i.e., as needed). Special technical assignments may include leading a specialty workshop for the AIR Committee or general BACWA members, participating in AIR Committee strategy meetings, or performing other activities not included in Tasks 1-3.

EXHIBIT B
HOURLY RATES

Consultant / Subconsultant	Hourly Rate
Ray David, Carollo Engineers	\$278
Courtney Mizutani, Mizutani Environmental	\$255



BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: 4

MEETING DATE: April 17, 2026

TITLE: Fiscal Year 2027 Budget & Workplan

RECEIPT DISCUSSION RESOLUTION APPROVAL

RECOMMENDED ACTION

Approve the Budget and Workplan for the fiscal year covering July 1, 2026 through June 30, 2027.

SUMMARY

The Joint Powers Agreement establishing BACWA requires approval of a Budget and Workplan for the coming fiscal year's activities no later than June of the preceding fiscal year.

Draft versions of the budget were reviewed first with the Finance Committee on February 10, 2026 and at the February 20, 2026 and March 20, 2026 Executive Board meetings. There were a few comments from the Board, and this final budget and workplan is ready to be approved.

FISCAL IMPACT

The final budget has revenues of \$3,470,225 and expenses of \$4,172,275 resulting in a negative variance of expenses over revenues of \$702,050 for FY27 which will be transferred from reserves.

ALTERNATIVES

Do not approve the Budget and Workplan: This is not recommended as the budget has been reviewed by the Finance committee and Executive Board.

Attachments:


FY 2027 Budget and Workplan

Approved: _____

Jackie Zipkin
Chair, BACWA Executive Board

Date: _____

FY 2027 Budget

			
	<u>Line Item Description</u>	<u>FY27 Budget</u>	<u>FY27 NOTES</u>
REVENUES & FUNDING			
Dues	Principals' Contributions	\$610,707	FY27: 5% increase 5 @ \$122,141
	Associate & Affiliate Contributions	\$226,446	FY27: 5% increase. 13 Assoc: \$10,079 47 Affiliate: \$2018; UC Berkeley \$541
Fees	Clean Bay Collaborative	\$675,000	Same as FY25. Prin: \$450,000; Assoc/Affil: \$225,000
	Nutrient Surcharge	\$1,750,000	See Nutrient Surcharge Spreadsheet
	Member Voluntary Nutrient Contributions		
Other Receipts	Non R2 Affiliate Members	\$8,072	FY27: 5% increase Santa Rosa, Sac Reg'l, Vacaville, Ironhouse \$2018 / each,
Interest Income	LAIF	\$200,000	BACWA, Legal, & CBC Funds invested in LAIF
	Total Revenue	\$3,470,225	
	<u>Line Item Description</u>	<u>FY27 Budget</u>	<u>FY27 NOTES</u>
EXPENSES			
Labor			
	Executive Director	\$240,195	(incl 3% CPI SF Bay Metro Area Dec 2025)
	Assistant Executive Director	\$126,427	(incl 3% CPI SF Bay Metro Area Dec 2025); \$84.28/hour; Reflects 1200 AED hours + 300 hrs EPA Grant
	Regulatory Program Manager	\$167,249	(incl 3% CPI SF Bay Metro Area Dec 2025); \$123.88/hour, Reflects 1350 hours
	Employee Model Contingency	\$152,573	Based on an estimate of benefits costing 30% of salary
	Total	\$686,444	
Administration			
	EBMUD Financial Services	\$46,826	5% increase from FY26
	Auditing Services	\$6,200	Financial Auditors through EBMUD; per auditor rate schedule
	Administrative Expenses	\$4,059	No change from FY26
	Insurance	\$11,000	15-20% increase from FY26 actual (per Alliant)
	Total	\$68,085	
Meetings			
	EB Meetings	\$4,200	No change from FY26
	Annual Meeting	\$15,806	10% increase from FY26
	Pardee	\$4,000	No change from FY26
	Misc. Meetings and conferences	\$10,000	No change from FY26
	Total	\$34,006	


FY 2027 Budget

EXPENSES			
Communication			
	Website Hosting / Domain registration	\$250	66% decrease based on FY25 actual spending and vendor change
	File Storage	\$750	No change from FY26, box.net
	Website Development/Maintenance	\$750	54% decrease based on FY25 actual spending and vendor change
	IT Support (As Needed)	\$1,000	65% decrease based on FY25 actual spending
	BACWA Value of Wastewater Communication	\$50,000	New line item in FY24, no change from FY24 - TBD
	Other Communication	\$4,000	10% increase from FY25 actual; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile, listserv
	Total	\$56,750	
Legal			
	Regulatory Support	\$20,000	No change from FY26
	Executive Board Support	\$20,000	Increase from FY26 for employment models support
	Total	\$40,000	
Committees			
	AIR	\$126,030	Carollo contract
	BAPPG	\$159,060	Includes Pest. Reg Spt. @ \$77k; Pest. Prof Outreach @\$27K; Media Consultant @ \$50K; misc.\$5k
	Asset Management Committee	\$500	No change from FY26
	BABC	\$120,000	Formerly BACWA Biosolids, now BABC program management contract
	Collections System	\$700	SSS WDR Support
	O&M Committee	\$500	No change from FY26
	Laboratory Committee	\$700	Increase from FY26
	Permits Committee	\$500	No change from FY26
	Pretreatment	\$500	No change from FY26
	Recycled Water Committee	\$500	No change from FY26
	Misc Committee Support	\$45,000	No change from FY26
	Manager's Roundtable	\$1,000	No change from FY26
	Total	\$454,990	
Collaboratives			
	Collaboratives		
	State of the Estuary (SFEP-biennial)	\$0	Biennial in Even Fiscal Years
	Arleen Navarret Award	\$2,500	Next Award will be disbursed in FY27
	BayCAN	\$1,500	
	General benefit contribution to EPM Pilot	\$50,000	EPM time spent on general permitting improvements
	Bay Area One Water Network	\$0	No donations in FY27
	Bruce Wolfe Scholarship	\$4,000	FY27 thru FY31 approved in March 2026
	Our Water Our World Program	\$10,000	No change from FY26, Previously included in BAPPG Budget
	National Stewardship Action Council	\$10,000	No change from FY26, Previously included in BAPPG Budget

FY 2027 Budget

EXPENSES			
	California Product Stewardship Council	\$10,000	No change from FY26, Previously included in BAPPG Budget
	Misc	\$1,500	NBWA
	Total	\$89,500	
Other			
	Unbudgeted Items		
	Other		
Tech Support			
	Technical Support		
	Nutrients		
	Watershed Permit NMS Contribution	\$2,200,000	Permit required funding for 3rd Watershed Permit Science Studies
	NMS Voluntary Contributions		
	Additional work under permit	\$100,000	Discretionary work including CEQA support for Basin Plan Amendment
	Nutrient Workshop(s)	\$0	Pilot Studies/Plant Review/Innovative Technologies; Might change
	NMS Reviewer	\$30,000	Contract with Joe Dillion
	Regional Nutrient Compliance Support	\$250,000	HDR multi year contract
	General Tech Support	\$100,000	Eg. Nutrients, biosolids - may be used for trading if EPA support is unavailable
	CEC Investigations	\$50,000	PFAS Study Phase 3
	Risk Reduction	\$12,500	Will plan new risk reduction tasks for current Hg/PCB Watershed Permit
	Total	\$2,742,500	
	TOTAL EXPENSES	\$4,172,275	
	NET INCOME BEFORE TRANSFERS	-\$702,050	
	TRANSFERS FROM RESERVES		aligns with strategy of drawing down reserves to lessen impact of Nutrient Surcharge
	NET INCOME AFTER TRANSFERS	\$0	
	TOTAL OPERATING BUDGET	\$1,538,605	
	OPERATING RESERVE	\$384,651	

BACWA Special Projects Budget - FY27

			
	<u>Line Item Description</u>	<u>FY27 Budget</u>	<u>FY27 NOTES</u>
REVENUES & FUNDING			
	BACC Admin Fees	\$52,000	400 hours of AED support \$130/hr
	CASA Passthrough	\$620,125	Pass through program to support pooled emissions study
	EPA Grant - staffing/PM/admin	\$117,300	Project management task 4.1 in proposal to EPA (will find out in April if awarded) Includes 300 hrs AED
	EPA Grant - nutrient trading	\$365,667	Trading 3.1 in proposal to EPA (will find out in April if awarded)
	EPA Grant - Passthrough to subawardees	\$6,359,537	Passthrough to subawardees(will find out in April if awarded)
	AQPI	tbd	MOU under development - will be cost neutral for BACWA
	Bay Area Air District EPM Agency Passthrough	tbd	EPM work for specific agencies will be cost-neutral for BACWA
	Total Revenues	\$7,514,628	
	<u>Line Item Description</u>	<u>FY27 Budget</u>	<u>FY27 NOTES</u>
EXPENSES			
	BACC Administrator	\$52,000	400 hrs AED support at \$130 per hr
	CASA Passthrough	\$620,125	Pass through program to support pooled emissions study
	EPA Grant - staffing/PM/admin	\$117,300	Project management task 4.1 in proposal to EPA (will find out in April if awarded)
	EPA Grant - nutrient trading	\$365,667	Trading 3.1 in proposal to EPA (will find out in April if awarded) Includes 300 hrs AED
	EPA Grant - Passthrough to subawardees	\$6,359,537	Passthrough to subawardees(will find out in April if awarded)
	AQPI	tbd	MOU under development - will be cost neutral for BACWA
	Bay Area Air District EPM Agency Passthrough	tbd	EPM work for specific agencies will be cost-neutral for BACWA
	Total Expenses	\$7,514,628	
Administration			
	Total Revenues	\$7,514,628	
	(Total Exepnses)	\$7,514,628	
	Total Cost to BACWA General Fund	\$0	

Budget & Workplan
FISCAL YEAR 2027



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INTRODUCTION

The Bay Area Clean Water Agencies (BACWA) is a joint public powers agency created by a 1984 Joint Powers Agreement (JPA) between the Central Contra Costa Sanitary District (CCCSD), the East Bay Dischargers Association (EBDA), the East Bay Municipal Utility District (EBMUD), the City of San Francisco, and the City of San Jose (collectively, “the Principal Agencies”). The JPA requires approval of an annual budget and workplan divided into three parts: overhead (Part A), general benefit programs (Part B), and special benefit programs (Part C).

The JPA requires that revenues for each fiscal year be equivalent to anticipated expenditures. Expenditures for Management & Administration (Part A), and General Benefit Programs (Part B) are funded by all BACWA members because these programs are carried out on behalf of all member agencies.

Since adoption of the Annual Budget for fiscal year 1984, and each fiscal year thereafter, the Executive Board has allocated Part A and Part B costs pursuant to authority provided in Section 10 of the Joint Powers Agreement among Member Agencies in the following manner (the “Allocation Method”):

- a. a stated portion to the Original Signatory Members in equal shares; and
- b. the balance to Associate and Affiliate Members based on one or more of several factors consisting of the type of agency, size of plant, metals loadings, and total inorganic nitrogen loadings in the ratio that their share is to that of the total Associate and Affiliate Membership.

On September 26, 2014 BACWA formally adopted this allocation through Executive Board Resolution R-2015-01. BACWA currently has two General Benefit Programs: the core BACWA program to support member agencies and the Clean Bay Collaborative. Expenditures for Special Benefit Programs (Part C) are funded by those agencies that elect to fund those programs because those benefits accrue primarily to those participating agencies.

In FY26 BACWA had two Special Benefit Programs, all of which conform to the JPA requirements under Part C.: Water Operator Training, and the Bay Area Chemical Consortium (BACC). The Water Operator Training program, also known as the Bay Area Consortium for Water/Wastewater Education (BACWWE) is a group of BACWA agencies who provide funding for operator educational opportunities. The Bay Area Chemical Consortium is comprised of BACWA agencies as well as additional public water and wastewater agencies who work together to develop group chemical bids.

The purpose of this document is to fulfill the requirements of the JPA for Fiscal Year 2027 (FY27). This workplan and budget specify the purpose of each of BACWA’s programs during FY27, the methods by which they will be carried out, the products that will be developed, and the persons responsible for implementation. The schedule for implementation of these programs is July 1, 2026 through June 30, 2027.

STRATEGIC PLAN

BACWA adopted its first strategic plan and accompanying workplan in 2009. BACWA reformulated its strategic plan in 2020 and adopted updates in 2026. The strategic plan states the mission, vision values and goals of the organization as demonstrated in the work undertaken annually by the agency.

BACWA's Mission

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

BACWA's Vision

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

BACWA's Values

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

BACWA's Goals

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

MANAGEMENT AND ADMINISTRATION (PART A)

BACWA has administrative and management expenses that are necessary for the agency to carry out its non-program related core functions (JPA, Section 9). They include expenses related to financial management, insurance, and organizational support. Administration of BACWA is carried out under contract by an Executive Director (ED), Assistant Executive Director (AED), and Regulatory Program Manager (RPM) selected by the Executive Board. Treasurer services are provided through an agreement with EBMUD who manages BACWA's finances and oversees the annual audit which is conducted by an independent auditor. The objective of these expenditures is to ensure effective, efficient, and transparent management of BACWA, which serves BACWA's goal to practice good governance. BACWA management and administration are funded through BACWA dues.

Management & Administration (A)				
Goal	Deliverables/Outcomes	Lead	FY27 Budget	Budget Line
A. Practice Good Governance (Labor, Meetings, Legal, Administration)	A.1. Monthly Treasurer Reports,	ED, AED, EBMUD	\$46,826	Administration/ EBMUD Financial Services
	A.2. Annual audit	ED, AED, Auditor	\$6,200	Administration/ Auditing Services
	A.3. Miscellaneous Operational Expenses	ED, AED, RPM	\$4,059	Administration/ Administrative Expenses
	A.4. Insurance to manage organizational risk	ED, AED	\$11,000	Administration/ Insurance
	A.5. Compliance with organizational legal requirements	ED, AED	\$20,000	Legal/Executive Board Support
	A.6. Program Administration and Operations Support	ED, AED, RPM	\$329,174	Labor/ ED (15%), RPM (10%) AED (100%), + Benefits
	A.7. BACWA Executive Board Meetings & Administrative Expenses	ED, AED	\$4,200	Meetings/Exec. Board Meetings
	A.8. Pardee Technical Seminar & Administrative Expenses	ED, AED	\$4,000	Meetings/ Pardee Seminar
	A.9. Miscellaneous Meeting & Administrative Expenses	ED, AED, RPM	\$10,000	Meetings/ Misc. Meetings
	A.10. File Storage	ED, AED	\$750	Communications/File Storage
	A.11. IT Support (As Needed)	ED, AED	\$1,000	Communications/IT Support
	A.112. Software (As Needed)	ED, AED	\$4,000	Communications/Software
	A.113. BACWA Value of Wastewater Communication		50,000	Communications
	TOTAL		\$491,209	

GENERAL BENEFIT PROGRAMS (PART B)

There are two aspects of BACWA’s general benefit program: the core BACWA Member Agency program and the technically–focused Clean Bay Collaborative (CBC) program. Activities in these Programs are supported by the ED, AED, RPM, volunteers who Chair the BACWA Committees, and consultant support as needed.

BACWA MEMBER AGENCY PROGRAM (PART B1)

The **BACWA Member Agency Program (B1)** serves BACWA’s goals to (1) exemplify service and responsiveness to members and the public; and to (2) foster collaboration and relationship building with regulators and other stakeholders

These goals are accomplished by providing member agencies with information on regulations, scientific and technical developments; forums for participating in policy discussions and collaborating on mutually beneficial projects; and opportunities to engage with the larger Bay Area environmental community. Program expenses include support for committee facilitation and special projects; member workshops and trainings; membership in state and national organizations that disseminate information to members; and communication expenses such as the website, newsletters, the annual report, and the annual meeting. The BACWA Member Agency program is funded by BACWA dues.

CLEAN BAY COLLABORATIVE (CBC) (PART B2)

The purpose of the **CBC program (B2)** is to respond to current regulatory requirements and to develop scientific, technical, and industry information to inform future regulations and policies affecting Bay Area POTWs and the environment. These effort support BACWA’s goals to: (1) Advocate for regulation based on science; (2) Foster collaboration and relationship building with regulators and other stakeholders; and (3) Pursue regional, multi-benefit solutions to environmental challenges. Program expenses include the costs of targeted special studies and reports requested by or used to inform policy discussions with regulatory agencies, policy strategy development and implementation, and collaborations with statewide organizations to do the same. The CBC program is funded through CBC fees and the Nutrient Surcharge.

Bay Area Clean Water Agency Program (B1)				
Goal(s)	Deliverables/Outcomes	Lead	FY27 Budget	Budget Line
B1. Exemplify service and responsiveness to members and the public; and foster collaboration and relationship building with regulators and other stakeholders (Committees, Labor, Meetings, Administration, Communications, Collaborations)	B1.1. AIR Committee Support - Admin Support - Technical Support	Chair, AED, RPM, Consultant	\$126,030	Committees/AIR Comm.
	B1.2. BAPPG Committee Support - Multiple Programs for public education and outreach, and regulatory advocacy	Chair, AED, RPM, Consultants	\$159,060	Committees/BAPPG Comm.
	B1.3. Asset Management Comm		\$500	Committees/Asset Mgt
	B1.4. BABC - Misc. Expenses	Chair	\$120,000	Committees/BABC Comm.
	B1.5. Collection Systems Comm. Support - Misc. Expenses	Chair, RPM	\$700	Committees/Collection Systems Comm.
	B1.6. O&M Committee - Misc. Expenses	Chair, RPM	\$500	Committees/ O&M Committee
	B1.7. Laboratory Comm. Support - Misc. Expenses	Chair, RPM	\$700	Committees/Laboratory Comm.
	B1.8. Permits Comm. Support - Misc. Expenses	Chair, RPM	\$500	Committees/Permits Comm.

B1.9. Pretreatment Committee, - Misc. Expenses	Chair	\$500	Committees/Pretreatment Comm.
B1.10. Recycled Water Comm., Misc. Expenses	Chair, RPM	\$500	Committees/Recycled Water Comm.
B1.11. Misc. Committee Support	ED, AED, RPM	\$45,000	Committees/ Misc. Comm. Support
B1.12. Manager's Roundtable, Misc. Expenses	ED, AED	\$1,000	Committees/ Manager's Roundtable
B1.13. Executive Director	Board Chair	\$204,148	Labor/ ED (85%)
B1.14. Legal Support, provide review of regulatory products	ED	\$20,000	Legal/ Regulatory Legal Support
B1.15. Regulatory Program Manager	RPM	\$117,070	Labor/ RPM (70%)
B1.16. Annual Meeting	ED, AED, RPM	\$15,806	Meetings/ Annual Meeting
B1.17. Website Hosting	ED, AED, Consultant	\$250	Communications/ Website Hosting
B1.18. Website Development/Maintenance	ED, AED, RPM, Consultant	\$750	Communications/ Website Dev/Maint
B1.19. State of the Estuary	ED, AED	\$0	Collaboratives, State of the Estuary
B1.20. Arleen Navarret Award	ED, AED	\$2,500	Collaboratives, Arleen Navarret Award
B1.21. BayCAN	ED, AED	\$1,500	Collaboratives, New FY22
B1.22. Bay Area One Water Network	ED, AED	\$0	Collaboratives, Bay Area One Water Network
B1.23. Bruce Wolf Scholarship	ED, AED	\$4,000	Collaboratives, Bruce Wolf Scholarship
B1.24. Our Water Our World Program	ED, AED	\$10,000	Collaboratives, previously included in BAPPG budget
B1.25. National Stewardship Action Council	ED, AED	\$10,000	Collaboratives, previously included in BAPPG budget
B1.26. California Product Stewardship Council	ED, AED	\$10,000	Collaboratives, previously included in BAPPG budget
B1.27. Miscellaneous	ED, AED	\$1,500	Collaboratives, Misc.

Clean Bay Collaborative (B2)

B2. Clean Bay Collaborative (1) Advocate for regulation based on science; (2) Foster	B2.1. Watershed Permit NMS Contribution	ED, RPM, Consultant	\$2,200,000	Tech. Support/ Nutrients/Watershed Permit Obligation
	B2.2. NMS Voluntary Contributions	ED, RPM		Tech. Support/ Nutrients/Watershed/Vol Contributions

collaboration and relationship building with regulators and other stakeholders; and (3) Pursue regional, multi-benefit solutions to environmental challenges.	B2.3. Additional Work Needed Under Permit	ED, RPM, Consultant	\$100,000	Tech. Support/ Nutrients/Add'l Work Under Permit/ GAR etc.
	B2.6. Nutrient Workshop(s)	ED, RPM, Consultant		Tech. Support/ Nutrient Workshop(s)
	B2.6. NMS Reviewer	Consultant	\$30,000	Tech. Support/NMS Reviewer
	B2.7. Regional Nutrient Special Study		\$250,000	
	B2.8. General Tech Support	ED, RPM, Consultants	\$100,000	Tech. Support, General Tech Support: PEEP, PFAS, Nutrient Review
	B2.9. CEC Investigations	ED, RPM, Consultants	\$50,000	Tech Support/PFAS Study Phase 3
	B2.10. Risk Reduction	ED, RPM, Consultants	\$12,500	Tech, Support/ Risk Reduction
	B2.11. General Technical and Regulatory Support	ED, RPM	\$33,448	Labor/ RPM (20%)
	TOTAL		\$3,628,462	

SPECIAL BENEFITS PROGRAMS (PART C)

BACWA has two active special benefit programs: Water Operator Training also known as BACWWE, and Bay Area Chemical Consortium (BACC). These programs are administered under Part C of the JPA Annual Budget and Workplan. In FY26 the Bay Area Biosolids Coalition, previously a special benefit program, will be integrated into the general benefit program as a regular committee.

Member dues for Wastewater Operator Training (BACWWE) are optional and are established on an annual basis by its Program members with training offered at community colleges throughout the BACWA service area. In FY26, BACWWE is considering revamping their program, which will affect how the program is funded, and whether it will continue to be a program of special benefit.

BACC became a Special Benefits Program in FY20. BACC is an administrative program governed by BACWA and supported by the BACWA ED and AED. BACC solicits chemical bid information from more than 60 member agencies, then arranges a group bid. BACC participant agencies are invoiced for BACWA labor and other expenses related to bid administration each fiscal year.

In addition to BACWWE and BACC, BACWA may add two more special benefits programs in FY27. In Fiscal Year 2026, BACWA served as the lead agency in a Nutrient Management coalition proposal to the USEPA Region IX San Francisco Bay Program Office. This grant would support BACWA administration, the establishment of a nutrient trading program, as well as nutrient management projects by eight sub-

awardees. If funded, a new Special Benefits Program will be established in FY27 to administer this award.

BACWA is in discussions with the Center for Western Weather and Water Extremes, as well as member agencies, to provide administrative support for the Advanced Quantitative Precipitation Information project (AQPI). Additionally, BACWA is negotiating a Memorandum of Understanding with the Bay Area Air District to pass through funds from our members to support an Engineering Program Manager who would facilitate air permits for wastewater agencies. In June 2026 BACWA Board will vote on whether to establish new Special Benefits Programs for AQPI and the Air District Engineering Program Manager in FY27.

WATER OPERATOR TRAINING (PART C1)		
Deliverables/Outcomes	Manager	FY 27 Budget
Encourage development of a skilled workforce by offering classes in conjunction with a local community college.	Program Participant Reps; ED, AED	To be determined by member interest.

BAY AREA CHEMICAL CONSORTIUM (PART C2)		
Deliverables/Outcomes	Manager	FY 27 Budget
Administer a series of chemical bids for participating agencies.	ED, AED	To be determined by level of effort and expenses associated with program administration and legal reserve development.

FISCAL YEAR 2027 BUDGET

BACWA/CBC	2027 Budget	Notes
REVENUES		
BACWA Principals' Contributions	610,707	5% increase, 5@ \$122,141
BACWA Assoc. & Affil. Contributions	226,446	5% increase. 13 Assoc: \$10,079 47 Affiliate: \$2018; UC Berkeley \$541
Clean Bay Collaborative (CBC)	675,000	Prin: \$450,000; Assoc / Affil: \$225,00
Nutrient Surcharge	1,750,000	2 nd Watershed Permit Requirement
Voluntary Nutrient Contributions	0	
Non R2 Affiliate Members	8,072	Santa Rosa, Sac Reg'l, Vacaville, Ironhouse \$2018 / each
Interest Income (LAIF)	200,000	BACWA, Legal & CBC Funds LAIF invested
TOTAL	3,470,225	

EXPENSES		
Labor	686,444	
Executive Director	240,195	3% increase
Assistant Executive Director	126,427	3% increase; \$84.28/hour; Reflects 1500 hours
Regulatory Program Manager	167,249	3% increase; \$123.88/hour, Reflects 1350 hours
Employee Model Contingency	152,573	Based on est. of benefits costing 30% of salary
Administration	68,085	
EBMUD Financial Services	46,826	3% increase in FY26
EBMUD Financial Services for EPA Grant	Tbd	Financial services related to EPA grant
Auditing Services	6,200	Financial audit through EBMUD
Administrative Expenses	4,059	No change from FY26
Insurance	11,000	15-20% increase from FY26
Meetings	34,006	
EB Meetings	4,200	No change from FY26
Annual Meeting	15,806	10% increase from FY26
Pardee	4,000	No change from FY26
Misc. meetings and conferences	10,000	No change from FY26
Communications	56,750	
Web Hosting / Domain Registration	250	66% decrease based on FY25 actual spending and vendor change
File Storage	750	No change from FY26
Website Development/Maint.	750	54% decrease based on FY25 actual spending and vendor change
IT Support (As Needed)	1,000	65% decrease based on FY25 actual spending
BACWA Value of Wastewater Communication	50,000	
Other Communications/Software	4,000	10% increase from FY25 actual; MS Exchange, Survey Monkey, PollEv, Zoom, Netfile, listserv
Legal Support	40,000	
Regulatory Support	20,000	No change from FY26
Executive Board Support	20,000	Increase from FY26 for employment model support
BACWA Committees	454,990	
AIR	126,030	Consultant support
BAPPG	159,060	Consultant support
Asset Management Committee	500	No change from FY26
BABC Committee	120,000	No change from FY26
Collections System	700	SSS WDR Support
O&M Committee	500	No change from FY26
Laboratory Committee	700	Increase from FY26
Permit Committee	500	No change from FY26
Pretreatment Committee	500	No change from FY26
Recycled Water Committee	500	No change from FY26
Misc. Committee Support	45,000	No change from FY26
Manager's Roundtable	1,000	No change from FY26

Collaboratives	89,500	
State of the Estuary	0	Biennial in odd fiscal years
Arleen Navarret Award	2500	Biennial in even fiscal years
BayCAN	1,500	
General benefit contribution to EMP Pilot	50,000	EPM time spent on gen permitting improvements
Bay Area One Water Network	0	No donations in FY27
Bruce Wolf Scholarship	4,000	Renewed, FY27-FY31
Our Water Our World Program	10,000	Previously included in BAPPG Budget
National Stewardship Action Council	10,000	Previously included in BAPPG Budget
California Product Stewardship Council	10,000	Previously included in BAPPG Budget
Misc.	1,500	NBWA
Technical Support	\$2,742,500	
Nutrients		
Watershed	2,200,000	Advanced funding for 2 nd Watershed Permit Science Studies – not to exceed value.
NMS Voluntary Contributions	0	
Additional Work Under Permit	100,000	Discretionary work including trading
Nutrient Workshop(s)	0	
NMS Reviewer	30,000	Contract with Joe Dillon
Regional Nutrient Special Study	250,000	HDR multi-year contract
EPA Funded Grant Work	tbd	Regional Planning and Nutrient Trading
General Technical Support	100,000	E.g. Nutrients, biosolids
CEC Investigations	50,000	PFAS Study Phase 3
Risk Reduction	12,500	Will plan new risk reduction tasks for current Hg/PCB Watershed Permit.
TOTAL	\$4,172,275	

WOT	2027 Budget (Est)	Notes
REVENUES	0	
Participant's Contributions	0	Est. depends on member interest.
EXPENSES	0	
Contract expenses	0	Est. depends on member interest.
BACWA Indirect Expenses	0	Per BACWA level of effort in admin support
TOTAL	0	Funding transferred from WOT reserve

BACC	2027 Budget (Est)	Notes
REVENUES	\$60,373	
Participant's Contributions	\$60,373	Est. equivalent to expenses.
EXPENSES	\$60,593	
Bid software	\$4,945	
Miscellaneous expenses	\$2,427	

BACWA Indirect Expenses	\$53,000	
TOTAL	0	

The California Association of Sanitation Agencies (CASA) has requested that the Regional Associations, including BACWA, collect funds from their members in support of a statewide air toxics testing initiative. BACWA would pay CASA the estimated fees on behalf of BACWA’s participating members, and collect the funds from its participating members the subsequent fiscal year. The final fees are still under development and will be finalized and approved by a steering committee made up of project participants. This effort would not be a program of special benefit. This project would not impact BACWA’s finances over the four-year course of the project, as revenues and expenses are expected to be equivalent.

CASA Air Toxics	2027 Budget	Notes
REVENUES		
Participant Invoices	\$620,125	Fees reflect FY24 and FY26 CASA costs collected by BACWA in FY27.
EXPENSES		
CASA Air Toxics program	\$620,125	FY27 fees collected from BACWA members passed on to CASA.
TOTAL	0	

- \$100,000 was paid in FY24

Nutrient Surcharge Calculations for FY27 Based on Dry Season TIN Loads (2023-2025) and Fixed Base Fee				Comparison to Previous Years			
Loads Updated on April 6, 2026 to align with finalized Group Annual Report submitted April 1, 2026							
BACWA Agency	FY27 Load: Average of 2023-2025 Dry Seasons	FY27 Nutrient Surcharge Based on 3-year Average Dry Season Load	FY26 Load: Average of 2022-2024 Dry Seasons	FY26 Nutrient Surcharge	% Change in 3-year Load from FY26 to FY27	\$\$ Change from FY26 to FY27	% Change in \$ Contribution from FY26 to FY27
Amount Needed Science Funding		1,750,000					
CCCS	3,347	\$134,554	3,510	\$ 138,150	-5%	-\$3,596	-3%
EBDA	7,183	\$287,203	7,080	\$ 277,237	1%	\$9,966	4%
EBMUD	6,980	\$279,113	8,300	\$ 324,768	-16%	-\$45,655	-14%
San Jose	3,890	\$156,171	3,433	\$ 135,163	13%	\$21,008	16%
SFPUC Southeast	7,140	\$285,479	7,273	\$ 284,769	-2%	\$710	0%
American Canyon	22	\$2,285	17	\$ 2,049	33%	\$235	11%
Benicia	220	\$10,153	225	\$ 10,153	-2%	\$0	0%
Burlingame	264	\$11,917	259	\$ 11,478	2%	\$439	4%
CMSA	1,099	\$45,126	1,062	\$ 42,789	3%	\$2,337	5%
Crockett (Port Costa)	1.7	\$208	-	\$ 140	-	\$68	48%
Delta Diablo	1,307	\$53,388	1,155	\$ 46,386	13%	\$7,002	15%
FSSD	918	\$37,911	958	\$ 38,711	-4%	-\$800	-2%
Las Gallinas ^(b)	-	\$1,400	-	\$ 1,400	-	\$0	0%
MSD 5 (Tiburon & Paradise Cove)	49	\$2,221	46	\$ 2,066	6%	\$155	7%
Millbrae	274	\$12,302	256	\$ 11,361	7%	\$941	8%
Mt. View	53	\$3,519	49	\$ 3,314	8%	\$205	6%
Napa SD	-	\$1,400	-	\$ 1,400	-	\$0	0%
Novato SD	81	\$4,635	52	\$ 3,438	55%	\$1,197	35%
Palo Alto	2,183	\$88,268	2,193	\$ 86,852	0%	\$1,416	2%
Petaluma	-	\$1,400	-	\$ 1,400	-	\$0	0%
Pinole	344	\$15,073	357	\$ 15,296	-4%	-\$222	-1%
Rodeo SD	43	\$3,111	43	\$ 3,065	1%	\$46	1%
SFO Airport	121	\$6,201	119	\$ 6,043	1%	\$158	3%
San Mateo	1,453	\$59,224	1,400	\$ 55,944	4%	\$3,280	6%
Sausalito-Marín City SD	117	\$6,068	114	\$ 5,841	3%	\$227	4%
Sewerage Agency of SM	226	\$10,392	238	\$ 10,672	-5%	-\$281	-3%
Sonoma Co Water Ag	1	\$1,431	1	\$ 1,430	0%	\$1	0%
SVCW	2,447	\$98,745	2,433	\$ 96,203	1%	\$2,543	3%
South SF	1,000	\$41,187	1,200	\$ 48,152	-17%	-\$6,965	-14%
Sunnyvale	697	\$29,131	600	\$ 24,789	16%	\$4,343	18%
Treasure Island	28	\$2,522	23	\$ 2,290	24%	\$232	10%
Vallejo FWD	837	\$34,715	804	\$ 32,711	4%	\$2,004	6%
West County Agency	557	\$23,548	594	\$ 24,542	-6%	-\$994	-4%
	-						
Total	42,883	\$1,750,000	43,793	1,750,000	-2%	(0)	0%
Principals Only includes TI	28,568	\$1,145,041	29,620	\$1,162,376	-4%	-\$17,335	-1%
Total w/o principals	14,315	\$604,959	14,174	\$587,624	1%	\$17,335	3%



B A C W A
BAY AREA
CLEAN WATER
AGENCIES

BACWA EXECUTIVE BOARD ACTION REQUEST

AGENDA NO.: x

MEETING DATE: June 5, 2026

TITLE: Request for BACWA Authorization to Establish Advance Quantitative Precipitation Information Project as a Project of Special Benefit.

RECEIPT DISCUSSION RESOLUTION APPROVAL

RECOMMENDED ACTION

Authorize services by BACWA staff to administer the Advance Quantitative Precipitation Information (AQPI) Project.

SUMMARY

The Advanced Quantitative Precipitation Information (AQPI) program has installed a network of strategically located X- and C-band radars across the Greater San Francisco Bay Area. These radars complement the existing NEXRAD S-band network by filling horizontal and vertical gaps in coverage, and by operating at a very high spatial and temporal resolution, providing more detailed rainfall information across the region. Several BACWA members are using AQPI data to plan staffing deployment during wet weather events.

These radars, as well as other critical program infrastructure, were funded through a \$19.8M grant from the California Department of Water Resources (DWR) in 2016. A local partner action committee (LPAC) composed of regional stakeholders collectively worked towards this goal, with one partner, Sonoma County Water Agency, as the initial grant recipient and program administrator. In 2020, the LPAC voted that the Center for Western Weather and Water Extremes (CW3E) at UC San Diego (UCSD) and Scripps Institution of Oceanography (SIO) should assume program administration at the conclusion of the DWR grant. As the DWR grant expires, local partners are making a contribution towards the ongoing operation and maintenance of the system, as well as additional program enhancements.

The local partners are water and wastewater agencies, and may include (tbd):

- Sonoma County Water Agency
- San Francisco Public Utilities Commission
- Santa Clara Valley Water District
- East Bay Dischargers Authority
- East Bay Municipal Utility District
- Central Contra Costa Sanitary District
- Alameda County Water District
- Alameda County Public Works
- Contra Costa County Flood Control
- Zone 7 Water Agency

- West County Wastewater

The project requires an entity to administer the contract between participating local partners and CW3E. As a regional JPA with experience in administering similar projects of special benefit, and with relatively low administrative costs, BACWA is an ideal partner to provide this support.

BACWA would contract with CW3E to carry out a scope of work that will be defined by a Memorandum of Understanding between CW3E and the local partners. Each fiscal year, BACWA would send invoices to the local partners, and remit those funds to CW3E, minus the administrative costs, which are expected to be less than \$5,000 per year. The contract with CW3E will specify a 10-year duration of the agreement, with the opportunity for either party to terminate the agreement with 30 days notice. The contract will specify that funds will not be remitted to CW3E until they are received from the local partners, and that BACWA is not financially responsible for any shortfall.

FISCAL IMPACT

Support for the BACC would be provided under the BACWA JPA which allows payment by others for projects and programs administered by BACWA that benefit only some of the BACWA members. The administrative costs for the BACC program would be fully reimbursed by the BACC participants such that there would be no costs to BACWA.

ALTERNATIVES

1. The alternative is to decline the request to assume administrative support for the program. This is not recommended since the program may flounder without an administrative home. Additionally, the program benefits many BACWA members and its costs are fully reimbursed.

Approved: _____
Jackie Zipkin, Chair,
BACWA Executive Board

Date:

Title: AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Primary Contact:

Jonathan Rutz | jrutz@ucsd.edu | (517)-442-6489

Primary Recipient: CW3E | **PI:** Jonathan Rutz (CW3E) | **Co-PI:** Marty Ralph (CW3E)

Abstract: The Advanced Quantitative Precipitation Information (AQPI) program has installed a network of strategically located X- and C-band radars across the Greater San Francisco Bay Area (see Figure 1). These radars complement the existing NEXRAD S-band network by filling horizontal and vertical gaps in coverage, and by operating at a very high spatial and temporal resolution, providing more detailed rainfall information across the region. This project utilizes financial support from local partners to ensure ongoing operation and maintenance (O&M) of the radar network, as well as further program enhancements. AQPI radar O&M will be subawarded to CSU/CIRA, who has been the program’s longtime partner in developing the radar network. AQPI program enhancements will be performed primarily through CW3E’s research and operational capability, leveraging other support where possible. The enhancements could include, but are not limited to, improvements in quantitative precipitation estimates (QPE), quantitative precipitation forecasts (QPF), data services (display and delivery), data integration services, and streamflow modeling.



Figure 1: Schematic of AQPI radar deployments across the Greater San Francisco Bay Area. The green stars and circles represent X-band radar locations and coverage areas. The red star and circle represent C-band radar location and coverage area. Gray lines represent county boundaries and tan shading indicates historical fire perimeters from 2015–2022. Note that the X-band in Santa Cruz, while closely integrated with AQPI, was procured separately and is not part of this financial agreement.

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 - 2.2.3. Data Services (Display and Delivery)
 - 2.2.4. Data Integration Services
 - 2.2.5. Specific Objectives FY 26-27 (1 Jul 2026 – 30 Jun 2027)
3. Key Personnel and Groups

1. Background

The Advanced Quantitative Precipitation Information (AQPI) program has installed a network of strategically located X- and C-band radars across the Greater San Francisco Bay Area (see Figure 1). These radars complement the existing NEXRAD S-band network by filling horizontal and vertical gaps in coverage, and by operating at a very high spatial and temporal resolution, providing more detailed rainfall information across the region (see Figure 2). These radars, as well as other critical program infrastructure, were funded through a \$19.8M grant from the California Department of Water Resources (DWR) in 2016. A local partner action committee (LPAC) composed of regional stakeholders collectively worked towards this goal, with one partner, Sonoma County Water Agency, as the initial grant recipient and program administrator. In 2020, the LPAC voted that the Center for Western Weather and Water Extremes (CW3E) at UC San Diego (UCSD) and Scripps Institution of Oceanography (SIO) should assume program administration at the conclusion of the DWR grant. CW3E is well known for scientific excellence, as well as development and implementation of research and operations partnerships (RAOPs) focused on societal benefit. As the DWR grant expires, local partners are making a contribution towards the ongoing operation and maintenance of the system, as well as additional program enhancements. In terms of financial support, AQPI is now a truly unique federal, state, and local partnership.

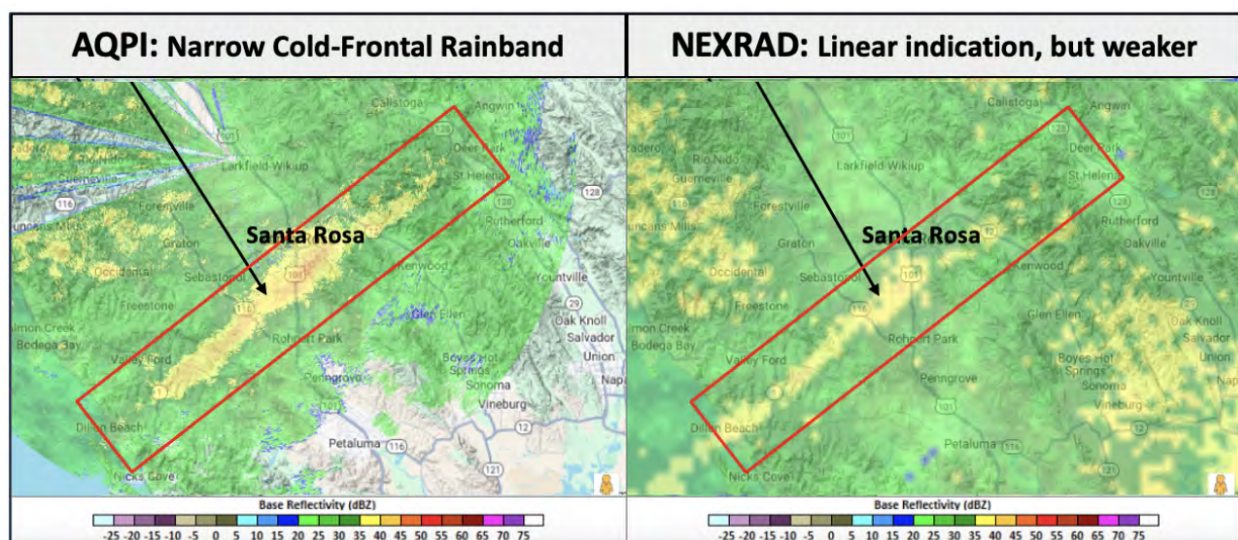


Figure 2: Example of differences in radar imagery between AQPI radar from Santa Rosa, CA (left) and NEXRAD radar from Monterey, CA (right) at 12:47 PM PST on 24 Oct 2021. Brighter colors indicate higher radar reflectivity (and likely rain rates).

2. Project Description

This section describes the long-term program enhancement categories for this effort.

2.1. Ongoing Radar Operations

One key objective of this project is the operation and maintenance (O&M) of the AQPI radar network (including necessary hardware, software, communications technology, travel, and staff time). This will be subawarded to the internationally-recognized radar group under the leadership of Dr. Chandrasekar at Colorado State University / Cooperative Institute for Research in the Atmosphere (CSU/CIRA), which has also built and deployed all AQPI radars.

2.2. Program Enhancements

Another key objective of this project is strategic pursuit of program enhancements that will benefit Local Sponsors and their operations. These include, but are not limited to, improvements in quantitative precipitation estimates (QPE), quantitative precipitation forecasts (QPF), data services (display and delivery), data integration services, and one-time expenses. This section describes several planned areas of focus, not necessarily in order of priority or expense.

2.2.1. Quantitative Precipitation Estimates (QPE)

Highly accurate QPEs, provided as gridded data at high spatiotemporal resolution, are a core component of the AQPI program. These are produced by generating a radar reflectivity mosaic, which incorporates data from AQPI and NWS radars, and then estimating rain rates. There is always room for improvement in both the complexity of generating the mosaic, which must handle data from non-synchronous radar observations, often overlapping, and at multiple elevations, as well as the empirically-derived relationships between reflectivity and rain rates. The former typically requires skilled staff time and experience, while the latter also requires more observations (e.g., rain gauges, disdrometers, etc) to facilitate radar calibration. One key element of CW3E's QPE efforts will be development of a gauge-adjusted radar rainfall (GARR) product, which is a standard method for using gauges to improve spatially continuous radar estimates; the product CW3E will develop for the AQPI partners will have the advantage of using AQPI radars.

2.2.2. Quantitative Precipitation Forecasts (QPF)

AQPI partners rely on skillful QPF forecasts, both for short-term operations and longer-term planning. In the short-term (1 h), AQPI uses a very skillful “nowcast” – a modeled extrapolation of the current radar reflectivity and rain rate mosaics – to produce an accurate forecast. Currently, the nowcast for rain rates is under development pending incorporation of C-band radar into the reflectivity mosaic. Following that step, the nowcast duration will be extended from 1 to 3 or 6 hours. In the longer-term, CW3E staff experience with QPF products will be leveraged to provide the best available data in formats ready to be used by Local Sponsors. Additionally, CW3E currently runs a forecast model customized for U.S. West Coast precipitation (West-WRF, [Delle Monache et al. 2025](#)), and has developed the capacity to do this experimentally at 1-km and 15-min resolution (a very high level of spatial and temporal detail; see Figure 3) across the AQPI region. This project funding will, while also leveraging other programs, operationally support this localized version of West-WRF during the wet season, as well as demonstration of a 10-member ensemble for this product, and further QPF modeling advances.

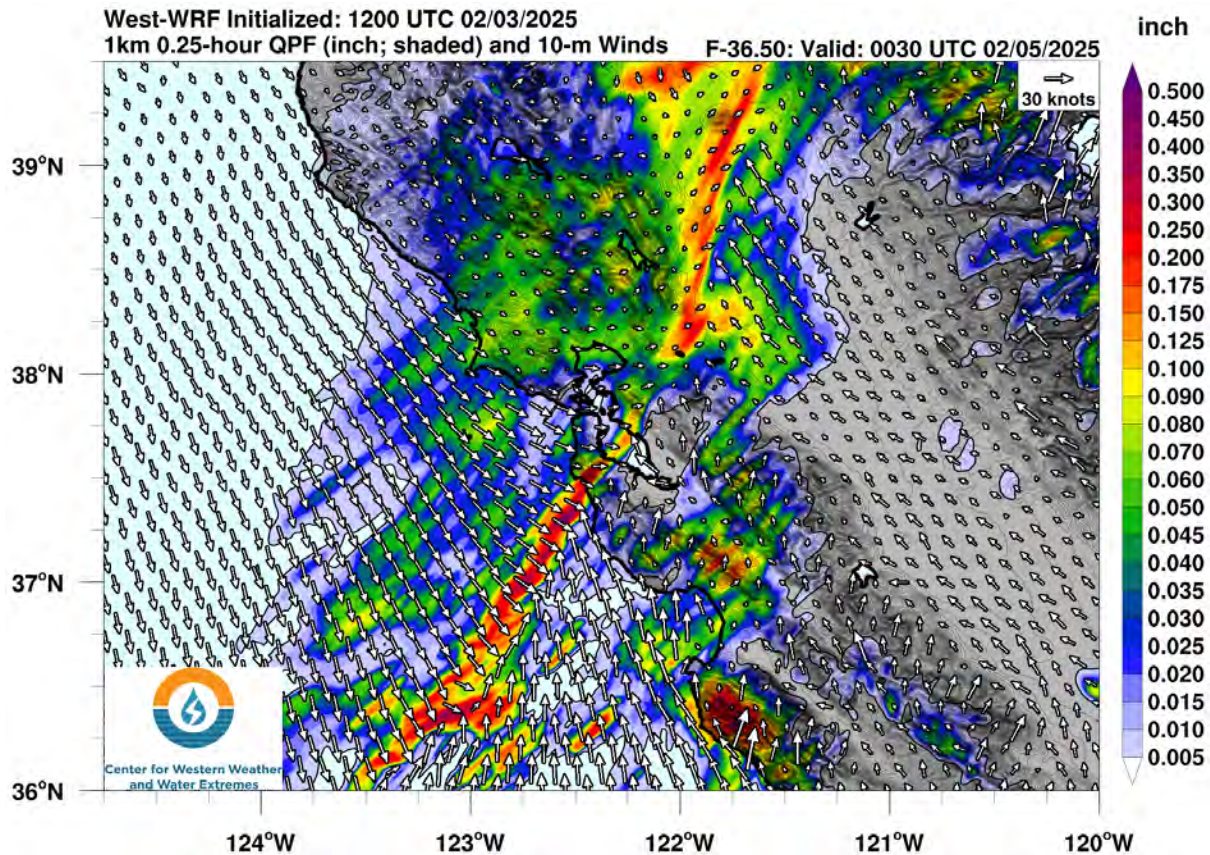


Figure 3: West-WRF 1-km forecast for 15-min precipitation, at 36.5-hr lead time, ending 4:30pm PT 5 Feb 2025. Note the intense precipitation band was forecast remarkably well by the model.

2.2.3. Data Services (Display and Delivery)

One critical aspect of AQPI is the rapid and reliable delivery of real-time information to users. This is done primarily through the [AQPI User Interface](#), which currently provides observational and forecast data visualization, as well as data delivery for QPE and QPF (currently via web-based csv files). CW3E will maintain reliability of service for the User Interface, add new visualization features and functionality, develop more sophisticated, yet easy-to-use methods of data delivery, as well as develop frameworks to further support specific user customization of AQPI data streams and services.

2.2.4. Data Integration Services

In addition to providing AQPI data streams, CW3E will provide data integration services to partners. This broadly encompasses:

- Training on features and functionality of the AQPI User Interface
- Interpretation, uses, and best practices regarding AQPI data streams
- Limited customization of data formats to facilitate integration into partner operations
- Generalized customer support and responsiveness

2.2.5. Specific Objectives FY 26-27 (1 Jul 2026 – 30 Jun 2027)

The section above describes the long-term program enhancement categories for this effort. This section describes specific short-term objectives for Year 1. Some of these objectives will remain unchanged in future years, while some will be modified or replaced as the program evolves. These changes will always be communicated to Local Sponsors as part of the annual reporting process, and will always align with supporting ongoing radar operations and program enhancements.

- 1) Continue to support ongoing radar operations through agreement with CSU/CIRA.
- 2) Develop a long-term strategy for systematic improvement of QPE estimates.
- 3) Produce operational (i.e., routine) 1-km West-WRF runs across the Greater San Francisco Bay Area during the wet season (Nov-Mar)
- 4) Demonstrate ability to experimentally produce a 10-member ensemble of the 1-km West-WRF runs across the Greater San Francisco Bay Area during the wet season (Nov-Mar)
- 5) Improve a “seamless” point-based precipitation time series that incorporates radar-based observations, a short-term forecast based on the CSU/CIRA Nowcast, and a long-term forecast based on the NWS National Blend of Models (NBM).
- 6) Demonstrate a prototype gauge-adjusted radar rainfall (GARR) product that incorporates AQPI radar data.

4. Key Personnel and Groups

J. Rutz (PI): The CW3E program manager, responsible for overall project management including implementation, schedule, personnel, and budget. Provides subject matter expertise related to all goals.

F. M. Ralph (Co-PI): Director of CW3E; responsible for overall project oversight and coordination at CW3E.

V. Chandrasekar (Key Person): Responsible for CSU/CIRA group subawarded for radar operations and maintenance.

Local Sponsors (Group): Local entities providing annual financial contributions to this project.

Biographical Sketch / 2-Page CV

Jonathan J. Rutz

Atmospheric Scientist
Center for Western Weather and Water Extremes (CW3E)
Scripps Institution of Oceanography (SIO)
University of California, San Diego (UCSD)
jrutz@ucsd.edu | 517-442-6489

Dr. Jonathan Rutz is an atmospheric scientist with expertise in synoptic and dynamic meteorology, operational weather forecasting, development of research-to-operations pipelines, and management of programs focused on weather and water applications. He has an extensive background in atmospheric rivers (ARs) including physical processes, climatology, identification methods, forecasting, and impacts. Dr. Rutz manages a variety of projects at CW3E, most notably the Advanced Quantitative Precipitation Information (AQPI) program, which uses advanced radar technology, customized precipitation forecasts, and new decision support news provide better rainfall data across the San Francisco Bay Area. In this role, he provides program leadership, technical expertise, and supervision of staff members. He has experience in program development, stakeholder engagement, and collaboration across groups with diverse interests.

(a) Professional Preparation

University of Michigan, Ann Arbor	Meteorology / Climate Physics	B.S.E. 2009
University of Utah, Salt Lake City	Atmospheric Science	M.S. 2011
University of Utah, Salt Lake City	Atmospheric Science	Ph.D. 2014

(b) Prior Appointments

2014-2022: Meteorologist / Program Manager, Science and Technology Infusion Division, Western Region Headquarters, National Weather Service, Salt Lake City, Utah
2009-2014: Graduate Research Assistant, Dept. of Atmospheric Sciences, University of Utah, Salt Lake City, UT

(c) Products

Five Most Relevant Publications

- Rutz, J. J.**, W.J. Steenburgh, and F.M. Ralph, (2014). Climatological Characteristics of Atmospheric Rivers and Their Inland Penetration over the Western United States. *Mon. Wea. Rev.*, **142**, 905–921.
- Rutz, J.J.**, W.J. Steenburgh, and F.M. Ralph, (2015). The Inland Penetration of Atmospheric Rivers over Western North America: A Lagrangian Analysis. *Mon. Wea. Rev.*, **143**, 1924–1944.
- Ralph, F.M., **J.J. Rutz**, J.M. Cordeira, M. Dettinger, M. Anderson, D. Reynolds, L.J. Schick, and C. Smallcomb, (2019) A Scale to Characterize the Strength and Impacts of Atmospheric Rivers. *Bull. Amer. Meteor. Soc.*, **100**, 269–289, <https://doi.org/10.1175/BAMS-D-18-0023.1>
- Rutz, J. J.**, and W. J. Steenburgh (2012). Quantifying the role of atmospheric rivers in the interior western United States. *Atmos. Sci. Lett.*, **13**, 257–261.

Dettinger, M.D., F.M. Ralph, and **J.J. Rutz**, (2018) Empirical Return Periods of the Most Intense Vapor Transports during Historical Atmospheric River Landfalls on the U.S. West Coast. *J. Hydrometeor.*, **19**, 1363–1377.

Five Other Significant Publications

Rutz, J. J., Shields, C. A., Lora, J. M., Payne, A. E., Guan, B., Ullrich, P., et al. (2019). The atmospheric river tracking method intercomparison project (ARTMIP): quantifying uncertainties in atmospheric river climatology. *JGR Atmos.*, **124**: 13777-13802. doi: 10.1029/2019JD030936

Shields, C. A., **Rutz, J. J.**, Leung, L.-Y., Ralph, F. M., Wehner, M., Kawzenuk, B., Lora, J. M., McClenny, E., Osborne, T., Payne, A. E., Ullrich, P., Gershunov, A., Goldenson, N., Guan, B., Qian, Y., Ramos, A. M., Sarangi, C., Sellars, S., Gorodetskaya, I., Kashinath, K., Kurlin, V., Mahoney, K., Muszynski, G., Pierce, R., Subramanian, A. C., Tome, R., Waliser, D., Walton, D., Wick, G., Wilson, A., Lavers, D., Prabhat, Collow, A., Krishnan, H., Magnusdottir, G., and Nguyen, P. (2018). Atmospheric River Tracking Method Intercomparison Project (ARTMIP): project goals and experimental design. *Geosci. Model Dev.*, **11**, 2455-2474. doi: 10.5194/gmd-11-2455-2018

Gershunov, A., T. Shulgina, F. M. Ralph, D. A. Lavers, and **J. J. Rutz** (2017). Assessing the climate-scale variability of atmospheric rivers affecting western North America. *Geophys. Res. Lett.*, **44**, 7900–7908.

Hatchett, B.J., S. Burak, **J.J. Rutz**, N.S. Oakley, E.H. Bair, and M.L. Kaplan, (2017). Avalanche Fatalities during Atmospheric River Events in the Western United States. *J. Hydrometeor.*, **18**, 1359–1374. doi: 10.1175/JAMC-D-13-0223.1

Ralph, F. M., Dettinger, M., Lavers, D., Gorodetskaya, I., Martin, A., Viale, M., White, A., Oakley, N.S., **Rutz, J.**, Spackman, R., Wernli, H., Cordeira, J. (2017). Atmospheric Rivers Emerge as a Global Science and Applications Focus. *Bull. Amer. Meteor. Soc.*, **98**, 1969-1973, doi:10.1175/BAMS-D-16-0262.1

(c) Synergistic Activities

- Co-editor and co-author of book, “Atmospheric Rivers – 1st edition (2020), Springer”, by F. Martin Ralph, Michael D. Dettinger, Jonathan J. Rutz, and Duane E. Waliser. ([link here](#))
- Served as co-organizer for all the first three International Atmospheric Rivers Conferences (2016, 2018, 2022) and instructor for CW3E Forecast Informed Reservoir Operations (FIRO) Colloquiums (2019, 2022)
- Co-chair of the Atmospheric River Tracking Method Intercomparison Project (ARTMIP), which seeks to quantify uncertainties in atmospheric river climatology – frequency, location, intensity, duration, and precipitation – and how these may be affected by a changing climate (2018-present).
- Member of American Meteorological Society, American Geophysical Union, National Weather Association

Dr. Fred Martin (Marty) Ralph

Scripps Institution of Oceanography at UC San Diego, La Jolla, California, USA; mralph@ucsd.edu

Education

1991	Ph.D. in Atmospheric Sciences, University of California at Los Angeles
1987	M.S. in Atmospheric Sciences, University of California at Los Angeles
1984	B.S. in Meteorology, with Highest Honors, University of Arizona

Appointments

2016-current	Researcher (Full, Step IX), UC San Diego, Scripps Institution of Oceanography
2023-current	Adjunct Professor, Southern Cross University, New South Wales, Australia
2013-current	Director (founding), Center for Western Weather and Water Extremes, UC San Diego/Scripps Institution of Oceanography
2005-2013	Chief, Water Cycle Branch of the NOAA/Earth System Research Lab./Physical Sciences Division
2001-2005	Chief, NOAA/Environmental Technology Laboratory/Weather & Climate Applications Division
2001-2013	Supervisory Meteorologist (ZP-4, 5), NOAA ETL and Earth System Research Laboratory
1992-2001	Research Meteorologist, NOAA Environmental Technology Laboratory (ETL)
1992	National Research Council Research Associate, NOAA Wave Propagation Laboratory
1986-1991	Research Assistant and Teaching Assistant, UCLA Dept. of Atmospheric Sciences

Committees

<u>(selected)</u>	Co-Chair, NOAA Science Advisory Board/Environmental Information Services Working Group directed by Congress to advise NOAA on innovation (member since 2020; co-chair since 2024)
	Co-Chair, Global Precipitation Experiment/Global Field Campaigns Working Group (GPEX; 2024)
	Co-Lead, Observations and Data Assimilation area of the Congressionally mandated “Priorities for Weather Research” report to improve NOAA weather research/forecasting over a decade (2021)
	Co-Chair, each of six Forecast-Informed Reservoir Operations Steering Committees (started 2014)
	Member, Council of Fellows, Cooperative Institute for Research to Operations in Hydrology, Univ. of Alabama (since 2022)
	Member, UCAR Community Programs External Advisory Committee (2023-2025)
	UCAR Member Representative for Scripps Institution of Oceanography (2014-2022)
	Member, Hydrology and Atmospheric Science Advisory Board, Univ. of Arizona (2014-2022)
	Member, GOES-R Science and Demonstration Executive Board (2012-2013)
	Member, Management Board, Developmental Testbed Center (2010-2013)
	Chair, NOAA’s USWRP Executive Committee (2004-2011)
	NASA Global Precipitation Mission, Ground Validation Advisory Panel (2006 -2010)
	Chair, NSF/NCAR Observing Facilities Advisory Panel (2003-04)
	Chair, American Meteorological Society Committee on Mesoscale Meteorology (2003-05)
	U. S. Scientific Steering Committee, Mesoscale Alpine Project (1997-2001)
	American Meteorological Society Committee on Radar Meteorology (1997-2000)
	Co-Chair, 8 th Conf. on Mountain Meteor, and 4 th Int’l Symp. on Tropospheric Profiling (1996-1998)

Honors (selected)

2025	Fellow, American Geophysical Union (AGU)
2025	AGU Ambassador: <i>for leading, community building, performing, & communicating groundbreaking regional to global research and applications of the new science of atmospheric rivers.</i>
2024	American Meteorological Society (AMS) Award for Outstanding Contribution to the Advance of Applied Meteorology: <i>for contributions to understanding hydrometeorological extremes, employing new observing strategies, modeling, and the creation of innovative decision support tools, particularly as related to atmospheric rivers.</i>
2008	Elected “Fellow” of the American Meteorological Society
2012	Dept. of Commerce Bronze Medal – Team for “...for comprehensive flood mitigation efforts in response to a...weakened Howard Hansen Dam project with the potential of catastrophic flooding”
2006	Dept. of Commerce Bronze Medal to the Boulder Planning and Transition Team “...consolidation of six research organizations in Boulder, CO into the new NOAA Earth System Research Laboratory”
2009	NOAA Administrator’s Award “for exemplary leadership of the NOAA Unmanned Aircraft Systems Program in its formative stage”
1998	NOAA/Oceanic and Atmospheric Research, Employee of the Year

Research areas Atmospheric rivers, precipitation, hydrometeorological and mesoscale processes, climate change.
Applications Water management, Forecast-informed reservoir operations, Research And Operations Partnerships.

Observations Center Extensive experience leading field programs with aircraft, remote sensing and in-situ networks. Founded (2013) and Directs the Center for Western Weather and Water Extremes at UC San Diego's Scripps Institution of Oceanography (cw3e.ucsd.edu), which as of 2025 includes >85 people, has raised >\$150 million in funding and had expenditures in FY2024/25 exceeded \$25 million.

Programs Program leadership experience ranges from developing new programs, to managing grants programs, advising programs, and organizing multi-year field programs.

2016-current Atmospheric River (airborne) Reconnaissance Program; founder, PI (scope >\$5 M/year)

2015-current Atmospheric River Program: Developed the multi-disciplinary Program; PI (\$60+ M thru 2025)

2013-current Forecast-Informed Reservoir Operations: Improving water supply reliability, flood mitigation capacity and ecosystems, using cross-disciplinary, interagency partnerships (\$50+ M thru 2025)

2009-2015 CalWater Program of field studies: Co-Chair of steering committee that organized annual field studies, including cross-disciplinary, interagency objectives and partnerships (scope \$15+ M)

2004-2010 Program Manager of NOAA's Science, Technology & Infusion Program (ST&I). ST&I was a \$75 M/year matrixed program within NOAA's formal Planning, Programming, Budgeting and Execution System (PPBES). It focused on research and its infusion into NOAA's operational forecasting through test and evaluation. The Program Manager was responsible for Planning, Programming and Budgeting that quantified current activities, documented what was required of NOAA, identified gaps in current capabilities and outcomes, developed program adjustment strategies to fill high priority gaps, and led their development from idea to appropriation with support from cognizant NOAA line offices and leadership. ST&I included elements in NWS, OAR, and NESDIS [e.g., NOAA's Weather laboratories (ESRL/PSD, ESRL/GSD, AOML/HRD, NSSL), USWRP, THORPEX, and NEXRAD Product Improvement, Phased Array Radar, AWIPS evolution, etc.]

2004-2011 Program Manager NOAA/US Weather Research Program.

2006-2009 Program Manager (founding) of NOAA/Unmanned Aircraft Systems Program (2006-2009)

2002-2013 Led development of NOAA/OAR's Hydrometeorology Testbed.

Publications Refereed: 250+ Refereed (First authored): 37
Citations: 25000+ (Google Scholar "F. Martin Ralph") H-Index: 83

Global rankings of most-cited authors on Google Scholar:

1st - Mountain Meteorology 2nd - Mesoscale Meteorology 7th - Hydrometeorology
8th - Precipitation 26th - Water Resources

Legislative Briefing/advising local, state and federal committees, committee staff, Boards, and elected officials on science and solutions to address extremes in weather and water, including flood and drought

Media Extensive experience communicating science to the public via television, radio, newspaper, magazine and online, e.g., in Jan 2023 over 600 news stories covered our work on atmospheric rivers; authored the Scientific American article "Forecasting Atmospheric Rivers" (2022)

Selected publications related to leadership of relevant science community efforts and program development.

Ralph, F.M., M Simpson, S Iacobellis, JM Cordeira..., 2024: Dropsonde Observations of the Stable Marine Boundary Layer Beneath Atmospheric Rivers. *Mon. Wea. Rev.*, **152**, 2735-2751.

Ralph, F.M. (Chief Editor), M.D. Dettinger, D. Waliser, J. Rutz (Co-Editors) and 30 Co-authors, 2020: Atmospheric Rivers. Springer.

Ralph, F. M., and 16 coauthors, 2020: West Coast Forecast Challenges and Development of Atmospheric River Reconnaissance. *Bull. Amer. Meteorol. Soc.*, **101**, E1357-E1377.

Ralph, F. Martin, Jonathan J. Rutz, Jason M. Cordeira, Michael Dettinger, Michael Anderson, David Reynolds, Lawrence J. Schick and Chris Smallcomb, 2019: A Scale to Characterize the Strength and Impacts of Atmospheric Rivers. *Bull. Amer. Meteor. Soc.*, **100**, 269-289, <https://doi.org/10.1175/BAMS-D-18-0023.1>

Ralph, F. M., M. D. Dettinger, M. M. Cairns, T. J. Galarneau, and J. Eylander, 2018: Defining "atmospheric river" How the *Glossary of Meteorology* helped resolve a debate. *Bull. Amer. Meteor. Soc.*, **99**, 837-839.

Ralph, F.M., and 22 coauthors, 2013: The emergence of weather-focused testbeds linking research and forecasting operations. *Bull. Amer. Meteor. Soc.*, **94**, 1187-1210.

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 1: 07/01/26 through 06/30/27

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/25	13,064				0	0.00%	0	0
Rsch Data Analyst 4	7/26	13,717	12.00	20.00%	2.40	32,921	50.30%	16,559	49,480
F. Marty Ralph	7/25	26,550				0	0.00%	0	0
Acad Prg Mgr 2	7/26	27,878	12.00	2.10%	0.25	7,025	36.30%	2,550	9,575
Julie Kalansky	7/25	14,629				0	0.00%	0	0
Acad Prg Mgr 1	7/26	15,360	12.00	2.10%	0.25	3,871	36.30%	1,405	5,276
Laura Martin	7/25	12,374				0	0.00%	0	0
Admin Ofcr 4	7/26	12,993	12.00	2.10%	0.25	3,274	50.30%	1,647	4,921
TBN	7/25	6,641				0	0.00%	0	0
Proj Policy Analyst 2	7/26	6,973	12.00	5.00%	0.60	4,184	50.30%	2,105	6,289
TBN	7/25	7,917				0	0.00%	0	0
Rsch Data Analyst 3	7/26	8,313	12.00	60.00%	7.20	59,854	50.30%	30,107	89,961
Daniel Steinhoff	7/25	11,756				0	0.00%	0	0
Rsch Data Analyst 4	7/26	12,344	12.00	5.00%	0.60	7,406	50.30%	3,725	11,131
Deanna Nash	7/25	7,917				0	0.00%	0	0
Rsch Data Analyst 3	7/26	8,313	12.00	20.00%	2.40	19,951	50.30%	10,035	29,986
Ricardo Batista Vilela	7/25	7,162				0	0.00%	0	0
Applictions Progr 2	7/26	7,520	12.00	20.00%	2.40	18,048	50.30%	9,078	27,126
Patrick Mulrooney	7/25	13,402				0	0.00%	0	0
Cmptl and Data Sci Rsc	7/26	14,072	12.00	5.00%	0.60	8,443	50.30%	4,247	12,690
Douglas Alden	7/25	13,077				0	0.00%	0	0
Rsch and Dev Engr 5	7/26	13,731	12.00	2.50%	0.30	4,119	50.30%	2,072	6,191
Adolfo Lopez Miranda	7/25	8,274				0	0.00%	0	0
Rsch and Dev Engr 2	7/26	8,688	12.00	7.50%	0.90	7,819	50.30%	3,933	11,752
Lisa Katz	7/25	7,298				0	0.00%	0	0
Rsch and Dev Engr 1	7/26	7,663	12.00	5.00%	0.60	4,598	50.30%	2,313	6,911
Subin Yoon	7/25	10,167				0	0.00%	0	0
Acad Prg Mgt Ofcr 3	7/26	10,675	12.00	1.50%	0.18	1,922	50.30%	967	2,889
Hart Wanetick	7/25	9,823				0	0.00%	0	0
Rsch and Dev Engr 3	7/26	10,314	12.00	7.50%	0.90	9,283	50.30%	4,669	13,952
Charlotte Piazza	7/25	5,434				0	0.00%	0	0
Lab Asst 3	7/26	5,706	12.00	10.00%	1.20	6,847	50.30%	3,444	10,291
Jacob Morgan	7/25	9,140				0	0.00%	0	0
Rsch and Dev Engr 2	7/26	9,597	12.00	1.50%	0.18	1,727	50.30%	869	2,596

Total person months 21.21

DIRECT SALARIES TOTAL 201,292

BENEFITS TOTAL 99,725

SALARIES AND BENEFITS TOTAL 301,017

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

RT SD/San Francisco	\$	538			1	\$	538
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	125	5	\$	625
Per Diem (Lodging)			\$	272	5	\$	1,360
Per Diem (Meals)			\$	92	5	\$	460

Conference

RT SD/TBD	\$	696			1	\$	696
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	125	5	\$	625
Per Diem (Lodging)			\$	276	5	\$	1,380
Per Diem (Meals)			\$	92	5	\$	460
Registration Fee			\$	833	1	\$	833

Stakeholders Meetings

RT SD/San Francisco	\$	538			1	\$	538
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	125	4	\$	500
Per Diem (Lodging)			\$	272	4	\$	1,088
Per Diem (Meals)			\$	92	4	\$	368

Field Work - Maintenance

(2 people x 4 days x 2 trips)							
RT SD/San Francisco	\$	538			4	\$	2,152
RT Checked Baggage	\$	70			1	\$	280
Rental Car/Ground Transportation			\$	125	4	\$	1,000

Per Diem (Lodging)		\$ 272	4	4	\$ 4,352
Per Diem (Meals)		\$ 92	4	4	\$ 1,472
Field Work - Station Install (3 people x 5 days x 1 trip)					
RT SD/San Francisco					
Rental 4WD / Mileage 1-way 508 miles		\$ 481	2	1	\$ 962
Per Diem (Lodging)		\$ 272	5	3	\$ 4,080
Per Diem (Meals)		\$ 92	5	3	\$ 1,380
Field Work - Scouting Location (2 people x 3 days x 1 trip)					
RT SD/San Francisco	\$	538		2	\$ 1,076
RT Checked Baggage	\$	70	1	2	\$ 140
Rental Car/Ground Transportation		\$ 125	3	1	\$ 375
Per Diem (Lodging)		\$ 272	3	2	\$ 1,632
Per Diem (Meals)		\$ 92	3	2	\$ 552
					Total Domestic Travel
					29,134
					TRAVEL TOTAL
					29,134

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer					8,690
					Total Equipment
					8,690

Fabrication: Instrument Setup

Customize observational equipment for deployment					34,855
					Total Fabrication
					34,855
					EQUIPMENT TOTAL
					43,545

E. SUPPLIES

Project Specific Research Supplies					4,000
Project Specific Computer Hardware Maintenance and Supplies					4,000
MacBook Pro					3,000
					SUPPLIES TOTAL
					11,000

F. CONTRACTUAL

Colorado State University					300,000
					SUBAWARD TOTAL
					300,000

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs					2,746
Managed Lab Machine (MLM) Service					2,651
San Diego Super Computer Charges					30,000
					OTHER EXPENSES TOTAL
					35,397

I. TOTAL DIRECT COSTS

720,093

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

	<u>Tuition:</u>	<u>0</u>	<u>Base</u>	<u>OH Rate</u>	
Equipment:		43,545			
Supercomputer:		30,000	346,548	60.0%	207,929
Excluded from Indirect:		73,545			
<u>IDC on Subcontract(s):</u>					
Colorado State University			25,000	60.0%	15,000
					TOTAL INDIRECT COST
					222,929

K. TOTAL AMOUNT REQUESTED

943,022

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 2: 07/01/27 through 06/30/28

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/26	13,717				0	50.30%	0	0
Rsch Data Analyst 4	7/27	14,403	12.00	20.00%	2.40	34,567	51.31%	17,736	52,303
F. Marty Ralph	7/26	27,878				0	36.30%	0	0
Acad Prg Mgr 2	7/27	30,735	12.00	2.10%	0.25	7,745	37.03%	2,868	10,613
Julie Kalansky	7/26	15,360				0	36.30%	0	0
Acad Prg Mgr 1	7/27	16,128	12.00	2.10%	0.25	4,064	37.03%	1,505	5,569
Laura Martin	7/26	12,993				0	50.30%	0	0
Admin Ofcr 4	7/27	13,642	12.00	2.10%	0.25	3,438	51.31%	1,764	5,202
TBN	7/26	6,973				0	50.30%	0	0
Proj Policy Analyst 2	7/27	7,322	12.00	5.00%	0.60	4,393	51.31%	2,254	6,647
TBN	7/26	8,313				0	50.30%	0	0
Rsch Data Analyst 3	7/27	8,728	12.00	60.00%	7.20	62,842	51.31%	32,244	95,086
Daniel Steinhoff	7/26	12,344				0	50.30%	0	0
Rsch Data Analyst 4	7/27	12,961	12.00	5.00%	0.60	7,777	51.31%	3,990	11,767
Deanna Nash	7/26	8,313				0	50.30%	0	0
Rsch Data Analyst 3	7/27	8,728	12.00	20.00%	2.40	20,947	51.31%	10,748	31,695
Ricardo Batista Vilela	7/26	7,520				0	50.30%	0	0
Applictions Progr 2	7/27	7,896	12.00	22.50%	2.70	21,319	51.31%	10,939	32,258
Patrick Mulrooney	7/26	14,072				0	50.30%	0	0
Cmptl and Data Sci Rsc	7/27	14,776	12.00	5.00%	0.60	8,866	51.31%	4,549	13,415
Douglas Alden	7/26	13,731				0	50.30%	0	0
Rsch and Dev Engr 5	7/27	14,417	12.00	2.50%	0.30	4,325	51.31%	2,219	6,544
Adolfo Lopez Miranda	7/26	8,688				0	50.30%	0	0
Rsch and Dev Engr 2	7/27	9,122	12.00	7.50%	0.90	8,210	51.31%	4,213	12,423
Lisa Katz	7/26	7,663				0	50.30%	0	0
Rsch and Dev Engr 1	7/27	8,046	12.00	5.00%	0.60	4,828	51.31%	2,477	7,305
Subin Yoon	7/26	10,675				0	50.30%	0	0
Acad Prg Mgt Ofcr 3	7/27	11,209	12.00	1.50%	0.18	2,018	51.31%	1,035	3,053
Hart Wanetick	7/26	10,314				0	50.30%	0	0
Rsch and Dev Engr 3	7/27	10,830	12.00	7.50%	0.90	9,747	51.31%	5,001	14,748
Charlotte Piazza	7/26	5,706				0	50.30%	0	0
Lab Asst 3	7/27	5,991	12.00	10.00%	1.20	7,189	51.31%	3,689	10,878
Jacob Morgan	7/26	9,597				0	50.30%	0	0
Rsch and Dev Engr 2	7/27	10,077	12.00	1.50%	0.18	1,814	51.31%	931	2,745

Total person months 21.51

DIRECT SALARIES TOTAL 214,089

BENEFITS TOTAL 108,162

SALARIES AND BENEFITS TOTAL 322,251

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

RT SD/San Francisco	\$	560			1	\$	560
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	130	5	\$	650
Per Diem (Lodging)			\$	283	5	\$	1,415
Per Diem (Meals)			\$	96	5	\$	480

Conference

RT SD/TBD	\$	724			1	\$	724
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	130	5	\$	650
Per Diem (Lodging)			\$	287	5	\$	1,435
Per Diem (Meals)			\$	96	5	\$	480
Registration Fee			\$	866	1	\$	866

Stakeholders Meetings

RT SD/San Francisco	\$	560			1	\$	560
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	130	4	\$	520
Per Diem (Lodging)			\$	283	4	\$	1,132
Per Diem (Meals)			\$	96	4	\$	384

Field Work - Maintenance

(2 people x 4 days x 2 trips)							
RT SD/San Francisco	\$	560			4	\$	2,240
RT Checked Baggage	\$	70			4	\$	280

Rental Car/Ground Transportation	\$ 130	4	2	\$ 1,040
Per Diem (Lodging)	\$ 283	4	4	\$ 4,528
Per Diem (Meals)	\$ 96	4	4	\$ 1,536
Field Work - Station Install (3 people x 5 days x 1 trip)				
RT SD/San Francisco				
Rental 4WD / Mileage 1-way 508 miles	\$ 500	2	1	\$ 1,000
Per Diem (Lodging)	\$ 283	5	3	\$ 4,245
Per Diem (Meals)	\$ 96	5	3	\$ 1,440
Field Work - Scouting Location (2 people x 3 days x 1 trip)				
RT SD/San Francisco	\$ 560		2	\$ 1,120
RT Checked Baggage	\$ 70	1	2	\$ 140
Rental Car/Ground Transportation	\$ 130	3	1	\$ 390
Per Diem (Lodging)	\$ 283	3	2	\$ 1,698
Per Diem (Meals)	\$ 96	3	2	\$ 576
				Total Domestic Travel
				30,299
				TRAVEL TOTAL
				30,299

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer				9,038
				Total Equipment
				9,038

Fabrication: Instrument Setup

Customize observational equipment for deployment				36,249
				Total Fabrication
				36,249

EQUIPMENT TOTAL 45,287

E. SUPPLIES

Project Specific Research Supplies				4,160
Project Specific Computer Hardware Maintenance and Supplies				4,160
MacBook Pro				3,120
				SUPPLIES TOTAL
				11,440

F. CONTRACTUAL

Colorado State University				312,000
				SUBAWARD TOTAL
				312,000

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs				2,924
Managed Lab Machine (MLM) Service				2,757
San Diego Super Computer Charges				31,200
				OTHER EXPENSES TOTAL
				36,881

I. TOTAL DIRECT COSTS

758,158

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

<i>Tuition:</i>	0	Base	OH Rate	
<i>Equipment:</i>	45,287	369,671	60.0%	221,803
<i>Supercomputer:</i>	31,200			
<i>Excluded from Indirect:</i>	76,487			

<i>IDC on Subcontract(s):</i>				
<i>Colorado State University</i>	0	60.0%		0

TOTAL INDIRECT COST 221,803

K. TOTAL AMOUNT REQUESTED

979,961

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 3: 07/01/28 through 06/30/29

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/27	14,403				0	51.31%	0	0
Rsch Data Analyst 4	7/28	15,123	12.00	20.00%	2.40	36,295	52.34%	18,997	55,292
F. Marty Ralph	7/27	30,735				0	37.03%	0	0
Acad Prg Mgr 2	7/28	32,272	12.00	2.10%	0.25	8,133	37.77%	3,072	11,205
Julie Kalansky	7/27	16,128				0	37.03%	0	0
Acad Prg Mgr 1	7/28	16,935	12.00	2.10%	0.25	4,268	37.77%	1,612	5,880
Laura Martin	7/27	13,642				0	51.31%	0	0
Admin Ofcr 4	7/28	14,324	12.00	2.10%	0.25	3,610	52.34%	1,889	5,499
TBN	7/27	7,322				0	51.31%	0	0
Proj Policy Analyst 2	7/28	7,688	12.00	5.00%	0.60	4,613	52.34%	2,414	7,027
TBN	7/27	8,728				0	51.31%	0	0
Rsch Data Analyst 3	7/28	9,165	12.00	60.00%	7.20	65,988	52.34%	34,538	100,526
Daniel Steinhoff	7/27	12,961				0	51.31%	0	0
Rsch Data Analyst 4	7/28	13,609	12.00	5.00%	0.60	8,165	52.34%	4,274	12,439
Deanna Nash	7/27	8,728				0	51.31%	0	0
Rsch Data Analyst 3	7/28	9,165	12.00	20.00%	2.40	21,996	52.34%	11,513	33,509
Ricardo Batista Vilela	7/27	7,896				0	51.31%	0	0
Applictions Progr 2	7/28	8,291	12.00	20.00%	2.40	19,898	52.34%	10,415	30,313
Patrick Mulrooney	7/27	14,776				0	51.31%	0	0
Cmptl and Data Sci Rsc	7/28	15,514	12.00	5.00%	0.60	9,308	52.34%	4,872	14,180
Douglas Alden	7/27	14,417				0	51.31%	0	0
Rsch and Dev Engr 5	7/28	15,138	12.00	2.50%	0.30	4,541	52.34%	2,377	6,918
Adolfo Lopez Miranda	7/27	9,122				0	51.31%	0	0
Rsch and Dev Engr 2	7/28	9,578	12.00	7.50%	0.90	8,620	52.34%	4,512	13,132
Lisa Katz	7/27	8,046				0	51.31%	0	0
Rsch and Dev Engr 1	7/28	8,448	12.00	5.00%	0.60	5,069	52.34%	2,653	7,722
Subin Yoon	7/27	11,209				0	51.31%	0	0
Acad Prg Mgt Ofcr 3	7/28	11,770	12.00	1.50%	0.18	2,119	52.34%	1,109	3,228
Hart Wanetick	7/27	10,830				0	51.31%	0	0
Rsch and Dev Engr 3	7/28	11,371	12.00	7.50%	0.90	10,234	52.34%	5,356	15,590
Charlotte Piazza	7/27	5,991				0	51.31%	0	0
Lab Asst 3	7/28	6,291	12.00	10.00%	1.20	7,549	52.34%	3,951	11,500
Jacob Morgan	7/27	10,077				0	51.31%	0	0
Rsch and Dev Engr 2	7/28	10,581	12.00	1.50%	0.18	1,905	52.34%	997	2,902

Total person months 21.21

DIRECT SALARIES TOTAL 222,311

BENEFITS TOTAL 114,551

SALARIES AND BENEFITS TOTAL 336,862

C. TRAVEL

Domestic

Stakeholders Visits

	Car/RF Airfare/Baggage	No. of Per Diem	No. of Days/Bags
RT SD/San Francisco	\$ 582		1 \$ 582
RT Checked Baggage	\$ 70	1	1 \$ 70
Rental Car/Ground Transportation		\$ 135	5 1 \$ 675
Per Diem (Lodging)		\$ 294	5 1 \$ 1,470
Per Diem (Meals)		\$ 100	5 1 \$ 500

Conference

RT SD/TBD	\$ 753		1 \$ 753
RT Checked Baggage	\$ 70	1	1 \$ 70
Rental Car/Ground Transportation		\$ 135	5 1 \$ 675
Per Diem (Lodging)		\$ 298	5 1 \$ 1,490
Per Diem (Meals)		\$ 100	5 1 \$ 500
Registration Fee		\$ 901	1 \$ 901

Stakeholders Meetings

RT SD/San Francisco	\$ 582		1 \$ 582
RT Checked Baggage	\$ 70	1	1 \$ 70
Rental Car/Ground Transportation		\$ 135	4 1 \$ 540
Per Diem (Lodging)		\$ 294	4 1 \$ 1,176
Per Diem (Meals)		\$ 100	4 1 \$ 400

Field Work - Maintenance

(2 people x 4 days x 2 trips)			
RT SD/San Francisco	\$ 582		4 \$ 2,328
RT Checked Baggage	\$ 70	1	4 \$ 280

Rental Car/Ground Transportation	\$ 135	4	2	\$ 1,080
Per Diem (Lodging)	\$ 294	4	4	\$ 4,704
Per Diem (Meals)	\$ 100	4	4	\$ 1,600
Field Work - Station Install (3 people x 5 days x 1 trip)				
RT SD/San Francisco				
Rental 4WD / Mileage 1-way 508 miles	\$ 520	2	1	\$ 1,040
Per Diem (Lodging)	\$ 294	5	3	\$ 4,410
Per Diem (Meals)	\$ 100	5	3	\$ 1,500
Field Work - Scouting Location (2 people x 3 days x 1 trip)				
RT SD/San Francisco	\$ 582		2	\$ 1,164
RT Checked Baggage	\$ 70		2	\$ 140
Rental Car/Ground Transportation	\$ 135	3	1	\$ 405
Per Diem (Lodging)	\$ 294	3	2	\$ 1,764
Per Diem (Meals)	\$ 100	3	2	\$ 600
				Total Domestic Travel
				31,469
				TRAVEL TOTAL
				31,469

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer				9,400
				Total Equipment
				9,400

Fabrication: Instrument Setup

Customize observational equipment for deployment				37,699
				Total Fabrication
				37,699

EQUIPMENT TOTAL 47,099

E. SUPPLIES

Project Specific Research Supplies				4,326
Project Specific Computer Hardware Maintenance and Supplies				4,326
MacBook Pro				3,245
				SUPPLIES TOTAL
				11,897

F. CONTRACTUAL

Colorado State University				324,480
				SUBAWARD TOTAL
				324,480

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs				3,028
Managed Lab Machine (MLM) Service				2,867
San Diego Super Computer Charges				32,448

OTHER EXPENSES TOTAL 38,343

I. TOTAL DIRECT COSTS

790,150

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

<i>Tuition:</i>	0	Base	OH Rate	
<i>Equipment:</i>	47,099	386,123	60.0%	231,674
<i>Supercomputer:</i>	32,448			
<i>Excluded from Indirect:</i>	79,547			
<i>IDC on Subcontract(s):</i>				
<i>Colorado State University</i>		0	60.0%	0
				TOTAL INDIRECT COST
				231,674

K. TOTAL AMOUNT REQUESTED

1,021,824

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 4: 07/01/29 through 06/30/30

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/28	15,123				0	52.34%	0	0
Rsch Data Analyst 4	7/29	15,879	12.00	20.00%	2.40	38,110	53.39%	20,347	58,457
F. Marty Ralph	7/28	32,272				0	37.77%	0	0
Acad Prg Mgr 2	7/29	33,885	12.00	2.10%	0.25	8,539	38.53%	3,290	11,829
Julie Kalansky	7/28	16,935				0	37.77%	0	0
Acad Prg Mgr 1	7/29	17,782	12.00	2.10%	0.25	4,481	38.53%	1,727	6,208
Laura Martin	7/28	14,324				0	52.34%	0	0
Admin Ofcr 4	7/29	15,041	12.00	2.10%	0.25	3,790	53.39%	2,023	5,813
TBN	7/28	7,688				0	52.34%	0	0
Proj Policy Analyst 2	7/29	8,072	12.00	5.00%	0.60	4,843	53.39%	2,586	7,429
TBN	7/28	9,165				0	52.34%	0	0
Rsch Data Analyst 3	7/29	9,623	12.00	60.00%	7.20	69,286	53.39%	36,992	106,278
Daniel Steinhoff	7/28	13,609				0	52.34%	0	0
Rsch Data Analyst 4	7/29	14,289	12.00	5.00%	0.60	8,573	53.39%	4,577	13,150
Deanna Nash	7/28	9,165				0	52.34%	0	0
Rsch Data Analyst 3	7/29	9,623	12.00	16.67%	2.00	19,250	53.39%	10,278	29,528
Ricardo Batista Vilela	7/28	8,291				0	52.34%	0	0
Applictions Progr 2	7/29	8,705	12.00	20.00%	2.40	20,892	53.39%	11,154	32,046
Patrick Mulrooney	7/28	15,514				0	52.34%	0	0
Cmptl and Data Sci Rsc	7/29	16,290	12.00	5.00%	0.60	9,774	53.39%	5,218	14,992
Douglas Alden	7/28	15,138				0	52.34%	0	0
Rsch and Dev Engr 5	7/29	15,895	12.00	2.50%	0.30	4,769	53.39%	2,546	7,315
Adolfo Lopez Miranda	7/28	9,578				0	52.34%	0	0
Rsch and Dev Engr 2	7/29	10,057	12.00	7.50%	0.90	9,051	53.39%	4,832	13,883
Lisa Katz	7/28	8,448				0	52.34%	0	0
Rsch and Dev Engr 1	7/29	8,871	12.00	5.00%	0.60	5,323	53.39%	2,842	8,165
Subin Yoon	7/28	11,770				0	52.34%	0	0
Acad Prg Mgt Ofcr 3	7/29	12,358	12.00	1.50%	0.18	2,224	53.39%	1,187	3,411
Hart Wanetick	7/28	11,371				0	52.34%	0	0
Rsch and Dev Engr 3	7/29	11,940	12.00	7.50%	0.90	10,746	53.39%	5,737	16,483
Charlotte Piazza	7/28	6,291				0	52.34%	0	0
Lab Asst 3	7/29	6,605	12.00	10.00%	1.20	7,926	53.39%	4,232	12,158
Jacob Morgan	7/28	10,581				0	52.34%	0	0
Rsch and Dev Engr 2	7/29	11,110	12.00	1.50%	0.18	2,000	53.39%	1,068	3,068

Total person months 20.81

DIRECT SALARIES TOTAL 229,577

BENEFITS TOTAL 120,636

SALARIES AND BENEFITS TOTAL 350,213

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

	Airfare/Baggage	Car/RF Per Diem	No. of Days/Bags	No. of Trips	Total
RT SD/San Francisco	\$ 605			1	\$ 605
RT Checked Baggage	\$ 70		1	1	\$ 70
Rental Car/Ground Transportation		\$ 140	5	1	\$ 700
Per Diem (Lodging)		\$ 306	5	1	\$ 1,530
Per Diem (Meals)		\$ 104	5	1	\$ 520

Conference

RT SD/TBD	\$ 783			1	\$ 783
RT Checked Baggage	\$ 70		1	1	\$ 70
Rental Car/Ground Transportation		\$ 140	5	1	\$ 700
Per Diem (Lodging)		\$ 310	5	1	\$ 1,550
Per Diem (Meals)		\$ 104	5	1	\$ 520
Registration Fee		\$ 937		1	\$ 937

Stakeholders Meetings

RT SD/San Francisco	\$ 605			1	\$ 605
RT Checked Baggage	\$ 70		1	1	\$ 70
Rental Car/Ground Transportation		\$ 140	4	1	\$ 560
Per Diem (Lodging)		\$ 306	4	1	\$ 1,224
Per Diem (Meals)		\$ 104	4	1	\$ 416

Field Work - Maintenance

(2 people x 4 days x 2 trips)					
RT SD/San Francisco	\$ 605			4	\$ 2,420
RT Checked Baggage	\$ 70		1	4	\$ 280

Rental Car/Ground Transportation	\$ 140	4	2	\$ 1,120
Per Diem (Lodging)	\$ 306	4	4	\$ 4,896
Per Diem (Meals)	\$ 104	4	4	\$ 1,664
Field Work - Station Install (3 people x 5 days x 1 trip)				
RT SD/San Francisco				
Rental 4WD / Mileage 1-way 508 miles	\$ 541	2	1	\$ 1,082
Per Diem (Lodging)	\$ 306	5	3	\$ 4,590
Per Diem (Meals)	\$ 104	5	3	\$ 1,560
Field Work - Scouting Location (2 people x 3 days x 1 trip)				
RT SD/San Francisco	\$ 605		2	\$ 1,210
RT Checked Baggage	\$ 70	1	2	\$ 140
Rental Car/Ground Transportation	\$ 140	3	1	\$ 420
Per Diem (Lodging)	\$ 306	3	2	\$ 1,836
Per Diem (Meals)	\$ 104	3	2	\$ 624
				Total Domestic Travel 32,702
				TRAVEL TOTAL 32,702

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer				9,776
				Total Equipment 9,776

Fabrication: Instrument Setup

Customize observational equipment for deployment				39,207
				Total Fabrication 39,207

EQUIPMENT TOTAL 48,983

E. SUPPLIES

Project Specific Research Supplies				4,499
Project Specific Computer Hardware Maintenance and Supplies				4,499
MacBook Pro				3,375
				SUPPLIES TOTAL 12,373

F. CONTRACTUAL

Colorado State University				337,459
				SUBAWARD TOTAL 337,459

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs				3,119
Managed Lab Machine (MLM) Service				2,982
San Diego Super Computer Charges				33,746
				OTHER EXPENSES TOTAL 39,847

I. TOTAL DIRECT COSTS

821,577

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

<i>Tuition:</i>	0	Base	OH Rate	
<i>Equipment:</i>	48,983	401,389	60.0%	240,833
<i>Supercomputer:</i>	33,746			
<i>Excluded from Indirect:</i>	82,729			

<i>IDC on Subcontract(s):</i>				
Colorado State University	0	60.0%		0

TOTAL INDIRECT COST 240,833

K. TOTAL AMOUNT REQUESTED

1,062,410

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 5: 07/01/30 through 06/30/31

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/29	15,879				0	53.39%	0	0
Rsch Data Analyst 4	7/30	16,673	12.00	20.00%	2.40	40,015	54.46%	21,792	61,807
F. Marty Ralph	7/29	33,885				0	38.53%	0	0
Acad Prg Mgr 2	7/30	37,359	12.00	2.10%	0.25	9,414	39.30%	3,700	13,114
Julie Kalansky	7/29	17,782				0	38.53%	0	0
Acad Prg Mgr 1	7/30	18,671	12.00	2.10%	0.25	4,705	39.30%	1,849	6,554
Laura Martin	7/29	15,041				0	53.39%	0	0
Admin Ofcr 4	7/30	15,793	12.00	2.10%	0.25	3,980	54.46%	2,168	6,148
TBN	7/29	8,072				0	53.39%	0	0
Proj Policy Analyst 2	7/30	8,476	12.00	5.00%	0.60	5,086	54.46%	2,770	7,856
TBN	7/29	9,623				0	53.39%	0	0
Rsch Data Analyst 3	7/30	10,104	12.00	60.00%	7.20	72,749	54.46%	39,619	112,368
Daniel Steinhoff	7/29	14,289				0	53.39%	0	0
Rsch Data Analyst 4	7/30	15,004	12.00	5.00%	0.60	9,002	54.46%	4,902	13,904
Deanna Nash	7/29	9,623				0	53.39%	0	0
Rsch Data Analyst 3	7/30	10,104	12.00	13.33%	1.60	16,162	54.46%	8,802	24,964
Ricardo Batista Vilela	7/29	8,705				0	53.39%	0	0
Applictions Progr 2	7/30	9,141	12.00	20.00%	2.40	21,938	54.46%	11,947	33,885
Patrick Mulrooney	7/29	16,290				0	53.39%	0	0
Cmptl and Data Sci Rsc	7/30	17,105	12.00	5.00%	0.60	10,263	54.46%	5,589	15,852
Douglas Alden	7/29	15,895				0	53.39%	0	0
Rsch and Dev Engr 5	7/30	16,690	12.00	2.50%	0.30	5,007	54.46%	2,727	7,734
Adolfo Lopez Miranda	7/29	10,057				0	53.39%	0	0
Rsch and Dev Engr 2	7/30	10,560	12.00	7.50%	0.90	9,504	54.46%	5,176	14,680
Lisa Katz	7/29	8,871				0	53.39%	0	0
Rsch and Dev Engr 1	7/30	9,314	12.00	5.00%	0.60	5,588	54.46%	3,043	8,631
Subin Yoon	7/29	12,358				0	53.39%	0	0
Acad Prg Mgt Ofcr 3	7/30	12,976	12.00	1.50%	0.18	2,336	54.36%	1,270	3,606
Hart Wanetick	7/29	11,940				0	53.39%	0	0
Rsch and Dev Engr 3	7/30	12,537	12.00	7.50%	0.90	11,283	54.36%	6,133	17,416
Charlotte Piazza	7/29	6,605				0	53.39%	0	0
Lab Asst 3	7/30	6,935	12.00	10.00%	1.20	8,322	54.36%	4,524	12,846
Jacob Morgan	7/29	11,110				0	53.39%	0	0
Rsch and Dev Engr 2	7/30	11,665	12.00	1.50%	0.18	2,100	54.36%	1,142	3,242

Total person months 20.41

DIRECT SALARIES TOTAL 237,454

BENEFITS TOTAL 127,153

SALARIES AND BENEFITS TOTAL 364,607

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

		Car/RF	No. of	No. of	
	Airfare/Baggage	Per Diem	Days	Bags	Trips
RT SD/San Francisco	\$ 629				1 \$ 629
RT Checked Baggage	\$ 70			1	1 \$ 70
Rental Car/Ground Transportation		\$ 146	5	1	\$ 730
Per Diem (Lodging)		\$ 318	5	1	\$ 1,590
Per Diem (Meals)		\$ 108	5	1	\$ 540

Conference

RT SD/TBD	\$ 814				1 \$ 814
RT Checked Baggage	\$ 70			1	1 \$ 70
Rental Car/Ground Transportation		\$ 146	5	1	\$ 730
Per Diem (Lodging)		\$ 322	5	1	\$ 1,610
Per Diem (Meals)		\$ 108	5	1	\$ 540
Registration Fee		\$ 974			1 \$ 974

Stakeholders Meetings

RT SD/San Francisco	\$ 629				1 \$ 629
RT Checked Baggage	\$ 70			1	1 \$ 70
Rental Car/Ground Transportation		\$ 146	4	1	\$ 584
Per Diem (Lodging)		\$ 318	4	1	\$ 1,272
Per Diem (Meals)		\$ 108	4	1	\$ 432

Field Work - Maintenance

(2 people x 4 days x 2 trips)					
RT SD/San Francisco	\$ 629			4	\$ 2,516
RT Checked Baggage	\$ 70			4	\$ 280

Rental Car/Ground Transportation	\$ 146	4	2	\$ 1,168
Per Diem (Lodging)	\$ 318	4	4	\$ 5,088
Per Diem (Meals)	\$ 108	4	4	\$ 1,728
Field Work - Station Install (3 people x 5 days x 1 trip)				
RT SD/San Francisco				
Rental 4WD / Mileage 1-way 508 miles	\$ 563	2	1	\$ 1,126
Per Diem (Lodging)	\$ 318	5	3	\$ 4,770
Per Diem (Meals)	\$ 108	5	3	\$ 1,620
Field Work - Scouting Location (2 people x 3 days x 1 trip)				
RT SD/San Francisco	\$ 629		2	\$ 1,258
RT Checked Baggage	\$ 70	1	2	\$ 140
Rental Car/Ground Transportation	\$ 146	3	1	\$ 438
Per Diem (Lodging)	\$ 318	3	2	\$ 1,908
Per Diem (Meals)	\$ 108	3	2	\$ 648
				Total Domestic Travel 33,972
				TRAVEL TOTAL 33,972

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer				10,167
				Total Equipment 10,167

Fabrication: Instrument Setup

Customize observational equipment for deployment				40,775
				Total Fabrication 40,775

EQUIPMENT TOTAL 50,942

E. SUPPLIES

Project Specific Research Supplies				4,679
Project Specific Computer Hardware Maintenance and Supplies				4,679
MacBook Pro				3,510
				SUPPLIES TOTAL 12,868

F. CONTRACTUAL

Colorado State University				350,958
				SUBAWARD TOTAL 350,958

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs				3,212
Managed Lab Machine (MLM) Service				3,101
San Diego Super Computer Charges				35,096
				OTHER EXPENSES TOTAL 41,409

I. TOTAL DIRECT COSTS

854,756

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

Tuition:	0	Base	OH Rate	
Equipment:	50,942	417,760	60.0%	250,656
Supercomputer:	35,096			
Excluded from Indirect:	86,038			

<u>IDC on Subcontract(s):</u>				
Colorado State University	0	60.0%	0	

TOTAL INDIRECT COST 250,656

K. TOTAL AMOUNT REQUESTED

1,105,412

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 6: 07/01/31 through 06/30/32

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/30	16,673				0	54.46%	0	0
Rsch Data Analyst 4	7/31	17,507	12.00	20.00%	2.40	42,017	55.55%	23,340	65,357
F. Marty Ralph	7/30	37,359				0	39.30%	0	0
Acad Prg Mgr 2	7/31	39,227	12.00	2.10%	0.25	9,885	40.09%	3,963	13,848
Julie Kalansky	7/30	18,671				0	39.30%	0	0
Acad Prg Mgr 1	7/31	19,605	12.00	2.10%	0.25	4,940	40.09%	1,980	6,920
Laura Martin	7/30	15,793				0	54.46%	0	0
Admin Ofcr 4	7/31	16,583	12.00	2.10%	0.25	4,179	55.55%	2,321	6,500
TBN	7/30	8,476				0	54.46%	0	0
Proj Policy Analyst 2	7/31	8,900	12.00	5.00%	0.60	5,340	55.55%	2,966	8,306
TBN	7/30	10,104				0	54.46%	0	0
Rsch Data Analyst 3	7/31	10,609	12.00	60.00%	7.20	76,385	55.55%	42,432	118,817
Daniel Steinhoff	7/30	15,004				0	54.46%	0	0
Rsch Data Analyst 4	7/31	15,754	12.00	5.00%	0.60	9,452	55.55%	5,251	14,703
Deanna Nash	7/30	10,104				0	54.46%	0	0
Rsch Data Analyst 3	7/31	10,609	12.00	10.00%	1.20	12,731	55.55%	7,072	19,803
Ricardo Batista Vilela	7/30	9,141				0	54.46%	0	0
Applictions Progr 2	7/31	9,598	12.00	20.00%	2.40	23,035	55.55%	12,796	35,831
Patrick Mulrooney	7/30	17,105				0	54.46%	0	0
Cmptl and Data Sci Rsc	7/31	17,960	12.00	5.00%	0.60	10,776	55.55%	5,986	16,762
Douglas Alden	7/29	16,690				0	54.46%	0	0
Rsch and Dev Engr 5	7/30	17,525	12.00	2.50%	0.30	5,258	55.55%	2,921	8,179
Adolfo Lopez Miranda	7/29	10,560				0	54.46%	0	0
Rsch and Dev Engr 2	7/30	11,088	12.00	7.50%	0.90	9,979	55.55%	5,543	15,522
Lisa Katz	7/29	9,314				0	54.46%	0	0
Rsch and Dev Engr 1	7/30	9,780	12.00	5.00%	0.60	5,868	55.55%	3,260	9,128
Subin Yoon	7/29	12,358				0	54.46%	0	0
Acad Prg Mgt Ofcr 3	7/30	12,976	12.00	1.50%	0.18	2,336	55.55%	1,298	3,634
Hart Wanetick	7/29	11,940				0	54.46%	0	0
Rsch and Dev Engr 3	7/30	12,537	12.00	7.50%	0.90	11,283	55.55%	6,268	17,551
Charlotte Piazza	7/29	6,605				0	54.46%	0	0
Lab Asst 3	7/30	6,935	12.00	10.00%	1.20	8,322	55.55%	4,623	12,945
Jacob Morgan	7/29	11,110				0	54.46%	0	0
Rsch and Dev Engr 2	7/30	11,665	12.00	1.50%	0.18	2,100	55.55%	1,167	3,267

Total person months 20.01

DIRECT SALARIES TOTAL 243,886

BENEFITS TOTAL 133,187

SALARIES AND BENEFITS TOTAL 377,073

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

	Car/RF Airfare/Baggage	No. of Per Diem	No. of Days/Bags
RT SD/San Francisco	\$ 654		1 \$ 654
RT Checked Baggage	\$ 70	1	1 \$ 70
Rental Car/Ground Transportation		\$ 152	5 1 \$ 760
Per Diem (Lodging)		\$ 331	5 1 \$ 1,655
Per Diem (Meals)		\$ 112	5 1 \$ 560

Conference

RT SD/TBD	\$ 847		1 \$ 847
RT Checked Baggage	\$ 70	1	1 \$ 70
Rental Car/Ground Transportation		\$ 152	5 1 \$ 760
Per Diem (Lodging)		\$ 335	5 1 \$ 1,675
Per Diem (Meals)		\$ 112	5 1 \$ 560
Registration Fee		\$1,013	1 \$ 1,013

Stakeholders Meetings

RT SD/San Francisco	\$ 654		1 \$ 654
RT Checked Baggage	\$ 70	1	1 \$ 70
Rental Car/Ground Transportation		\$ 152	4 1 \$ 608
Per Diem (Lodging)		\$ 331	4 1 \$ 1,324
Per Diem (Meals)		\$ 112	4 1 \$ 448

Field Work - Maintenance

(2 people x 4 days x 2 trips)			
RT SD/San Francisco	\$ 654		4 \$ 2,616
RT Checked Baggage	\$ 70	1	4 \$ 280

Rental Car/Ground Transportation	\$ 152	4	2	\$ 1,216
Per Diem (Lodging)	\$ 331	4	4	\$ 5,296
Per Diem (Meals)	\$ 112	4	4	\$ 1,792
Field Work - Station Install (3 people x 5 days x 1 trip)				
RT SD/San Francisco				
Rental 4WD / Mileage 1-way 508 miles	\$ 586	2	1	\$ 1,172
Per Diem (Lodging)	\$ 331	5	3	\$ 4,965
Per Diem (Meals)	\$ 112	5	3	\$ 1,680
Field Work - Scouting Location (2 people x 3 days x 1 trip)				
RT SD/San Francisco	\$ 654		2	\$ 1,308
RT Checked Baggage	\$ 70	1	2	\$ 140
Rental Car/Ground Transportation	\$ 152	3	1	\$ 456
Per Diem (Lodging)	\$ 331	3	2	\$ 1,986
Per Diem (Meals)	\$ 112	3	2	\$ 672
				Total Domestic Travel 35,307
				TRAVEL TOTAL 35,307

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer				10,574
				Total Equipment 10,574

Fabrication: Instrument Setup

Customize observational equipment for deployment				42,406
				Total Fabrication 42,406

EQUIPMENT TOTAL 52,980

E. SUPPLIES

Project Specific Research Supplies				4,866
Project Specific Computer Hardware Maintenance and Supplies				4,866
MacBook Pro				3,650
				SUPPLIES TOTAL 13,382

F. CONTRACTUAL

Colorado State University				364,996
				SUBAWARD TOTAL 364,996

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs				3,306
Managed Lab Machine (MLM) Service				3,225
San Diego Super Computer Charges				36,500
				OTHER EXPENSES TOTAL 43,031

I. TOTAL DIRECT COSTS

886,769

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

<i>Tuition:</i>	0	Base	OH Rate	
<i>Equipment:</i>	52,980	432,293	60.0%	259,376
<i>Supercomputer:</i>	36,500			
<i>Excluded from Indirect:</i>	89,480			

<i>IDC on Subcontract(s):</i>				
<i>Colorado State University</i>	0	60.0%		0

TOTAL INDIRECT COST 259,376

K. TOTAL AMOUNT REQUESTED

1,146,145

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 7: 07/01/32 through 06/30/33

A. SALARIES	FY Rates	Monthly	No. Months	% Salary or	Person	Salary	Fringe Benefits		TOTAL
							Beginnin	Direct Salary	
Jonathan Rutz	7/31	17,507				0	55.55%	0	0
Rsch Data Analyst 4	7/32	18,382	12.00	20.00%	2.40	44,117	56.66%	24,997	69,114
F. Marty Ralph	7/31	39,227				0	40.09%	0	0
Acad Prg Mgr 2	7/32	41,188	12.00	2.10%	0.25	10,379	40.89%	4,244	14,623
Julie Kalansky	7/31	19,605				0	40.09%	0	0
Acad Prg Mgr 1	7/32	20,585	12.00	2.10%	0.25	5,187	40.89%	2,121	7,308
Laura Martin	7/31	16,583				0	55.55%	0	0
Admin Ofcr 4	7/32	17,412	12.00	2.10%	0.25	4,388	56.66%	2,486	6,874
TBN	7/31	8,900				0	55.55%	0	0
Proj Policy Analyst 2	7/32	9,345	12.00	5.00%	0.60	5,607	56.66%	3,177	8,784
TBN	7/31	10,609				0	55.55%	0	0
Rsch Data Analyst 3	7/32	11,139	12.00	60.00%	7.20	80,201	56.66%	45,442	125,643
Daniel Steinhoff	7/31	15,754				0	55.55%	0	0
Rsch Data Analyst 4	7/32	16,542	12.00	5.00%	0.60	9,925	56.66%	5,624	15,549
Deanna Nash	7/31	10,609				0	55.55%	0	0
Rsch Data Analyst 3	7/32	11,139	12.00	10.00%	1.20	13,367	56.66%	7,574	20,941
Ricardo Batista Vilela	7/31	9,598				0	55.55%	0	0
Applicions Progr 2	7/32	10,078	12.00	20.00%	2.40	24,187	56.66%	13,704	37,891
Patrick Mulrooney	7/31	17,960				0	55.55%	0	0
Cmptl and Data Sci Rsc	7/32	18,858	12.00	5.00%	0.60	11,315	56.66%	6,411	17,726
Douglas Alden	7/29	17,525				0	55.55%	0	0
Rsch and Dev Engr 5	7/30	18,401	12.00	2.50%	0.30	5,520	56.66%	3,128	8,648
Adolfo Lopez Miranda	7/29	11,088				0	55.55%	0	0
Rsch and Dev Engr 2	7/30	11,642	12.00	7.50%	0.90	10,478	56.66%	5,937	16,415
Lisa Katz	7/29	9,780				0	55.55%	0	0
Rsch and Dev Engr 1	7/30	10,269	12.00	5.00%	0.60	6,161	56.66%	3,491	9,652
Subin Yoon	7/29	12,358				0	55.55%	0	0
Acad Prg Mgt Ofcr 3	7/30	12,976	12.00	1.50%	0.18	2,336	56.66%	1,324	3,660
Hart Wanetick	7/29	11,940				0	55.55%	0	0
Rsch and Dev Engr 3	7/30	12,537	12.00	7.50%	0.90	11,283	56.66%	6,393	17,676
Charlotte Piazza	7/29	6,605				0	55.55%	0	0
Lab Asst 3	7/30	6,935	12.00	10.00%	1.20	8,322	56.66%	4,715	13,037

Total person months 19.83

DIRECT SALARIES TOTAL 252,773

BENEFITS TOTAL 140,768

SALARIES AND BENEFITS TOTAL 393,541

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

RT SD/San Francisco	\$	680			1	\$	680
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	158	5	\$	790
Per Diem (Lodging)			\$	344	5	\$	1,720
Per Diem (Meals)			\$	116	5	\$	580

Conference

RT SD/TBD	\$	881			1	\$	881
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	158	5	\$	790
Per Diem (Lodging)			\$	348	5	\$	1,740
Per Diem (Meals)			\$	116	5	\$	580
Registration Fee			\$	1,054	1	\$	1,054

Stakeholders Meetings

RT SD/San Francisco	\$	680			1	\$	680
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	158	4	\$	632
Per Diem (Lodging)			\$	344	4	\$	1,376
Per Diem (Meals)			\$	116	4	\$	464

Field Work - Maintenance

(2 people x 4 days x 2 trips)							
RT SD/San Francisco	\$	680			4	\$	2,720
RT Checked Baggage	\$	70			1	\$	280
Rental Car/Ground Transportation			\$	158	4	\$	1,264
Per Diem (Lodging)			\$	344	4	\$	5,504

Per Diem (Meals)		\$ 116	4	4	\$ 1,856
Field Work - Station Install (3 people x 5 days x 1 trip)					
RT SD/San Francisco					
Rental 4WD / Mileage 1-way 508 miles		\$ 609	2	1	\$ 1,218
Per Diem (Lodging)		\$ 344	5	3	\$ 5,160
Per Diem (Meals)		\$ 116	5	3	\$ 1,740
Field Work - Scouting Location (2 people x 3 days x 1 trip)					
RT SD/San Francisco	\$	680		2	\$ 1,360
RT Checked Baggage	\$	70	1	2	\$ 140
Rental Car/Ground Transportation		\$ 158	3	1	\$ 474
Per Diem (Lodging)		\$ 344	3	2	\$ 2,064
Per Diem (Meals)		\$ 116	3	2	\$ 696
					Total Domestic Travel
					36,653
					TRAVEL TOTAL
					36,653

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer					10,997
					Total Equipment
					10,997

Fabrication: Instrument Setup

Customize observational equipment for deployment					44,102
					Total Fabrication
					44,102

EQUIPMENT TOTAL 55,099

E. SUPPLIES

Project Specific Research Supplies					5,061
Project Specific Computer Hardware Maintenance and Supplies					5,061
MacBook Pro					3,796
					SUPPLIES TOTAL
					13,918

F. CONTRACTUAL

Colorado State University					379,596
					SUBAWARD TOTAL
					379,596

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs					3,441
Managed Lab Machine (MLM) Service					3,354
San Diego Super Computer Charges					37,960

OTHER EXPENSES TOTAL 44,755

I. TOTAL DIRECT COSTS

923,562

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

<i>Tuition:</i>	<u>0</u>	Base	OH Rate	
<i>Equipment:</i>	55,099	450,907	60.0%	270,544
<i>Supercomputer:</i>	<u>37,960</u>			
<i>Excluded from Indirect:</i>	<u>93,059</u>			

<u><i>IDC on Subcontract(s):</i></u>				
<i>Colorado State University</i>		0	60.0%	0

TOTAL INDIRECT COST 270,544

K. TOTAL AMOUNT REQUESTED

1,194,106

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 8: 07/01/33 through 06/30/34

A. SALARIES	FY Rates	Monthly	Person	% Salary or	Person	Salary	Fringe Benefits		TOTAL
							Beginnin	Direct Salary	
Jonathan Rutz	7/32	18,382				0	56.66%	0	0
Rsch Data Analyst 4	7/33	19,301	12.00	20.00%	2.40	46,322	57.79%	26,769	73,091
F. Marty Ralph	7/32	41,188				0	40.89%	0	0
Acad Prg Mgr 2	7/33	45,410	12.00	2.10%	0.25	11,443	41.71%	4,773	16,216
Julie Kalansky	7/32	20,585				0	40.89%	0	0
Acad Prg Mgr 1	7/33	21,614	12.00	2.10%	0.25	5,447	41.71%	2,272	7,719
Laura Martin	7/32	17,412				0	56.66%	0	0
Admin Ofcr 4	7/33	18,283	12.00	2.10%	0.25	4,607	57.79%	2,662	7,269
TBN	7/32	9,345				0	56.66%	0	0
Proj Policy Analyst 2	7/33	9,812	12.00	5.00%	0.60	5,887	57.79%	3,402	9,289
TBN	7/32	11,139				0	56.66%	0	0
Rsch Data Analyst 3	7/33	11,696	12.00	60.00%	7.20	84,211	57.79%	48,666	132,877
Daniel Steinhoff	7/32	16,542				0	56.66%	0	0
Rsch Data Analyst 4	7/33	17,369	12.00	5.00%	0.60	10,421	57.79%	6,022	16,443
Deanna Nash	7/32	11,139				0	56.66%	0	0
Rsch Data Analyst 3	7/33	11,696	12.00	10.00%	1.20	14,035	57.79%	8,111	22,146
Ricardo Batista Vilela	7/32	10,078				0	56.66%	0	0
Applicions Progr 2	7/33	10,582	12.00	17.50%	2.10	22,222	57.79%	12,842	35,064
Patrick Mulrooney	7/32	18,858				0	56.66%	0	0
Cmptl and Data Sci Rsc	7/33	19,801	12.00	5.00%	0.60	11,881	57.79%	6,866	18,747
Douglas Alden	7/29	18,401				0	56.66%	0	0
Rsch and Dev Engr 5	7/30	19,321	12.00	2.50%	0.30	5,796	57.79%	3,350	9,146
Adolfo Lopez Miranda	7/29	11,642				0	56.66%	0	0
Rsch and Dev Engr 2	7/30	12,224	12.00	7.50%	0.90	11,002	57.79%	6,358	17,360
Lisa Katz	7/29	10,269				0	56.66%	0	0
Rsch and Dev Engr 1	7/30	10,782	12.00	5.00%	0.60	6,469	57.79%	3,738	10,207
Subin Yoon	7/29	12,358				0	56.66%	0	0
Acad Prg Mgt Ofcr 3	7/30	12,976	12.00	1.50%	0.18	2,336	57.79%	1,350	3,686
Hart Wanetick	7/29	11,940				0	56.66%	0	0
Rsch and Dev Engr 3	7/30	12,537	12.00	7.50%	0.90	11,283	57.79%	6,520	17,803
Charlotte Piazza	7/29	6,605				0	56.66%	0	0
Lab Asst 3	7/30	6,935	12.00	10.00%	1.20	8,322	57.79%	4,809	13,131

Total person months 19.53

DIRECT SALARIES TOTAL 261,684

BENEFITS TOTAL 148,510

SALARIES AND BENEFITS TOTAL 410,194

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

RT SD/San Francisco	\$	707			1	\$	707
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	164	5	\$	820
Per Diem (Lodging)			\$	358	5	\$	1,790
Per Diem (Meals)			\$	121	5	\$	605

Conference

RT SD/TBD	\$	916			1	\$	916
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	164	5	\$	820
Per Diem (Lodging)			\$	362	5	\$	1,810
Per Diem (Meals)			\$	121	5	\$	605
Registration Fee			\$	1,096	1	\$	1,096

Stakeholders Meetings

RT SD/San Francisco	\$	707			1	\$	707
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	164	4	\$	656
Per Diem (Lodging)			\$	358	4	\$	1,432
Per Diem (Meals)			\$	121	4	\$	484

Field Work - Maintenance

(2 people x 4 days x 2 trips)

RT SD/San Francisco	\$	707			4	\$	2,828
RT Checked Baggage	\$	70			1	\$	280
Rental Car/Ground Transportation			\$	164	4	\$	1,312
Per Diem (Lodging)			\$	358	4	\$	5,728

Per Diem (Meals)	\$ 121	4	4	\$ 1,936
Field Work - Station Install (3 people x 5 days x 1 trip)				
RT SD/San Francisco				
Rental 4WD / Mileage 1-way 508 miles	\$ 633	2	1	\$ 1,266
Per Diem (Lodging)	\$ 358	5	3	\$ 5,370
Per Diem (Meals)	\$ 121	5	3	\$ 1,815
Field Work - Scouting Location (2 people x 3 days x 1 trip)				
RT SD/San Francisco	\$ 707		2	\$ 1,414
RT Checked Baggage	\$ 70	1	2	\$ 140
Rental Car/Ground Transportation	\$ 164	3	1	\$ 492
Per Diem (Lodging)	\$ 358	3	2	\$ 2,148
Per Diem (Meals)	\$ 121	3	2	\$ 726
				Total Domestic Travel
				38,113
				TRAVEL TOTAL
				38,113

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer				11,437
				Total Equipment
				11,437

Fabrication: Instrument Setup

Customize observational equipment for deployment				45,866
				Total Fabrication
				45,866
				EQUIPMENT TOTAL
				57,303

E. SUPPLIES

Project Specific Research Supplies				5,263
Project Specific Computer Hardware Maintenance and Supplies				5,263
MacBook Pro				3,948
				SUPPLIES TOTAL
				14,474

F. CONTRACTUAL

Colorado State University				394,779
				SUBAWARD TOTAL
				394,779

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs				3,558
Managed Lab Machine (MLM) Service				3,488
San Diego Super Computer Charges				39,478
				OTHER EXPENSES TOTAL
				46,524

I. TOTAL DIRECT COSTS

961,387

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

	<i>Tuition:</i>	0	Base	OH Rate	
	<i>Equipment:</i>	57,303	469,827	60.0%	281,896
	<i>Supercomputer:</i>	39,478			
	<i>Excluded from Indirect:</i>	96,781			
	<i>IDC on Subcontract(s):</i>				
	<i>Colorado State University</i>	0	60.0%		0
					TOTAL INDIRECT COST
					281,896

K. TOTAL AMOUNT REQUESTED

1,243,283

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 9: 07/01/34 through 06/30/35

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/33	19,301				0	57.79%	0	0
Rsch Data Analyst 4	7/34	20,266	12.00	20.00%	2.40	48,638	58.95%	28,672	77,310
F. Marty Ralph	7/33	45,410				0	41.71%	0	0
Acad Prg Mgr 2	7/34	50,065	12.00	2.10%	0.25	12,616	42.54%	5,367	17,983
Julie Kalansky	7/33	21,614				0	41.71%	0	0
Acad Prg Mgr 1	7/34	22,695	12.00	2.10%	0.25	5,719	42.54%	2,433	8,152
Laura Martin	7/33	18,283				0	57.79%	0	0
Admin Ofcr 4	7/34	19,197	12.00	2.10%	0.25	4,838	58.95%	2,852	7,690
TBN	7/33	9,812				0	57.79%	0	0
Proj Policy Analyst 2	7/34	10,303	12.00	5.00%	0.60	6,182	58.95%	3,644	9,826
TBN	7/33	11,696				0	57.79%	0	0
Rsch Data Analyst 3	7/34	12,281	12.00	60.00%	7.20	88,423	58.95%	52,125	140,548
Daniel Steinhoff	7/33	17,369				0	57.79%	0	0
Rsch Data Analyst 4	7/34	18,237	12.00	5.00%	0.60	10,942	58.95%	6,450	17,392
Deanna Nash	7/33	11,696				0	57.79%	0	0
Rsch Data Analyst 3	7/34	12,281	12.00	10.00%	1.20	14,737	58.95%	8,687	23,424
Ricardo Batista Vilela	7/33	10,582				0	57.79%	0	0
Applictions Progr 2	7/34	11,111	12.00	15.00%	1.80	20,000	58.95%	11,790	31,790
Patrick Mulrooney	7/33	19,801				0	57.79%	0	0
Cmptl and Data Sci Rsc	7/34	20,791	12.00	5.00%	0.60	12,475	58.95%	7,354	19,829
Douglas Alden	7/29	19,321				0	57.79%	0	0
Rsch and Dev Engr 5	7/30	20,287	12.00	2.50%	0.30	6,086	58.95%	3,588	9,674
Adolfo Lopez Miranda	7/29	12,224				0	57.79%	0	0
Rsch and Dev Engr 2	7/30	12,835	12.00	7.50%	0.90	11,552	58.95%	6,810	18,362
Lisa Katz	7/29	10,782				0	57.79%	0	0
Rsch and Dev Engr 1	7/30	11,321	12.00	5.00%	0.60	6,793	58.95%	4,004	10,797
Subin Yoon	7/29	12,358				0	57.79%	0	0
Acad Prg Mgt Ofcr 3	7/30	12,976	12.00	1.50%	0.18	2,336	58.95%	1,377	3,713
Hart Wanetick	7/29	11,940				0	57.79%	0	0
Rsch and Dev Engr 3	7/30	12,537	12.00	7.50%	0.90	11,283	58.95%	6,651	17,934
Charlotte Piazza	7/29	6,605				0	57.79%	0	0
Lab Asst 3	7/30	6,935	12.00	10.00%	1.20	8,322	58.95%	4,906	13,228

Total person months 19.23

DIRECT SALARIES TOTAL 270,942

BENEFITS TOTAL 156,710

SALARIES AND BENEFITS TOTAL 427,652

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

RT SD/San Francisco	\$	735			1	\$	735
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	171	5	\$	855
Per Diem (Lodging)			\$	372	5	\$	1,860
Per Diem (Meals)			\$	126	5	\$	630

Conference

RT SD/TBD	\$	953			1	\$	953
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	171	5	\$	855
Per Diem (Lodging)			\$	376	5	\$	1,880
Per Diem (Meals)			\$	126	5	\$	630
Registration Fee			\$	1,140	1	\$	1,140

Stakeholders Meetings

RT SD/San Francisco	\$	735			1	\$	735
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	171	4	\$	684
Per Diem (Lodging)			\$	372	4	\$	1,488
Per Diem (Meals)			\$	126	4	\$	504

Field Work - Maintenance

(2 people x 4 days x 2 trips)							
RT SD/San Francisco	\$	953			4	\$	3,812
RT Checked Baggage	\$	70			1	\$	280
Rental Car/Ground Transportation			\$	171	4	\$	1,368
Per Diem (Lodging)			\$	372	4	\$	5,952

Per Diem (Meals)		\$ 126	4	4	\$ 2,016
Field Work - Station Install (3 people x 5 days x 1 trip)					
RT SD/San Francisco					
Rental 4WD / Mileage 1-way 508 miles		\$ 658	2	1	\$ 1,316
Per Diem (Lodging)		\$ 372	5	3	\$ 5,580
Per Diem (Meals)		\$ 126	5	3	\$ 1,890
Field Work - Scouting Location (2 people x 3 days x 1 trip)					
RT SD/San Francisco	\$	953		2	\$ 1,906
RT Checked Baggage	\$	70	1	2	\$ 140
Rental Car/Ground Transportation		\$ 171	3	1	\$ 513
Per Diem (Lodging)		\$ 372	3	2	\$ 2,232
Per Diem (Meals)		\$ 126	3	2	\$ 756
					Total Domestic Travel
					40,920
					TRAVEL TOTAL
					40,920

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer					11,894
					Total Equipment
					11,894

Fabrication: Instrument Setup

Customize observational equipment for deployment					47,701
					Total Fabrication
					47,701

EQUIPMENT TOTAL 59,595

E. SUPPLIES

Project Specific Research Supplies					5,474
Project Specific Computer Hardware Maintenance and Supplies					5,474
MacBook Pro					4,106
					SUPPLIES TOTAL
					15,054

F. CONTRACTUAL

Colorado State University					410,570
					SUBAWARD TOTAL
					410,570

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs					3,678
Managed Lab Machine (MLM) Service					3,628
San Diego Super Computer Charges					41,057

OTHER EXPENSES TOTAL 48,363

I. TOTAL DIRECT COSTS

1,002,154

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

<i>Tuition:</i>	<u>0</u>	Base	OH Rate	
<i>Equipment:</i>	59,595	490,932	60.0%	294,559
<i>Supercomputer:</i>	<u>41,057</u>			
<i>Excluded from Indirect:</i>	<u>100,652</u>			

<u>IDC on Subcontract(s):</u>				
Colorado State University	0	60.0%	0	

TOTAL INDIRECT COST 294,559

K. TOTAL AMOUNT REQUESTED

1,296,713

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

Year 10: 07/01/35 through 06/30/36

A. SALARIES	FY Rates Beginnin	Monthly Direct Salary	No. Months	% Salary or Effort	Person Mos.	Salary Subtotal	Fringe Benefits		TOTAL
							%	Amount	
Jonathan Rutz	7/34	20,266				0	58.95%	0	0
Rsch Data Analyst 4	7/35	21,279	12.00	20.00%	2.40	51,070	60.13%	30,708	81,778
F. Marty Ralph	7/34	50,065				0	42.54%	0	0
Acad Prg Mgr 2	7/35	55,197	12.00	2.10%	0.25	13,910	43.39%	6,036	19,946
Julie Kalansky	7/34	22,695				0	42.54%	0	0
Acad Prg Mgr 1	7/35	23,830	12.00	2.10%	0.25	6,005	43.39%	2,606	8,611
Laura Martin	7/34	19,197				0	58.95%	0	0
Admin Ofcr 4	7/35	20,157	12.00	2.10%	0.25	5,080	60.13%	3,055	8,135
TBN	7/34	10,303				0	58.95%	0	0
Proj Policy Analyst 2	7/35	10,818	12.00	5.00%	0.60	6,491	60.13%	3,903	10,394
TBN	7/34	12,281				0	58.95%	0	0
Rsch Data Analyst 3	7/35	12,895	12.00	60.00%	7.20	92,844	60.13%	55,827	148,671
Daniel Steinhoff	7/34	18,237				0	58.95%	0	0
Rsch Data Analyst 4	7/35	19,149	12.00	5.00%	0.60	11,489	60.13%	6,908	18,397
Deanna Nash	7/34	12,281				0	58.95%	0	0
Rsch Data Analyst 3	7/35	12,895	12.00	12.50%	1.50	19,343	60.13%	11,631	30,974
Ricardo Batista Vilela	7/34	11,111				0	58.95%	0	0
Applicions Progr 2	7/35	11,667	12.00	10.00%	1.20	14,000	60.13%	8,418	22,418
Patrick Mulrooney	7/34	20,791				0	58.95%	0	0
Cmptl and Data Sci Rsc	7/35	21,831	12.00	5.00%	0.60	13,099	60.13%	7,876	20,975
Douglas Alden	7/29	20,287				0	58.95%	0	0
Rsch and Dev Engr 5	7/30	21,301	12.00	2.50%	0.30	6,390	60.13%	3,842	10,232
Adolfo Lopez Miranda	7/29	12,835				0	58.95%	0	0
Rsch and Dev Engr 2	7/30	13,477	12.00	7.50%	0.90	12,129	60.13%	7,293	19,422
Lisa Katz	7/29	11,321				0	58.95%	0	0
Rsch and Dev Engr 1	7/30	11,887	12.00	5.00%	0.60	7,132	60.13%	4,288	11,420
Subin Yoon	7/29	12,358				0	58.95%	0	0
Acad Prg Mgt Ofcr 3	7/30	12,976	12.00	1.50%	0.18	2,336	60.13%	1,405	3,741
Hart Wanetick	7/29	11,940				0	58.95%	0	0
Rsch and Dev Engr 3	7/30	12,537	12.00	7.50%	0.90	11,283	60.13%	6,784	18,067
Charlotte Piazza	7/29	6,605				0	58.95%	0	0
Lab Asst 3	7/30	6,935	12.00	10.00%	1.20	8,322	60.13%	5,004	13,326

Total person months 18.93

DIRECT SALARIES TOTAL 280,923

BENEFITS TOTAL 165,584

SALARIES AND BENEFITS TOTAL 446,507

B. FRINGE BENEFITS

C. TRAVEL

Domestic

Stakeholders Visits

RT SD/San Francisco	\$	764			1	\$	764
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	178	5	\$	890
Per Diem (Lodging)			\$	387	5	\$	1,935
Per Diem (Meals)			\$	131	5	\$	655

Conference

RT SD/TBD	\$	991			1	\$	991
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	178	5	\$	890
Per Diem (Lodging)			\$	391	5	\$	1,955
Per Diem (Meals)			\$	131	5	\$	655
Registration Fee			\$	1,186	1	\$	1,186

Stakeholders Meetings

RT SD/San Francisco	\$	764			1	\$	764
RT Checked Baggage	\$	70			1	\$	70
Rental Car/Ground Transportation			\$	178	4	\$	712
Per Diem (Lodging)			\$	387	4	\$	1,548
Per Diem (Meals)			\$	131	4	\$	524

Field Work - Maintenance

(2 people x 4 days x 2 trips)							
RT SD/San Francisco	\$	991			4	\$	3,964
RT Checked Baggage	\$	70			4	\$	280
Rental Car/Ground Transportation			\$	178	4	\$	1,424
Per Diem (Lodging)			\$	387	4	\$	6,192

Per Diem (Meals)		\$ 131	4	4	\$ 2,096
Field Work - Station Install (3 people x 5 days x 1 trip)					
RT SD/San Francisco					
Rental 4WD / Mileage 1-way 508 miles		\$ 684	2	1	\$ 1,368
Per Diem (Lodging)		\$ 387	5	3	\$ 5,805
Per Diem (Meals)		\$ 131	5	3	\$ 1,965
Field Work - Scouting Location (2 people x 3 days x 1 trip)					
RT SD/San Francisco	\$	991		2	\$ 1,982
RT Checked Baggage	\$	70	1	2	\$ 140
Rental Car/Ground Transportation		\$ 178	3	1	\$ 534
Per Diem (Lodging)		\$ 387	3	2	\$ 2,322
Per Diem (Meals)		\$ 131	3	2	\$ 786
					Total Domestic Travel
					42,537
					TRAVEL TOTAL
					42,537

D. EQUIPMENT (or equivalent and includes sales tax)

OTT HydroMet - Parsivel Laser Discrometer					12,370
					Total Equipment
					12,370

Fabrication: Instrument Setup

Customize observational equipment for deployment					49,609
					Total Fabrication
					49,609

EQUIPMENT TOTAL 61,979

E. SUPPLIES

Project Specific Research Supplies					5,693
Project Specific Computer Hardware Maintenance and Supplies					5,693
MacBook Pro					4,270
					SUPPLIES TOTAL
					15,656

F. CONTRACTUAL

Colorado State University					426,994
					SUBAWARD TOTAL
					426,994

H. OTHER

Project Specific Communications, Mailing/FedEx, and Network Costs					3,802
Managed Lab Machine (MLM) Service					3,773
San Diego Super Computer Charges					42,699

OTHER EXPENSES TOTAL 50,274

I. TOTAL DIRECT COSTS

1,043,947

J. INDIRECT COSTS (less equipment, tuition remission, subcontract costs in excess of \$25K)

<i>Tuition:</i>	<u>0</u>	<u>Base</u>	<u>OH Rate</u>	
<i>Equipment:</i>	61,979	512,275	60.0%	307,365
<i>Supercomputer:</i>	<u>42,699</u>			
<i>Excluded from Indirect:</i>	<u>104,678</u>			

<u>IDC on Subcontract(s):</u>				
Colorado State University	0	60.0%	0	

TOTAL INDIRECT COST 307,365

K. TOTAL AMOUNT REQUESTED

1,351,312

AQPI Local Partner Support for Ongoing Radar Operations and Program Enhancement

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL PROJECT
A. Salaries	201,292	214,089	222,311	229,577	237,454	243,886	252,773	261,684	270,942	280,923	2,414,931
B. Fringe Benefits	99,725	108,162	114,551	120,636	127,153	133,187	140,768	148,510	156,710	165,584	1,314,986
C. Travel	29,134	30,299	31,469	32,702	33,972	35,307	36,653	38,113	40,920	42,537	351,106
D. Equipment	43,545	45,287	47,099	48,983	50,942	52,980	55,099	57,303	59,595	61,979	522,812
E. Supplies	11,000	11,440	11,897	12,373	12,868	13,382	13,918	14,474	15,054	15,656	132,062
F. Contractual Subawards	300,000	312,000	324,480	337,459	350,958	364,996	379,596	394,779	410,570	426,994	3,601,832
H. Other Expenses	35,397	36,881	38,343	39,847	41,409	43,031	44,755	46,524	48,363	50,274	424,824
I. Total Direct Costs	720,093	758,158	790,150	821,577	854,756	886,769	923,562	961,387	1,002,154	1,043,947	8,762,553
J. Indirect Cost	222,929	221,803	231,674	240,833	250,656	259,376	270,544	281,896	294,559	307,365	2,581,635
K. Total Amount Requested	943,022	979,961	1,021,824	1,062,410	1,105,412	1,146,145	1,194,106	1,243,283	1,296,713	1,351,312	11,344,188

SIO / UC San Diego Budget Justification

Salaries for all personnel are based upon current university salary scales. Escalations for all personnel costs reflect range and merit increases in accordance with University of California policies.

A. SENIOR PERSONNEL: (PI/PD, Co-PI'S, Faculty and Other Senior Associates.)

PI Jonathan Rutz: Funds are requested for two months' salary support at 20% effort in all years. PI Rutz is responsible for overall project management including administration, coordination, finance, personnel, implementation, as well as Project Science Lead

Co-PI F. Marty Ralph: Funds are requested for one months' salary support at 2.1% effort in all years. Co-PI Ralph is responsible for overall project oversight.

OTHER PERSONNEL

Julie Kalansky, Acad Prg Mgr 1: Funds are requested for one months' salary support at 2.1% effort in all years and is responsible for support for project management.

Laura Martin, Admin Ofcr 4: Funds are requested for one months' salary support at 2.1% effort in all and is responsible for support for administration and finance.

TBN, Proj Policy Analyst 2: Funds are requested for one months' salary support at 5% effort in all and is responsible for support for project coordination.

TBN, Rsch Data Analyst 3: Funds are requested for one months' salary support at 60% effort in all and is responsible for meteorological analysis.

Daniel Steinhoff, Rsch Data Analyst: Funds are requested for one months' salary support at 10% effort in all years and is responsible for atmospheric modeling and West-WRF.

Deanna Nash, Rsch Data Analyst 3: Funds are requested for one months' salary support at 20% effort in all years and is responsible for model verification.

Ricardo Batista Vilela, Applications Prog 2: Funds are requested for one months' salary support at 10% effort in years and is responsible for data and web development

Patrick Mulrooney, Cmptrl and Data Sci Rsc: Funds are requested for one months' salary support at 5% effort in years and is responsible for computational science and IT support

Douglas Alden, Rsch and Dev Engr 5: Funds are requested for one months' salary support at 5% effort in years and is responsible for leading engineering of fabrication for observational equipment

Adolfo Lopez Miranda, Rsch and Dev Engr 5: Funds are requested for one months' salary support at 5% effort in years and is responsible for fabrication, installation, and O&M of observational equipment

Lisa Katz, Rsch and Dev Engr 1: Funds are requested for one months' salary support at 5% effort in years and is responsible for fabrication, installation, and O&M of observational equipment

Subin Yoon, Acad Prg Mgt Ofcr 3: Funds are requested for one months' salary support at 5% effort in years and is responsible for field team / observations oversight

Hart Wanetick, Rsch and Dev Engr 3: Funds are requested for one months' salary support at 5% effort in years and is responsible for fabrication, installation, and O&M of observational equipment

Charlotte Piazza, Lab Asst 3: Funds are requested for one months' salary support at 5% effort in years and is responsible for fabrication, installation, and O&M of observational equipment

Jacob Morgan, Rsch and Dev Engr 2: Funds are requested for one months' salary support at 5% effort in years and is responsible for fabrication, installation, and O&M of observational equipment

B. FRINGE BENEFITS

Fringe benefits are calculated using the current planning Composite Benefit Rates (CBR) in effect for the UC San Diego. CBRs are reviewed and approved by UC San Diego's cognizant Federal agency, the Department of Health and Human Services.

C. TRAVEL (Below is my requested format which aligns with agency requirements for this section.)

Domestic:

Funds are requested for travel from San Diego to San Francisco for five days to attend two stakeholder meeting (one for 5 days and one for 4 days) in years one thru 10 with an estimated cost of \$3,053 per person/trip in year 1 (4% escalation per year thereafter). Trip costs are broken down as follows for the five days: Airfare/Baggage \$608, Lodging \$1,360, Ground \$625, Meals \$460.

Funds are requested for travel from San Diego to TBD for five days to attend a conference in years one thru 10 with an estimated cost of \$4,064 per person/trip in year 1 (4% escalation per year thereafter). Trip costs are broken down as follows: Airfare/Baggage \$766, Lodging \$1,380, Ground \$625, Meals \$460, Registration Fee \$833.

Funds are requested for travel from San Diego to San Francisco for four days for field work station install on observational equipment in years one thru 10 with an estimated cost of \$2,314 per person/trip in year 1 (4% escalation per year thereafter). Trip costs are broken down as follows: Airfare/Baggage \$608, Lodging \$1,088, Ground \$250, Meals \$368.

Funds are requested for travel from San Diego to San Francisco for five days for field work maintenance on observational equipment in years one thru 10 with an estimated cost of \$2,140 per person/trip in year 1 for driving (4% escalation per year thereafter). Trip costs are broken down as follows: Rental 4WD and mileage \$320, Lodging \$1,360, Meals \$460.

Funds are requested for travel from San Diego to San Francisco for four days for field work scouting location on observational equipment in years one thru 10 with an estimated cost of \$1,888 per person/trip in year 1 (4% escalation per year thereafter). Trip costs are broken down as follows: Airfare/Baggage \$608, Lodging \$816, Ground \$188, Meals \$276.

Airfares obtained by WWW quote; per diem and lodging rates were estimated by using university and federally approved rates and recent lodging costs, per prescribed maximum per diem rates for CONUS web site.

D. EQUIPMENT

Fabrication – Customize observational equipment for deployment. A core element of this project is installation of observational equipment that will be used for high-quality precipitation monitoring and radar calibration. This requires customized fabrication.

OTT HydroMet – Parsivel Laser Discrometer. This instrument is a key component of the station fabrication described above.

E. SUPPLIES

Laptop Computer (\$3000 in year 1 with an escalation rate of 4% in years 2 thru 10) needed to perform technical analysis

F. CONTRACTUAL - Subaward

A subaward is requested for Colorado State University for radar operation and maintenance.

H. OTHER DIRECT COSTS

Managed Lab Machine (MLM) Service: This service allows Scripps IT to ensure that the managed computer will remain in compliance with UCSD Network Security Standards by installing routine security patches, firewall management and attending to virus abatement.

San Diego Super Computer Charges: CW3E will use a supercomputer for this project and this funding will support running of the supercomputer and storage of output data.

UCSD Next Generation Network Communication charge (NGN):

UC San Diego Information and Technology Services (ITS) charges a flat per month fee for services to provide state-of-the-art technology infrastructure and services to the campus community. These charges are directly attributable and proportionally applied for the individual(s) included in the proposed budget on the project. These costs are not included in the campus' Facilities & Administration (F&A) rate as an indirect cost. UC San Diego auditors have determined that it is both equitable and consistent with the OMB Circular 2 CFR 200 provisions on cost allocability that the costs be assigned to FTE on grant and contract funds. Accordingly, an allocable portion of these NGN costs are included in this budget as direct project costs.

I. TOTAL DIRECT COSTS - \$8,762,553

J. TOTAL INDIRECT COSTS - \$2,581,635

Indirect Cost:

UC San Diego's indirect costs are calculated based on Modified Total Direct Costs (MTDC) as defined in 2 CFR Part 200.68 using Facilities and Administration (F&A) rates approved by the U.S. Department of Health and Human Services (DHHS).

Rates established by UC San Diego's F&A rate agreement dated June 06, 2024 are as follows:

- July 1, 2026, to June 30, 2027: 60.0%

K. TOTAL DIRECT & INDIRECT COSTS (A through G) - \$11,344,188



OTT HydroMet Corp.

22400 Davis Drive, SUITE 20164 Sterling VA

UNITED STATES

<https://www.otthydromet.com/>

QUOTATION

Customer Address:

UC SAN DIEGO MARKET PLACE/SCRIPPS
9500 GILMAN DRIVE
LA JOLLA CA 92093
UNITED STATES

Delivery Address:

UC SAN DIEGO MARKET PLACE/SCRIPPS
9500 GILMAN DRIVE
LA JOLLA CA 92093
UNITED STATES

Quotation No.: E200002766 Customer No.: C003318 Payment terms: Net 30 Days
Validity: 12/20/2025 Incoterm: FOB Delivery Address Your Sales Tax ID:

Contact person

Field Sales

Whitney, Russell
Tel: +1 5302630908
Email: russell.whitney@otthydromet.com

Quote creation

Russell Whitney
Email: russell.whitney@otthydromet.com

Line	Item	Description	Quantity	UM	Unit Price	Discount	Amount
10	70.210.001.3.0	PARSIVEL LASER DISDROMETER	1.000	EA	7,078.00	3.0%	6,865.66 USD
15	Surcharge	7.500% Tariff Surcharge (Line 10)	1.000	EA	514.92	0.0%	514.92 USD
20	70.210.409.4.13	PARSIVEL CABLE-13M CABLE	1.000	EA	513.00	3.0%	497.61 USD
25	Surcharge	7.500% Tariff Surcharge (Line 20)	1.000	EA	37.32	0.0%	37.32 USD
Subtotal from :							7,915.51 USD

Delivery time (approx.): weeks after receipt of order and clarification of all technical details.

Amount excl. Sales Tax:	7,915.51	USD
Sales Tax:	585.31	USD
Est. Freight:	189.00	USD
Total Amount Incl. Sales Tax:	8,689.82	USD

All business transactions shall be subject to our General Terms and Conditions see (www.ott.com/GTC).

OTT HydroMet Corp. Trade registered number:
22400 Davis Drive, SUITE 100 Our Sales EIN: 54-1006352
20164 Sterling VA

Per Jonathan Rutz

A core element of this project is installation of observational equipment that will be used for high-quality precipitation monitoring and radar calibration. Summarized below are categorical costs for fabrication of a surface meteorology station including a disdrometer that meets these requirements:

- Enclosure (external): \$4,058
- Enclosure (internal): \$4,184
- Disdrometer accessories: \$163
- Telemetry: \$9,441
- Surface Met: \$15,724
- External UPS Battery & Power Source: \$1,285
- **Total: \$34,855**



BACWA
BAY AREA
CLEAN WATER
AGENCIES

**BAY AREA CLEAN WATER AGENCIES
 ANNUAL MEETING PROGRAM**

draft

May 15, 2026

David Brower Center

TIME	DESCRIPTION	SPEAKER
8:30am - 9:00am	Coffee in the lobby	
9:00 am - 9:30 am	Welcome/Introduction Year in Review	Jackie Zipkin, BACWA Chair/ EBDA Lorien Fono, BACWA
9:30 am - 10:30 am	Regulator Priorities Bay Area Air District US Environmental Protection Agency State Water Resources Control Board San Francisco Bay Regional Water Board staff Q&A	Moderator: Amy Chastain, SFPUC Janet Whittick Peter Kozelka Sean Maguire Mary Cousins
10:30 am - 10:55 am	Break - Coffee and snacks in the foyer	
10:55 pm -12:15 pm	Nutrient Watershed Permit: Year 2 Check-in Regional Planning - Which projects are agencies advancing? Nutrient Credit Trading Science Program Update	Moderator: Amit Mutsuddy, EBMUD Mike Falk, HDR Chris Thomas, TFT Ian Wren, SFEI
12:15 pm - 1:15 pm	Lunch - On the terrace	
1:20 pm - 1:35 pm	BACWA Leadership Recognition and Award	Jackie Zipkin, BACWA Chair/EBDA
1:35 pm - 2:25 pm	Ready or Not: Disaster Preparedness and Resilience Preparing for The Big One Managing power supply uncertainty OR AQPI?	Moderator: Eric Dunlavey, San José Amit Mutsuddy, EBMUD Mariana Chavez-Vazquez, San José
2:25 pm - 3:20 pm	Telling our Story: Wastewater Communications (some ideas) Regional messaging and BACWA materials Go With the Flow Bike tour Public Outreach Program Pubic Plant Tours	Moderator: Lori Schectel, Central San BACWA Ben Lavender, Central San Meg Herston, FSSD Zoe Lake (tbd), EBMUD
3:20 pm - 3:30 pm	Annual Meeting Wrap-Up	Jackie Zipkin, BACWA Chair/EBDA
3:30 PM	Adjourn - Social hour	



BACWA BOARD POLICIES

POLICY NUMBER: BFP – 2.03

NAME OF POLICY: Contracting

LAST REVISED: June 19, 2020

PREVIOUSLY LAST REVISED: February 15, 2019

PURPOSE: Pursuant to Section 4 of the Joint Powers Agreement, BACWA has the authority to make and enter into contracts for the conduct of its business. This Policy establishes guidance for exercising BACWA’s contracting authority.

POLICY

BACWA will accomplish its Mission through a combination of member agency staff volunteers and, when needed, professional services contracts.

When entering into contracts, BACWA will seek services from firms that reflect the public constituency of the BACWA participating agencies.

Contractors for needed services will periodically be selected through a competitive, qualification-based process. When services are anticipated to be annual on-going services, the goal is to conduct a competitive selection process at least every three to five years unless there is an overriding benefit associated with continuity of maintaining the same provider of services, such as Executive Director, Assistant Executive Director and Regulatory Program Manager.

Contracts should be aligned with the BACWA budget. For the purposes of California Government Code Section 6509, the BACWA’s contracting powers will be exercised subject to the restrictions upon the manner of exercising such powers as are imposed on Central Contra Costa Sanitary District.



BACWA PROCEDURES

PROCEDURE NUMBER: 203

NAME OF PROCEDURE: Contracting for Professional Services

LAST REVISED: November 15, 2013
December 21, 2018
June 19, 2020

PURPOSE: Provide guidelines for implementing Board Policy BFP 2.03 Contracting

DEFINITIONS:

Single Source: A procurement in which two or more vendors can perform the services required, but one vendor is selected without a competitive process over the others for reasons such as expertise or previous experience with similar contracts.

Informal Competition: A procurement in which information about the scope of services requested and the potential vendors' fees and qualifications are communicated informally via email, telephone, and/or facsimile transmissions followed by an evaluation by BACWA and selection of a contractor.

Request for Proposals: A description of the services sought and a solicitation to prospective contractors to submit proposals on how they would provide those services and at what level of effort. BACWA then establishes an evaluation process whereby the most qualified contractors are interviewed and a selection made

PROCEDURE: Professional Services Contracting (PSC) will be implemented in accordance with the following considerations in order to comply with Board Policy BFP 2.03.

1. Check to ensure all PSC is done in accordance with procedures of the State of California to reflect the regional nature and purposes of the BACWA Joint Powers Agreement.



BACWA PROCEDURES

2. Any PSC by BACWA will include a provision to terminate for convenience on 30 days notice. This provision is based on the nature of the Association's annual budgeting process (cash accounting) and to assure conservation and effectiveness of the use of limited resources.
 3. PSC to provide support for significant projects or technical support with a value of more than \$100,000 shall be open to consideration of all qualified candidates. This provision does not apply where BACWA is funding studies as part of a regional collaboration, involving other funding sources, where funds have been pooled and directed to a central scientific research organization that provides continuity in conducting interrelated investigations over several years.
 4. Multi-year contracts will be approved annually by the Board after the Board has appropriated the funds for the multi-year contract through the approval of the annual budget.
 6. Contracting Authority shall be in accordance with Table 1 (see attached)
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Table 1.
AUTHORIZATION
LIMITS^{4 5 6}

Annual Contract Value	Contracting Authority	Competition Requirements	Contract Terms & Limitations	Amendment Guidelines
Less than \$5,000	Executive Director Approval ¹	Single Source ²	Contract term may not exceed one fiscal year. Must be consistent with and specified in the Board-approved budget and work plan.	Any amendment requires approval of the Executive Board.
Less than \$20,000	Chair of the Executive Board Approval ¹	Single Source ²	Contract term may not exceed one fiscal year.	Chair may approve an amendment increasing the total contract amount by no more than 25%.
Less than \$30,000	Executive Board Approval	Single Source ²	Contract term may not exceed five years, including any optional extensions.	Executive Board may approve an amendment increasing the total contract amount by no more than 25%.
\$30,000 to \$99,999.99	Executive Board Approval	Informal Competition ²	Contract term may not exceed five years, including any optional extensions.	Executive Board may approve an amendment increasing the total contract amount by no more than 25%.
Greater than or equal to \$100,000	Executive Board Approval	Request for Proposals ³	Contract term may not exceed five years, including any optional extensions.	Executive Board may approve an amendment increasing the total contract amount by no more than 25%.

1. On a monthly or more frequent basis, the Executive Director will report to the Executive Board all contracts which were approved by either the Chair of the Executive Board or the Executive Director.
2. When single source or informal competition is used, the Executive Director will report to the Executive Board the reasons that a particular vendor was selected over others. With strong justification, single sourcing may be used for contracts greater than \$30,000. For example, it may be used if only one contractor is able to supply the necessary services, or a consulting firm has satisfactorily performed the preliminary stage of a project.
3. For ~~all~~ contracts of \$100,000 or more, BACWA will issue a request for proposals (RFP), ~~unless there is strong justification for sole sourcing, as in #2, above.~~ The RFP will be developed by the ~~Executive Director~~ and publicly noticed. A committee comprised of the Executive Director ~~or the Regulatory Program Manager~~, and ~~at least one~~

Committee Chair/member agency staff shall review the proposals received and recommend a vendor to the Executive Board based on their review and approval.

4.4. The Chair has the authority to approve a requested change in subcontractors on an executed contract providing the value of the work involved does not exceed 40% of the total contract amount or \$50,000. All such changes shall be reported to the Board at the next regularly scheduled Board meeting. Changes in subcontractor work greater than 40% of the total contract amount or \$50,000 must be approved by the Executive Board.

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5. ~~Contracts will include provisions specifying any limitations on reallocation of budget between tasks. The Chair has the authority to approve reallocation of budget between work items in the scope of work of an executed contract provided the reallocation of budget does not exceed 20% of the total contract amount or \$50,000. Reallocations that exceed either of these limits must be approved by the Executive Board.~~

6. ~~Contracts will specify the conditions and limits under which they may be amended. Amendments increasing the value of a contract may be authorized by the Executive Director or Chair when they conform to the limits in Table 1. All other amendments must be approved by the Executive Board.~~

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4.7. For the purposes of conforming to these authorization limits, the value of a multi-year contract is the sum of the amounts for the individual years including any optional extensions of the contract.

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Executive Board Special Meeting

Agenda

SF Bay Regional Water Board /
 BACWA Executive Board Joint Meeting
 May 5, 2026, 9:00 AM – 12:00 PM

Special Location: TBD

1. Roll Call and Introductions – 9:00 AM
2. Public Comment – 9:10 AM
3. Discussion Items – See below

Topic	Goal	Time
A. BACWA Approvals	<ul style="list-style-type: none"> • MOU with Water Board for CEQA Contract • Interim RPM Contract 	9:15 AM
B. Agency Updates	<ul style="list-style-type: none"> • Roundtable from BACWA and Water Board 	9:30 AM
C. Constituents of Emerging Concern	<ul style="list-style-type: none"> • BACWA PFAS Phase 3 Study • Water Boards strategy for PFAS • RMP Special Studies Update 	9:45 AM
D. Nutrients - Trading	<ul style="list-style-type: none"> • Presentation from The Freshwater Trust 	9:55 AM
E. Nutrients – Funding	<ul style="list-style-type: none"> • EPA SF Bay Program Funding Opportunity 	10:30 AM
F. Nutrients - Basin Plan Amendment for Compliance Schedule Policy	<ul style="list-style-type: none"> • CEQA Substitute Environmental Document Workplan • Basin Plan Language – next steps • Update on project timing from SVCW 	10:35 AM
G. Nutrients - Reporting	<ul style="list-style-type: none"> • Group Annual Report and Compliance Schedule Milestones – Water Board Response 	10:50 AM
H. Next meeting	<ul style="list-style-type: none"> • USD or Central San 	10:55 AM

4. Tour – 11:00 AM

San Francisco Bay Water Quality Trading Program: A Primer for Wastewater Treatment Plants

In recent years, the San Francisco Bay has experienced an increased frequency and severity of harmful algal blooms (HABs). In July 2024, the Regional Water Quality Control Board adopted the Nutrient Watershed Permit (Nutrient Permit), establishing nitrogen discharge limits for wastewater treatment plants (WWTPs) across the San Francisco Bay. The Nutrient Permit is intended to reduce the potential for HABs by requiring a 40% reduction in total inorganic nitrogen (TIN) loading from WWTPs by 2034. Satisfying the Nutrient Permit’s final limits will require costly facility upgrades—estimated at approximately \$11 billion. In response, many dischargers have expressed interest in water quality trading as a compliance option to help reduce financial and operational burdens while achieving water quality improvements.

What Is Water Quality Trading?

Water quality trading (WQT) is a voluntary, market-based compliance strategy authorized under the Clean Water Act. It allows a regulated discharger with high permit compliance costs to purchase credits from another source that can achieve those reductions more cost effectively. This results in water quality improvements at a lower overall cost. WQT is not a new concept. In fact, WQT programs that allow dischargers to meet permit limits have been operational for more than a decade.

How Does WQT Work?

Every WWTP covered by a watershed permit receives an individual effluent limit. WWTPs that are able to economically reduce pollutant loads below their effluent limit can sell those excess reductions (i.e., credits) to other WWTPs to offset their discharges. Credits are generally measured in the same units as the permit and cover the same compliance period, so they slot directly into existing monitoring and reporting. The specific rules governing trading are approved by the regulators and incorporated into the permit, providing all potential participants with certainty about the program requirements, restrictions, and mechanics. For WQT programs with multiple participants, especially in the context of a general watershed permit, this is most often accomplished by developing a generally applicable trading framework.

EXAMPLE CREDIT TRADE



A watershed-wide program to reduce nutrients in the San Francisco Bay could include voluntary trades between wastewater treatment plants. One regulated discharger with high permit compliance costs can purchase credits from another discharger that can achieve nutrient reductions more cost effectively.



*Hypothetical trade between two WWTPs.
Map: NASA Landsat*

Legal Foundations

WQT is supported by EPA policies, most notably the 2003 Water Quality Trading Policy, which EPA reaffirmed in 2019 and 2020. WQT has also been upheld by federal courts and has been endorsed by the State Water Resources Control Board. Active trading programs operate successfully across the country, including in Connecticut, Virginia, Maryland, Wisconsin, and Oregon, among others. California has an existing WQT program in the Laguna de Santa Rosa.

SAN FRANCISCO BAY CONTEXT

For San Francisco Bay, trading enables coordinated compliance efforts by allowing WWTPs with limits in the Nutrient Permit to work together to protect the Bay. Some facilities can reduce pollutant loads below their limit more efficiently than others—due to available space, existing infrastructure, or economies of scale. Under a WQT program, a facility that goes beyond its required reductions generates credits, which it can sell to a facility that would otherwise need expensive upgrades to meet its own limit. Credits are generally measured in the same units as the permit (e.g., kilograms of TIN during dry season) and cover the same compliance period, so they can be recognized through existing monitoring and reporting.

In addition to buying and selling credits, trading can enable dischargers to collaboratively fund treatment upgrades in exchange for a portion of the resulting nutrient reductions. By allowing the Bay's regulated dischargers to look beyond an individual facility to consider nutrient reduction opportunities throughout the watershed, participants in a trading program can pursue the most efficient and cost-effective compliance strategies while maintaining and improving overall load reductions across the Bay.

Why Consider Trading?

- **COST SAVINGS.** Trading capitalizes on differences in treatment costs across facilities, enabling the region to meet aggregate load targets without every facility independently building treatment.
- **FLEXIBILITY.** Facilities close to meeting their limits can purchase a small number of credits rather than investing in a full capital project. Smaller agencies with limited budgets, space, or ratepayer bases can achieve compliance by purchasing credits and co-funding larger treatment upgrades at other facilities.
- **COLLABORATION.** Trading encourages watershed-wide coordination, turning individual compliance challenges into shared solutions and consolidating capital investments where they make the most difference.
- **ENVIRONMENTAL BENEFIT.** Well-designed WQT programs include safeguards—trading ratios, credit reserve pools, and adaptive management—so that trading delivers water quality improvement.

WHAT DOES WQT MEAN FOR YOUR WWTP?

Whether your facility is a potential buyer or seller, WQT provides another tool in the compliance toolbox. Facilities planning capital upgrades can evaluate whether over-treating could generate revenue through credit sales. Facilities facing difficult or expensive upgrades can evaluate whether purchasing credits is a more cost-effective path to compliance. WQT preserves future flexibility, even if you are unsure if you will be a credit buyer or seller.

ENGAGEMENT

It is important to engage early to make sure your perspectives are considered. Program design is happening in 2026 and 2027.

CONTACT

Lorien Fono

Executive Director

Bay Area Clean Water Agencies

lfono@bacwa.org

Chris Thomas

Senior Attorney

The Freshwater Trust

cthomas@thefreshwatertrust.org

The Freshwater Trust, a national expert in water quality trading, is supporting BACWA, HDR, and the Regional Water Quality Control Board. TFT is providing resources to support WWTPs as they consider WQT, including a workshop, credit price and availability analysis, and one-on-one consultation. The goal of this work is to establish the framework and systems necessary to facilitate nutrient credit trading.

Water Board’s Questions to POTWs for Informing Statewide PFAS Strategy

****PFAS Source Identification “Representative Study”****

1. Which industries discharge the highest concentrations into the collection system compared to residential wastewater?
2. What products have the highest PFAS concentrations in wastewater discharges when manufactured or used?
3. How widespread is the use of PFAS products or manufacturing processes that contribute to high concentrations in wastewater across the state?
4. How can one determine the key differences between residential, commercial, and industrial wastewater contaminants?

****Analytical Testing Approach****

1. What is an effective and cost-efficient method for comprehensive PFAS testing at POTWs?

****Data Interpretation****

1. Are there types or classes of PFAS that can be linked to specific industries, acting like a fingerprint?
2. What concentration levels of PFAS in wastewater are considered concerning or actionable?
3. Does industrial discharge contribute more PFAS than residential sources?

****Industrial Pretreatment****

1. What are some effective and cost-efficient practices to reduce elevated PFAS in industrial discharges?

****Proposed Phase 2 Outcomes:****

1. Summary of industrial processes or products contributing to high PFAS levels in wastewater.
2. Potential PFAS wastewater fingerprints associated with specific industrial processes.
3. Potential source control/minimization alternatives.
4. Feasibility of treatment/pre-treatment technologies and general costs.
5. Areas of needed additional research/studies.

BAY AREA CLEAN WATER AGENCIES PROFESSIONAL SERVICES CONTRACT

This PROFESSIONAL SERVICES CONTRACT, effective March 27, 2026, is between Bay Area Clean Water Agencies (“BACWA”), a joint powers agency which exists as a public entity separate and apart from its Member Agencies, created January 4, 1984 by a Joint Powers Agreement between Central Contra Costa Sanitary District, East Bay Dischargers Association, East Bay Municipal Utility District, the City and County of San Francisco and the City of San Jose, with a mailing address of P.O. Box 24055, MS 702, Oakland, CA 94623, and the San Francisco Estuary Institute (“Consultant”), a 501 (c)3 Non-Profit doing business at 4911 Central Ave., Richmond, CA 94904 for professional services as described in any Exhibit A attached hereto.

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

Description and Standard of Services to be Performed

1. Consultant will perform the Services as described by and in accordance with Exhibit A in a manner acceptable to BACWA.
2. Consultant shall not contract with or otherwise use any subconsultants, subcontractors or other nonemployee persons or entities (“Subconsultants”) to perform the Services without the prior written approval of BACWA. If Consultant and BACWA agree that Subconsultants shall be used, Consultant shall ensure Subconsultants’ compliance with all the terms and conditions of this agreement.
3. Consultant will exercise that degree of care in performing the Services in accordance with that prevailing among firms of comparable standing in the State of California (“Professional Standard”). Consultant will promptly correct or re-perform those Services not meeting the Professional Standard without additional compensation.
4. Consultant warrants that it is fully licensed, registered and otherwise fully authorized to perform the Services in the State of California to the extent applicable law requires such licensure, registration or authorization.
5. BACWA’s review, approval, acceptance, use, or payment for all or any part of the Services hereunder will not alter the Consultant’s obligations or BACWA’s rights hereunder, and will not excuse or diminish Consultant’s responsibility for performing all Services consistent with this Contract.
6. The term of this agreement shall not extend beyond September 30, 2029.

Payment for Services

7. BACWA will pay Consultant based work performed on the various tasks shown in the scope of work in Exhibit A, up to a maximum amount payable of \$100,000. Consultant will not exceed the maximum amount payable without obtaining prior written approval from BACWA.
8. Consultant shall submit invoices quarterly (March, June, September, December), or upon completion of major project milestones via email to jdymnt@bacwa.org. Invoices shall indicate hours associated with each task in Exhibit A, and a brief description of work performed.
9. Payments under this Contract will be due thirty (30) days after BACWA’s receipt of invoices. BACWA may withhold from any progress or final payment any damages, backcharges or claims incurred or anticipated by BACWA to the extent caused by Consultant.

Document Ownership and Retention

9. Consultant will maintain all financial records relating to this Contract in accordance with generally accepted accounting principles and for at least three years following termination of this Contract. Consultant will grant BACWA and its representatives access upon request to all such records and all other books, documents, papers, drawings, and writings of Consultant that refer or relate to this Contract.
10. All drawings, specifications, reports, programs, manuals, and other work product of Consultant that result from this Contract (“Work Product”) will be considered the exclusive property of BACWA. Consultant agrees that it will not use, disclose, communicate, publish or otherwise make available to third parties any products, analyses, data, compilations, studies, proposals, technical or business information, and any other information related to the Services provided to BACWA without BACWA’s prior written approval.

Indemnification

11. To the fullest extent allowed by law, Consultant will indemnify, hold harmless, reimburse and defend BACWA, its Member Agencies, and each of their officers, directors, employees and agents from, for and against any and all claims, demands, damages, losses, expenses, liabilities and penalties, including but not limited to reasonable attorneys’ and expert witnesses’ fees, arising out of or relating to the Services but only to the extent caused by the negligent or other wrongful acts or omissions of Consultant or any person or entity for whose acts or omissions any of them are responsible, or by the failure of any such party to perform as required by this Contract.

Insurance

12. Consultant will purchase and maintain, at Consultant’s expense, the following types of insurance, covering Consultant, its employees and agents:
 - a. Workers’ Compensation Insurance as required by law, subject to a waiver of subrogation in favor of BACWA;
 - b. Employers Liability Insurance with a per accident value at \$1,000,000, Policy Limit of \$1,000,000 and Each Employee of \$1,000,000, subject to a waiver of subrogation in favor of BACWA.
 - c. Comprehensive General Liability Insurance covering personal injury and property damage with a combined single limit, or the equivalent, of not less than \$1,000,000.00 each occurrence, \$2,000,000.00 general aggregate, and naming BACWA as an additional insured.
 - d. Business Automobile Liability Insurance with combined single limit coverage of not less than \$1,000,000.00 aggregate for each claim, incident, or occurrence; and naming BACWA as an additional insured.

Assignment

13. Consultant will not assign or transfer any of its interest in this Contract, in whole or in part, without the prior written consent of BACWA. BACWA may assign this Contract and any rights relating to this Contract (including but not limited to its right to assert claims and defenses against Consultant) at BACWA’s discretion.

Independent Contractor

14. Consultant will perform the Services as an independent contractor. Although Consultant will perform its Services for the benefit of BACWA, and although BACWA reserves the right to determine the schedule for the Services and to evaluate the quality of the completed performance, BACWA does not control the means or methods of Consultant's performance. Consultant is solely responsible for determining the appropriate means and methods of performing the Services, and Consultant's liability will not be diminished by any review, approval, acceptance, use or payment for the same by BACWA or any other party.

Termination of Contract; Suspension of Services

15. This contract shall automatically terminate on June 30, 2028. Either party may also terminate this Contract in whole or in part at any time for its convenience. For a termination for convenience, the termination will be effective thirty (30) days following receipt of a written notice of termination by one party from the other. BACWA may terminate this Contract in whole or in part for cause, in which event the termination will be effective ten (10) days after Consultant's receipt of BACWA's written notice and Consultant's failure during that period to cure the default.

Dispute Resolution

16. Consultant will give prompt written notice to BACWA of any claim, dispute or other matter in question, but in no event will Consultant give such notice later than ten (10) days after Consultant's becoming aware of the event or circumstance giving rise to the claim, dispute or matter in question.
17. All claims, disputes and other matters in question between BACWA and Consultant arising out of or relating to this Contract will be subject to alternative dispute resolution. If both parties agree to arbitration it will be conducted in accordance with the Commercial Arbitration Rules of the American Arbitration Association then in effect. Notice of the demand for arbitration will be filed in writing with the other party to this Contract and with the American Arbitration Association. Any arbitration arising out of or relating to this Contract will include, by consolidation, joinder or joint filing, any other person or entity not a party to this Contract that is substantially involved in a common issue of law or fact and whose involvement in the consolidated arbitration is necessary to achieve a final resolution of a matter in controversy therein. This agreement to arbitrate will be specifically enforceable by any court with jurisdiction thereof.
18. A demand for dispute resolution by either party will be made within a reasonable time after the claim, dispute, or other matter in question has arisen, and in no event will it be made after the date when institution of court litigation based on such claim, dispute or other matter in question would be barred by the applicable period of limitations. For all claims by BACWA against Consultant, the applicable period of limitations will not commence to run, and any alleged cause of action will not be deemed to have accrued (whether such action is based on negligence, strict liability, indemnity, intentional tort or other tort, breach of contract, breach of implied or express warranty, or any other legal or equitable theory), unless and until BACWA is fully aware of all three of the following: (1) the identity of the party(ies) responsible, (2) the magnitude of the damage or injury and (3) the cause(s) of the damage or injury. The contractual limitations period and discovery rule provided herein applies in lieu of any otherwise applicable statute or related case law.
19. The failure of either party to enforce any provision of this Contract will not constitute a waiver by that party of that or any other provision of this Contract.

Severability

20. BACWA and Consultant agree that if any term or provision of this Contract is determined to be illegal, in conflict with any law, void or otherwise unenforceable, and if the essential terms and provisions of this Contract remain unaffected, then the validity of the remaining terms and provisions will not be affected and the offending provision will be given the fullest meaning and effect allowed by law.

Survival

21. All rights and obligations set out in this Contract and arising hereunder will survive the termination of this Contract (i) as to the parties' rights and obligations that arose prior to such termination and (ii) as is necessary to give effect to rights and obligations that arise after such termination but derive from a breach or performance failure that occurred prior to the termination.

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

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

Exhibit A – Scope of Work, Schedule, and Budget

CONSULTANT:

San Francisco Estuary Institute

4911 Central Ave.

Street Address
Richmond, CA 94904

City, State, Zip Code
94-2951373

Tax Identification No.

Emily Corwin

04 / 01 / 2026

Consultant Signature

Date

Emily Corwin, Interim Executive Director

Name, Title



04 / 01 / 2026

BACWA Signature
Jackie Zipkin, BACWA Executive Board Chair

Date

Name, Title

Exhibit A

Scope of Work (SOW)

Professional Services by San Francisco Estuary Institute (SFEI)

Period of 1/15/2026 – 9/30/2029

Scope of Work: Per- and Polyfluoroalkyl Substances Monitoring for Bay Area Publicly-Owned Treatment Works, Phase 3: Investigation of PFAS Sources in Sewershed to Inform Management

Objective: Following up from Per- and Polyfluoroalkyl Substances (PFAS) Monitoring for Bay Area Publicly-Owned Treatment Works, Phase 2 study, San Francisco Estuary Institute (SFEI) will develop and implement a third phase study to further investigate PFAS in matrices from Bay Area Publicly-Owned Treatment Works (POTWs) to inform the management of PFAS at the local, regional, and state level. This study supports BACWA's partnership and match funding for the project: *PFAS Sources to Solutions: Identifying and Preventing PFAS Pollution in San Francisco Bay* (PFAS Sources to Solutions), a project funded by the US EPA San Francisco Bay Water Quality Improvement Fund.

Tasks to be undertaken by SFEI in Phase 3 consist of project management, study design, coordination of sample collection, data analysis and reporting (described in Tasks 1 through 4 below). This study will be conducted in collaboration with BACWA members (Study Participants) who have volunteered to collaborate by supporting study design and collecting samples in their sewersheds.

This Scope of Work does not include the cost of laboratory analysis of samples, data management and quality assurance, and final report. That work is covered separately by the PFAS Sources to Solutions project.

Some of the management questions that will be informed via Phase 3 include the following:

- What are relative PFAS loadings from POTWs to the San Francisco Bay compared to urban stormwater runoff?
- Are there observed temporal trends in PFAS levels in wastewater?
- What are relative PFAS mass loadings from monitored sewershed sources (e.g. residential customers, landfill leachate, car wash, industrial/commercial laundry) to POTWs?

Task 1: Project Management

SFEI will conduct project management activities, including:

- Supervise, coordinate, and monitor project progress and subcontracts in conformance with best practices and other governing agency requirements;
- Notify BACWA of any changes in scope or budget as soon as possible and propose actions if necessary to correct these changes;
- Maintain communication with BACWA by being available by phone or e-mail and responding in a timely fashion;
- Maintain project files; and

- Provide quarterly invoices with progress updates to BACWA.

Task 2: Sampling and Analysis Plan Development

Based on discussions with BACWA members and consistent with overall goals of the PFAS Sources to Solutions project, SFEI will identify study questions and draft a sampling and analysis plan (SAP). The SAP will be developed in consultation with BACWA and BACWA members to select representative sampling locations in the sewershed to investigate major sources of PFAS entering wastewater influent. The budget includes up to six meetings with BACWA and Study Participants to develop and finalize study design and sampling procedures.

BACWA and BACWA members are expected to provide timely technical support in selecting representative sampling locations in their sewershed and provide timely feedback on the study design. BACWA and BACWA members will have the opportunity to provide comments on the draft SAP before it is finalized, and it is expected that final comments will be received within fourteen days of receiving the draft SAP. SFEI will address BACWA member comments as practical and issue a final SAP that is approved by participants.

Task 3: SAP Implementation

Guided by the SAP, SFEI will coordinate sample collection and handling procedures with the participating POTWs and the analytical laboratory, to ensure sampling is completed and quality control measures are met.

Schedule and Deliverables

- Sampling and Analysis Plan: May 2026;
- Support Sample Collection: May 2026 – September 2027

Task 4: Data Analysis and Report

SFEI will analyze and synthesize data in a technical report.

It is expected that Study Participants will provide comments to guide interpretation of results from their sewersheds. SFEI will organize virtual meetings (up to four budgeted for data interpretation) with BACWA, Study Participants, and BACWA members to discuss interpretation of the data and receive comments on draft report.

Schedule and Deliverables

- Presentation of preliminary data analysis: 90 days after data receipt of final data from analytical laboratory.
- Data interpretation discussions with BACWA: 45 days after initial preliminary presentation.
- Draft Report: 6 months after receipt of final data from analytical laboratory.

Staff and Budget

Position	Maximum Rate Thru 6/26	Maximum Rate Thru 6/27	Maximum Rate Thru 6/28	Maximum Rate Thru 6/29	Maximum Rate Thru 6/30
Admin	\$131.89	\$140.46	\$149.59	\$159.31	\$169.67
Assoc Sci I&II/Assoc Tech Specialist I&II	\$135.43	\$144.23	\$153.60	\$163.58	\$174.21
Environmental/Tech Analyst	\$116.73	\$124.32	\$132.40	\$141.01	\$150.18
Sr Environmental/Sr Tech Analyst	\$124.79	\$132.90	\$141.54	\$150.74	\$160.54
Manager/Sr Scientist I-IV/Sr Tech Specialist I-IV	\$242.73	\$258.51	\$275.31	\$293.21	\$312.27
Program Director/Managing Sr Scientist/Managing Director	\$281.73	\$300.04	\$319.54	\$340.31	\$362.43
Scientist I/Tech Specialist I	\$146.67	\$156.20	\$166.35	\$177.16	\$188.68
Scientist II/Tech Specialist II	\$167.83	\$178.74	\$190.36	\$202.73	\$215.91

*Hourly Rates listed above represent the maximum billing rates for each position. Invoices will reflect the actual billing rates for staff working on the project during that period.

Direct costs will be invoiced at actual cost.

Total expenditures not to exceed \$100,000. Estimated hours and budget for each task are summarized below.

Estimated hours and budget per task

	Hours	Basic Budget
Task 1: Project Management	53	\$10,000
Task 2: SAP	164	\$30,000
Task 3: SAP Implementation support	55	\$10,000
Task 4: Data Analysis and Draft Report	290	\$50,000
Total		\$100,000

Exhibit A

Scope of Work (SOW)

Professional Services by San Francisco Estuary Institute (SFEI)

Period of 1/15/2026 – 9/30/2029

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This Scope of Work does not include the cost of laboratory analysis of samples, data management and quality assurance, and final report. That work is covered separately by the PFAS Sources to Solutions project.

Some of the management questions that will be informed via Phase 3 include the following:

- What are relative PFAS loadings from POTWs to the San Francisco Bay compared to urban stormwater runoff?
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- What are relative PFAS mass loadings from monitored sewershed sources (e.g. residential customers, landfill leachate, car wash, industrial/commercial laundry) to POTWs?

Task 1: Project Management

SFEI will conduct project management activities, including:

- Supervise, coordinate, and monitor project progress and subcontracts in conformance with best practices and other governing agency requirements;
- Notify BACWA of any changes in scope or budget as soon as possible and propose actions if necessary to correct these changes;
- Maintain communication with BACWA by being available by phone or e-mail and responding in a timely fashion;
- Maintain project files; and

- Provide quarterly invoices with progress updates to BACWA.

Task 2: Sampling and Analysis Plan Development

Based on discussions with BACWA members and consistent with overall goals of the PFAS Sources to Solutions project, SFEI will identify study questions and draft a sampling and analysis plan (SAP). The SAP will be developed in consultation with BACWA and BACWA members to select representative sampling locations in the sewershed to investigate major sources of PFAS entering wastewater influent. The budget includes up to six meetings with BACWA and Study Participants to develop and finalize study design and sampling procedures.

BACWA and BACWA members are expected to provide timely technical support in selecting representative sampling locations in their sewershed and provide timely feedback on the study design. BACWA and BACWA members will have the opportunity to provide comments on the draft SAP before it is finalized, and it is expected that final comments will be received within fourteen days of receiving the draft SAP. SFEI will address BACWA member comments as practical and issue a final SAP that is approved by participants.

Task 3: SAP Implementation

Guided by the SAP, SFEI will coordinate sample collection and handling procedures with the participating POTWs and the analytical laboratory, to ensure sampling is completed and quality control measures are met.

Schedule and Deliverables

- Sampling and Analysis Plan: May 2026;
- Support Sample Collection: May – September 2027

Task 4: Data Analysis and Report

SFEI will analyze and synthesize data in a technical report.

It is expected that Study Participants will provide comments to guide interpretation of results from their sewersheds. SFEI will organize virtual meetings (up to four budgeted for data interpretation) with BACWA, Study Participants, and BACWA members to discuss interpretation of the data and receive comments on draft report.

Schedule and Deliverables

- Presentation of preliminary data analysis: 90 days after data receipt of final data from analytical laboratory.
- Data interpretation discussions with BACWA: 45 days after initial preliminary presentation.
- Draft Report: 6 months after receipt of final data from analytical laboratory.

Staff and Budget

Position	Maximum Rate Thru 6/26	Maximum Rate Thru 6/27	Maximum Rate Thru 6/28	Maximum Rate Thru 6/29	Maximum Rate Thru 6/30
Admin	\$131.89	\$140.46	\$149.59	\$159.31	\$169.67
Assoc Sci I&II/Assoc Tech Specialist I&II	\$135.43	\$144.23	\$153.60	\$163.58	\$174.21
Environmental/Tech Analyst	\$116.73	\$124.32	\$132.40	\$141.01	\$150.18
Sr Environmental/Sr Tech Analyst	\$124.79	\$132.90	\$141.54	\$150.74	\$160.54
Manager/Sr Scientist I-IV/Sr Tech Specialist I-IV	\$242.73	\$258.51	\$275.31	\$293.21	\$312.27
Program Director/Managing Sr Scientist/Managing Director	\$281.73	\$300.04	\$319.54	\$340.31	\$362.43
Scientist I/Tech Specialist I	\$146.67	\$156.20	\$166.35	\$177.16	\$188.68
Scientist II/Tech Specialist II	\$167.83	\$178.74	\$190.36	\$202.73	\$215.91

*Hourly Rates listed above represent the maximum billing rates for each position. Invoices will reflect the actual billing rates for staff working on the project during that period.

Direct costs will be invoiced at actual cost.

Total expenditures not to exceed \$100,000. Estimated hours and budget for each task are summarized below.

Estimated hours and budget per task

	Hours	Basic Budget
Task 1: Project Management	53	\$10,000
Task 2: SAP	164	\$30,000
Task 3: SAP Implementation support	55	\$10,000
Task 4: Data Analysis and Draft Report	290	\$50,000
Total		\$100,000

Proposed Updated Project Timeline for BACWA Phase 3 Study

2026	2027	2028
Apr: RMP ECWG meeting	Jan–Apr: Sewershed sampling design discussion (SFEI lead)	
May: influent/effluent sampling plan (SFEI lead)	Apr: Sewershed Sampling Plan (SFEI lead)	
Jun–Jul: influent/effluent sample collection (POTW lead)	May–Sep: Sewersheds sample collection (POTW lead)	June: Anticipated draft report (SFEI lead)
Aug–Oct: Laboratory Data Analysis (SGS AXYS lead)	Oct–Dec: Laboratory PFAS Analysis (SGS AXYS lead)	
PFAS data QA/QC, data analysis, and preliminary data presentation and discussion with BACWA members (SFEI lead)	Data QA/QC, data analysis, preliminary data presentation and discussion with BACWA members (SFEI lead)	

Committee Request for Board Action: Approval of FY27 budget request

43 attendees participated virtually, including one guest speaker and representatives from 23 member agencies and the Regional Water Board.

Updates on Committee Activity and Announcements

- **BACWA's Annual Members Meeting** will be held Friday, May 15th - [Register Here](#) by May 6th.
- **Spring Campaign on Pet Pesticides.** BAPPG's spring digital media campaign will be focused on **pet pesticides**. Flea & tick pesticides like fipronil and imidacloprid are frequently found in municipal wastewater at concentrations that exceed aquatic toxicity benchmarks. The online digital campaign encourages pet owners to choose Bay-friendly options for flea & tick control. The ads will run in April to align with Earth Day. All of the GIFs and PNG files associated with the campaign are available for member use in Spanish or English from the [BACWA website](#). Contact San Jose's [David Robertson](#) to coordinate on this outreach campaign.
- **CWEA.** The CWEA P3S committee will convene at the Annual Conference on Friday, April 10th ([link](#)). Adrian Calederon-Flores from Oro Loma SD is chairing the committee, which will help plan the P3S Conference in February 2027.
- **Pesticides Committee update.** The pesticides committee is preparing an update to the [Pesticides Watch List](#) and will share it soon. There is draft State legislation ([AB 1603](#)) that would ban PFAS-containing pesticides.
- **BACWA Executive Board update** – Co-chair Autumn Ross recently provided the BACWA Executive Board with an update on BAPPG Activities. [Link to Slides](#).
- **BAPPG Steering Committee** welcomes suggestions for future meeting topics, especially those focused on water quality trends for pollutants of concern in Bay Area wastewater, such as dioxins or metals.
- **BACWA Communication Update:** To join the BACWA communications steering committee, contact [Lorien Fono](#). BACWA plans to participate in an Exploratorium outreach event on August 1st (Bay Day), and also encourages member agencies to participate.

San Francisco Estuary Institute – Science Communication and New Sediment Scan

[Link to Slides](#)

Sierra Garcia from the San Francisco Estuary Institute shared information about science communication and outreach materials that are available from the [Regional Monitoring Program](#), such as [RMP e-Updates](#), Contaminant Data Display & Download ([CD3](#)), plain language summaries of scientific studies ([example](#)), and print publications such as [The Pulse of the Bay](#).

Sierra also shared the results of a recent non-targeted analysis of Bay sediments. This analytical method can help scientists scan for tens of thousands of chemicals, though not at exact concentrations. The scan showed that most of the detected chemicals are already part of the RMP monitoring program, such as pesticides, flame retardants, disinfectants, and plastic additives. However, the scan did reveal two new chemical groups of interest which may be included in future RMP studies: synthetic dyes and siloxanes. More information is available in the [Fact Sheet](#) or the [202 Report](#).

SFEI welcomes informal member agency input on RMP communication materials – contact [Sierra Garcia](#) to share your thoughts.

Next Meeting: Wednesday, June 3, 2026, 10 am- 12pm, Virtual

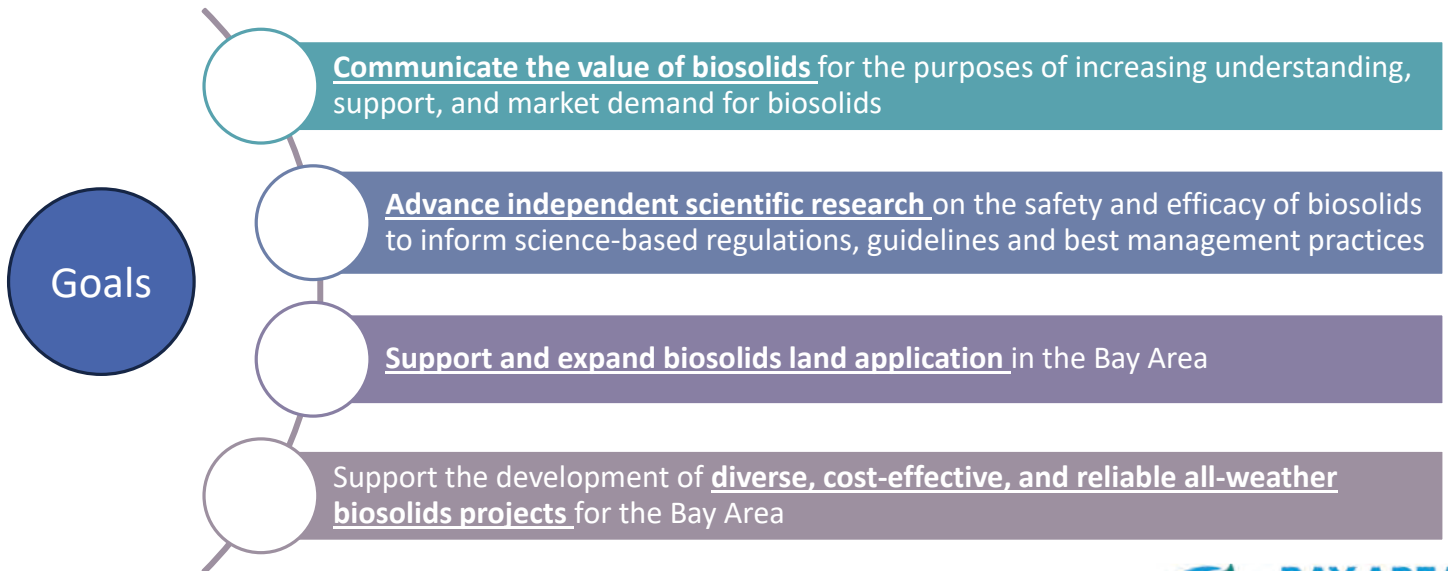
Bay Area Biosolids Coalition: Meeting

April 13th, 2026

A. Welcome/Introductions



B. Strategic Plan Goals – Progress Updates



Updates in blue bold.
Key points highlighted.

1. Communicate the Value of Biosolids

News & Events Posts on BABC website*:

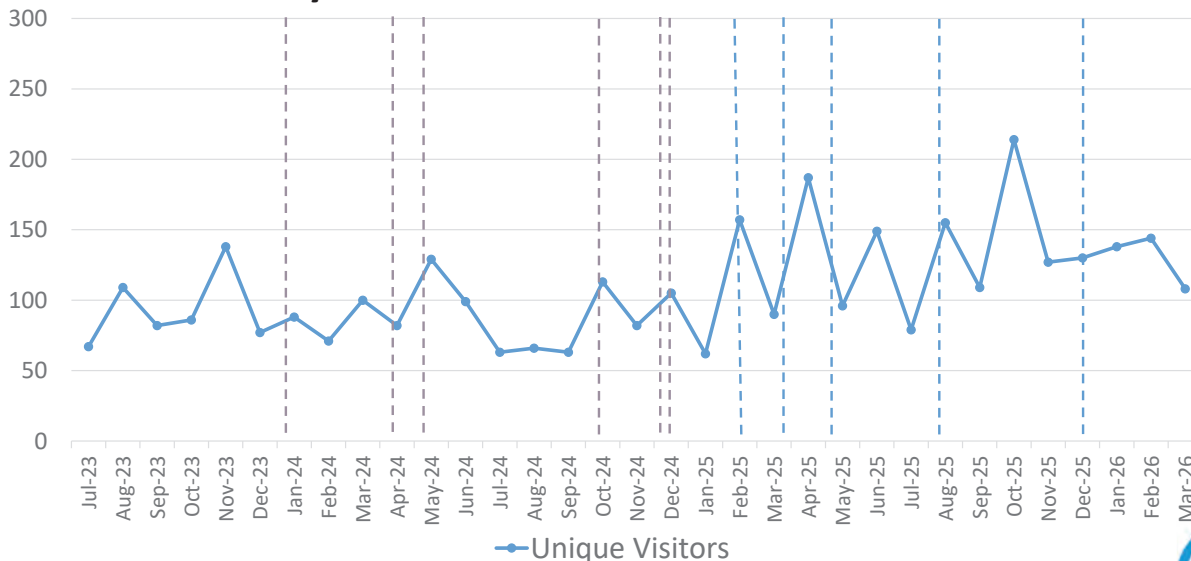
- Upcoming posts:
 - “How Microbes Could Remediate PFAS-Containing Biosolids” (draft in review)
 - Biosolids Benefits on Wildlife and Ecosystem Health (draft in review)
 - Land application site photos
 - Biosolids benefits research summaries:
 - Improve crop productivity
 - Reduce irrigation
 - Agency highlights:
 - San Jose, West County, SFPUC
 - **Let us know if interested!**



*BABC website: <https://www.bayareabiosolids.com/>

1. Communicate the Value of Biosolids

Website Analytics



Posts:

- 2024:**
- Jan 9: Biosolids Product Profile – Dried
 - April 12: BEAM
 - May 13: Biosolids Product Profile – Class A
 - Oct 23: Restoring fire impacted lands
 - Dec 9: PFAS Resources
 - Dec 18: BACWA Biosolids Survey
- 2025:**
- Feb 28: Mine reclamation
 - Mar 31: Agency Highlight: Vallejo FWD
 - May 5: PFAS uptake to oats
 - Aug 12: National PFAS migration to groundwater
 - Dec 19: Biosolids benefits: sustainable fertilizer



1. Communicate the Value of Biosolids

Updates in blue bold.
Key points highlighted.

BACWA/BABC Collaboration

- **Purpose:** How to best use Baywise and BABC website to educate the public about biosolids benefits and safety.
- **Updates:**
 - Civic Edge developing biosolids fundamentals webpage for Baywise.
 - Based on BABC website and reviewed by BABC members.
 - **Zach Kay and Jim Dunbar connected with farmers interested in developing videos on biosolids benefits.**
 - **CASA helping find existing farmer videos and image of lab testing. SFEI helping with PFAS graphic.**
 - BABC writing website posts series on biosolids benefits.
 - BACWA will develop an outreach strategy.

Toilets Aren't Trash Cans!

Did you know that so-called "flushable" wipes aren't flushable at all? Learn what can and can't be flushed.

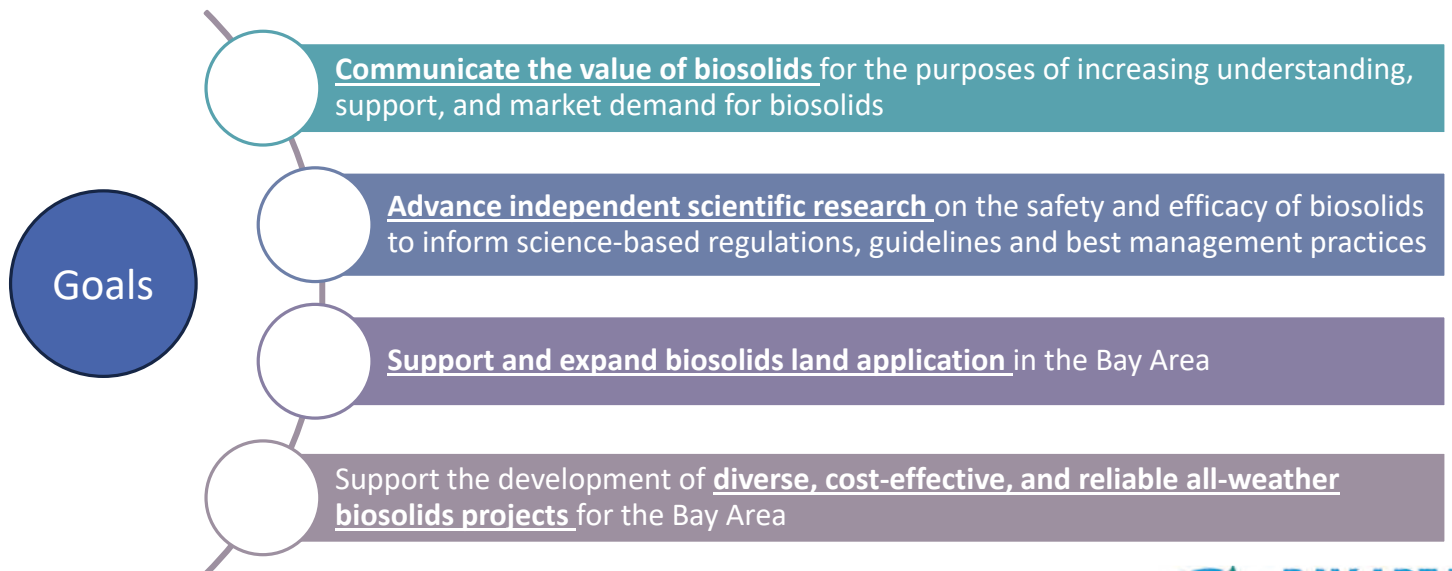
What happens after I flush my Toilet?

When you flush a toilet, wash your dishes, or take a shower, that water (called wastewater) flows through sewers to a wastewater treatment facility where it is cleaned before being discharged into the Bay.

Snippet from Baywise.org, BACWA's public-facing, educational website.



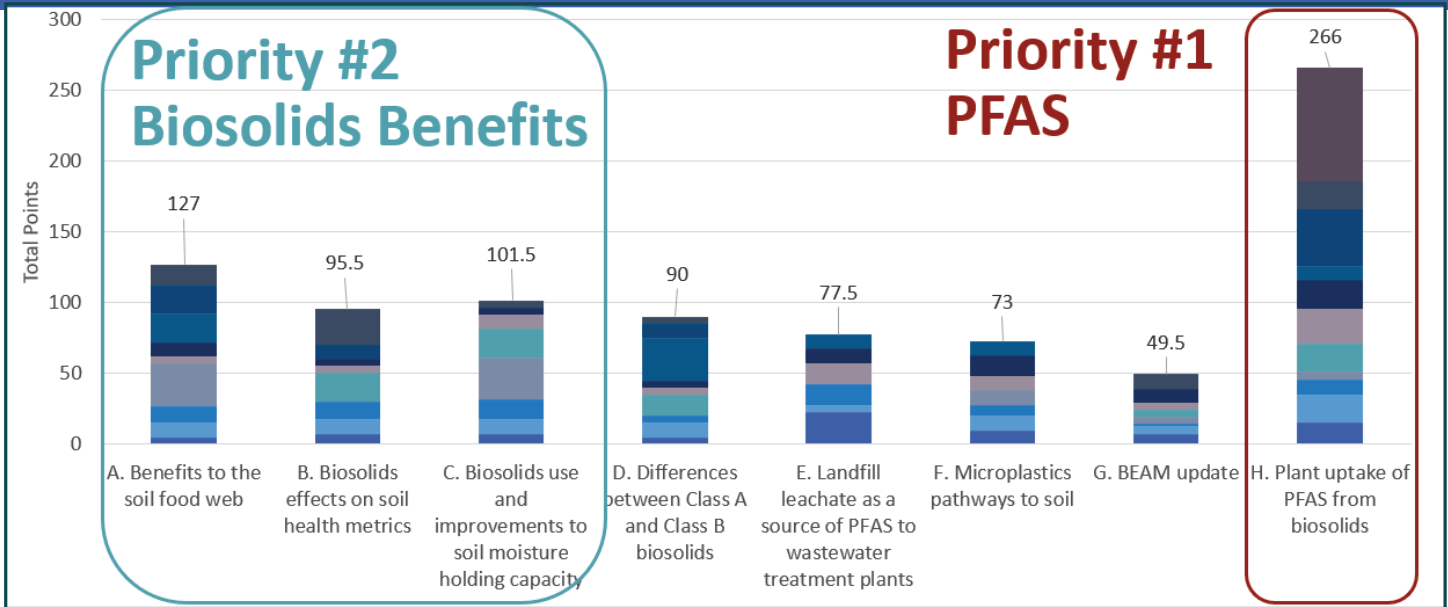
B. Strategic Plan Goals – Progress Updates



2. Advance Scientific Research

Research Priorities

Updates in blue bold.
Key points highlighted.



2. Advance Scientific Research

Updates in blue bold.
Key points highlighted.

Research BABC has or is Supporting

SUPPORTED RESEARCH PROJECTS

The BABC is committed to advancing the future of biosolids through meaningful research and innovation. We actively support and fund projects to stay ahead of evolving regulations and emerging technologies, ensuring high-quality, proactive, and sustainable service for all San Francisco Bay Area residents. Below is a list of active and completed research projects the BABC has funded over the years.

PFAS Removal Through Thermal Drying

- **Contribution:** BABC contributed \$50,000.
- **Team:** Led by Mary Martis, Parsons Corporation and Dr. Linda Lee, Purdue University.
- **Goal:** Investigate operating conditions that maximize PFAS removal and better understand fate of PFAS in a full-scale thermal dryer.
- **Status:** Active. Conducted in 2025 - 2027.

Data-Driven Defense Against Biosolids Land Application Bans

- **Contribution:** BABC contributed \$10,000.
- **Team:** National collaboration of biosolids agencies including Mid-Atlantic Biosolids Association, Northwest Biosolids, and California Association of Sanitation Agencies.

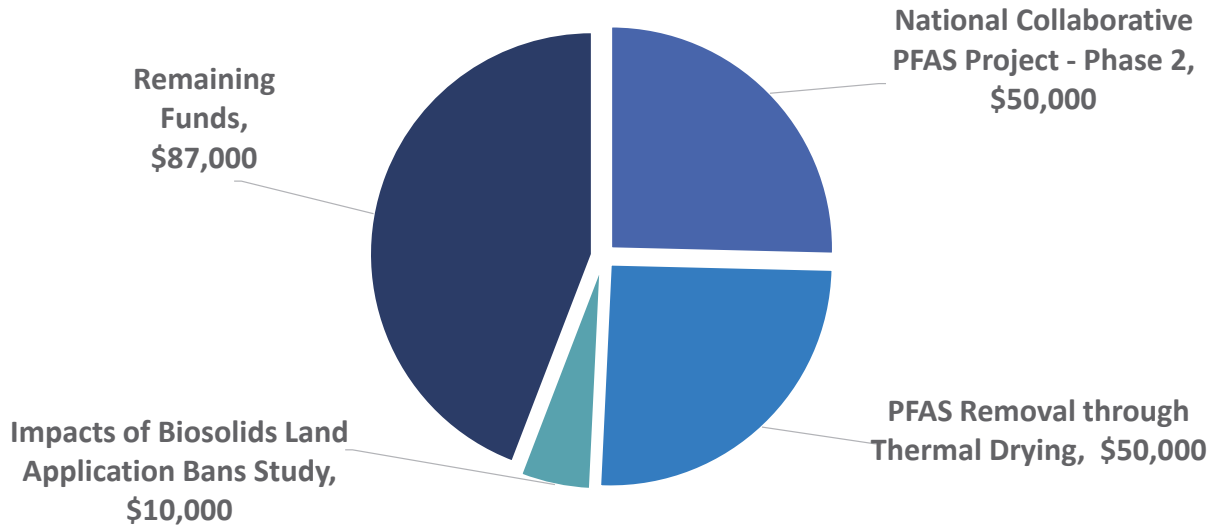
→ **New website section describing all research projects BABC has supported or is supporting!**

Thank you, Research Subgroup!

2. Advance Scientific Research

Active Research BABC is Supporting

Updates in blue bold.
Key points highlighted.



2. Advance Scientific Research

Active Research BABC is Supporting

Updates in blue bold.
Key points highlighted.

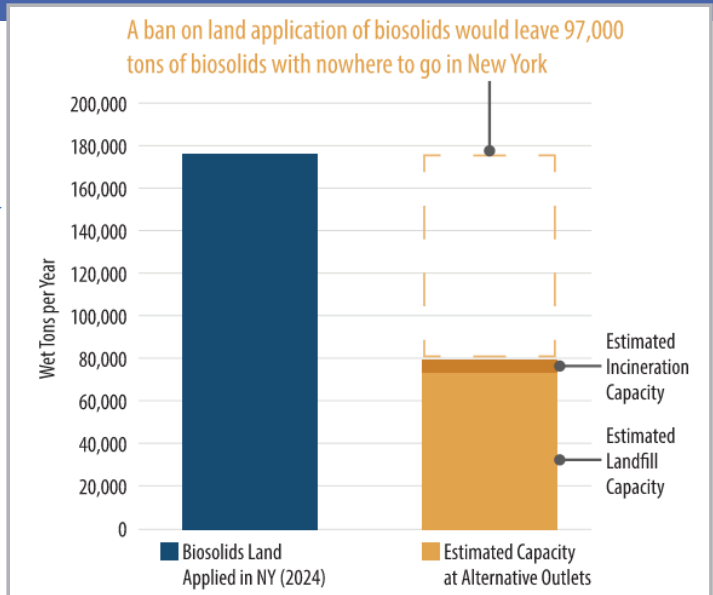


2. Advance Scientific Research

Active Research BABC is Supporting

Updates in blue bold.
Key points highlighted.

- **NY-focused Cost and Capacity report, slides, and legislative handout published**
 - **Provided with meeting materials.**
 - **>~1/2 of biosolids would have nowhere to go**
 - **Landfill disposal would conflict with state's climate and solid waste goals.**
 - **Presented at USEPA meeting at DC Policy Forum and CASA Biosolids meeting.**
- **Next steps:**
 - **Same analysis for other states, including CA.**

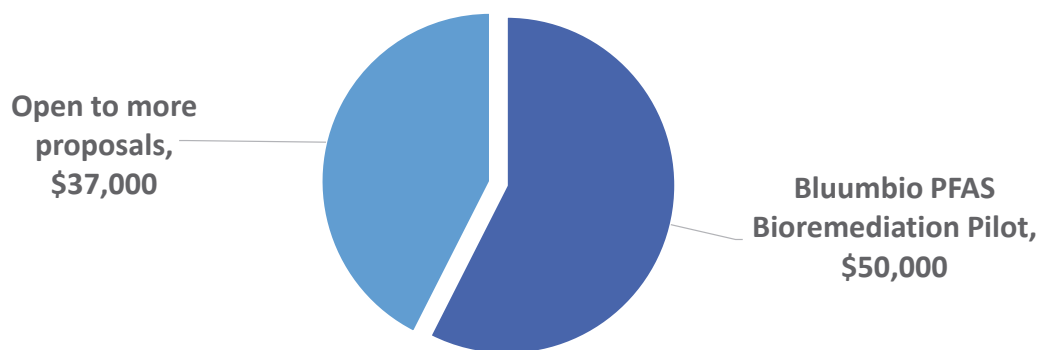


Snippet from legislative handout.

2. Advance Scientific Research

Ideas for Use of Remaining \$87k

Updates in blue bold.
Key points highlighted.



2. Advance Scientific Research

BluumBio Partnership with San Mateo

Updates in blue bold.
Key points highlighted.

Apr 2025 BABC Meeting:

BluumBio technology spotlight.

Aug/Sep 2025:

BluumBio and Vallejo discussed potential field trial.

Not viable due to lack of funds.

Feb/Mar 2026:

Email sent to BABC seeking partner.

Response from San Mateo! Discussed partnership arrangement.

May 2025:

BluumBio provided proposal for \$50k field trial.

Email sent to BABC seeking partner. No responses.

Feb 2026 BABC Meeting:

BluumBio presented again.

BABC switched focus to biosolids trial. BluumBio provided proposal.

This meeting:

Proposal provided with meeting materials.

Discuss whether to fund.

Vote after this meeting.

2. Advance Scientific Research

Other Research We're Tracking

Updates in blue bold.
Key points highlighted.

- Solano County Study on PFAS in Biosolids by Trihydro
 - Final report published Dec 2025, titled *Study of the Fate of PFAS in Biosolids after Land Application*: <https://www.solanocounty.gov/government/resource-management/environmental-health/water-protection-waste-management-technical-services/biosolids-landspreading-program> (see 4th link under “Biosolids Reports”)
 - **Updates on next slide.**
- University of Arizona WEST Center Foam Fractionation Pilot
 - **Research update:** <https://west.arizona.edu/news/pilot-study-evaluates-pfas-treatment-technologies-west-center>
- BACWA/SFEI Phase 3 PFAS Study “PFAS Sources to Solutions”
 - **Test PFAS in wastewater influent and effluent, not biosolids.**
 - **Identify major contributors: residential vs commercial (laundromat, car wash, etc.) to target solutions.**
 - **SFEI to provide a draft sampling plan in May and begin collecting samples this summer.**

2. Advance Scientific Research

Solano County Study by Trihydro

Updates in blue bold.
Key points highlighted.

Dec 2025:
Solano County study on PFAS in biosolids published.

Feb 26:
Several BABC members attended the **meeting** and provided oral comments.

Apr 1:
Draft letter sent to BACWA Board.

Feb BABC Meeting:
BABC members invited to attend the **Solano County Biosolids Stakeholders** meeting.
Decided to submit comment letters "by consensus"

Mar 24:
Draft letter sent to BABC.
No comments or objections received.

April 9:
Comment letter submitted to Solano County; provided with meeting materials..

B. Strategic Plan Goals – Progress Updates

Goals

Communicate the value of biosolids for the purposes of increasing understanding, support, and market demand for biosolids

Advance independent scientific research on the safety and efficacy of biosolids to inform science-based regulations, guidelines and best management practices

Support and expand biosolids land application in the Bay Area

Support the development of diverse, cost-effective, and reliable all-weather biosolids projects for the Bay Area



3. Support and Expand Biosolids Land Application

Support and expand biosolids land application in the Bay Area

- Track regulations, funding programs, and media that could impact biosolids beneficial use in the Bay Area
 - Regulations on PFAS and other emerging contaminants that could limit land application
 - SB 1383 and county ordinances that could limit or expand local land application
 - Regulations and funding programs that could impact anaerobic digestion and biogas use (e.g., SB 1383, potential BAAD/CARB methane emission limits, CARB ZEV requirements, CARB LCFS credits and federal RIN credits and IRA funding)
 - Zero waste, healthy soils, and other climate programs that could incentivize use of biosolids
 - Local media on biosolids safety and benefits

3. Support and Expand Biosolids Land Application

- PFAS (EPA/National)
 - Draft Risk Assessment
 - **No updates.**
 - House Appropriations Bill FY26
 - Stipulates no funds to be used for Draft Risk Assessment.
 - **No updates.**
 - Effluent Guidelines & POTW Study
 - **Still on hold.**
 - PFAS CERCLA Liability Exemption for Passive Receivers
 - **Bill submitted to EPW (Senate Committee on Environment and Public Works). Hearings held with EPW and passive receivers.**
 - **Still on hold.**

Updates in blue bold.
Key points highlighted.



3. Support and Expand Biosolids Land Application

■ PFAS (Other States)

Updates in blue bold.
Key points highlighted.

- New York S5759C/A6192
 - Would place a **5-year moratorium** on biosolids land application.
 - **Opposition letter by NYWEA, MABA, NEBRA:**
<https://maba.memberclicks.net/assets/2025December/Industry%20Biosolids%20Opposition%20Letter%2012-23-25.pdf>
- **Virginia SB 386**
 - **Would ban land application of biosolids with **any trace** of PFAS.**
 - **Passed the House, on to the Senate.**
- Texas
 - 3 anti-biosolids bills.
 - Died.
- Arizona HB 2640
 - Would ban any fertilizer containing any amount of PFAS. Same as last year's.
 - Died.

3. Support and Expand Biosolids Land Application

■ PFAS (California)

Updates in blue bold.
Key points highlighted.

- **AB 1603 (2026) PFAS:**
Department of Pesticide Regulation
 - https://www.leginfo.legislature.ca.gov/faces/bilINavClient.xhtml?bill_id=202520260AB1603
 - **Introduced on Jan 16th by Assemblymember Shultz (D-Bakersfield).**
 - **Would fully ban PFAS use in pesticides by 2035 and require transparency in labeling until then.**
 - **Driven by 2025 Environmental Working Group (EWG) analysis.**

EWG: 2.5 million pounds of PFAS pesticides spread on California farmland annually



By Jared Hayes (EWG), Al Rabine (EWG)

NOVEMBER 18, 2025

Snippet from 2025 EWG report. Full article containing interactive map and link to paper: <https://www.ewg.org/research/ewg-25-million-pounds-toxic-pfas-pesticides-spread-california-farmland-annually>

3. Support and Expand Biosolids Land Application

■ PFAS (Source Control - California)

Updates in blue bold.
Key points highlighted.

- SB 682 (broad PFAS ban)
 - Vetoed by governor.
- SB 454 (PFAS mitigation funds)
 - Vetoed by governor.
- **Department of Toxic Substances Control (DTSC) targeting PFAS in floor maintenance products (i.e., polishes, waxes, etc.)**
 - **DTSC’s plan to list as priority product could lead to a product ban.**
 - **Feb 2026 meeting to discuss report.**
 - **Mar 2026 virtual, public workshop.**
 - **More info:** <https://dtsc.ca.gov/scp/proposed-priority-product-floor-maintenance-products-containing-pfass/>

3. Support and Expand Biosolids Land Application

■ PFAS (Resources)

Updates in blue bold.
Key points highlighted.

- NACWA Biosolids PFAS Legislative Guide:
 - <https://nacwa.realmagnet.land/2025-11-04-biosolids-pfas-legislative-guide>
- Databases of state PFAS actions:
 - ECOS: <https://www.ecos.org/documents/ecos-compendium-of-state-pfas-actions/>
 - Safer States: https://www.saferstates.org/bill-tracker/?toxic_chemicals=PFAS&issue_sectors=Biosolids/Sludge&status=Introduced&year=2025:2025
- Maine statement urging states to weigh options before banning land application:
 - <https://insideepa.com/pfas-news/maine-official-urges-states-weigh-biosolids-disposal-options-ban>
- **Western Lake Superior Sanitary 2-min video PFAS: What Are “Forever Chemicals”:**
 - <https://www.youtube.com/watch?v=JkA6ZbQoe3k&themeRefresh=1>
- **PNA & MABA PFAS 101: Putting Together the Puzzle webinar:**
 - <https://vimeo.com/user45319173/pfas101?share=copy> Password: PFAS101
- **Mar 24-25th Northeast Recycling Council PFAS webinar:**
 - <https://www.nerc.org/the-cycle-of-pfas-and-its-evolving-landscape>

3. Support and Expand Biosolids Land Application

- PFAS (Resources, continued)

Updates in blue bold.
Key points highlighted.

- National Academy of Science (NAS) "PFAS in Agricultural Systems: Guidance for Conservation Programs at USDA" report:

- <https://www.nationalacademies.org/news/guidance-for-federal-conservation-programs-on-pfas-on-agricultural-lands-offered-in-new-report>

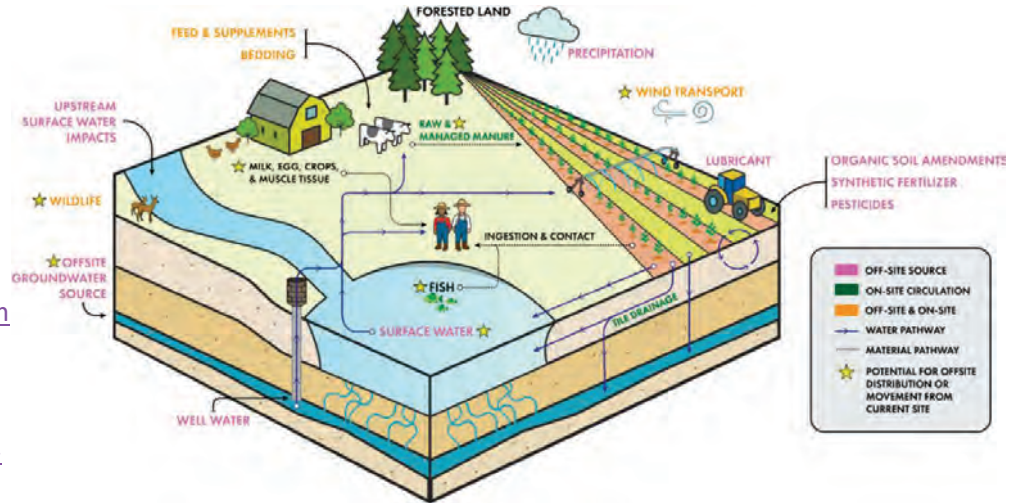


Figure 2-6 Conceptual model of the entry and cycling of PFAS on agricultural land.

3. Support and Expand Biosolids Land Application

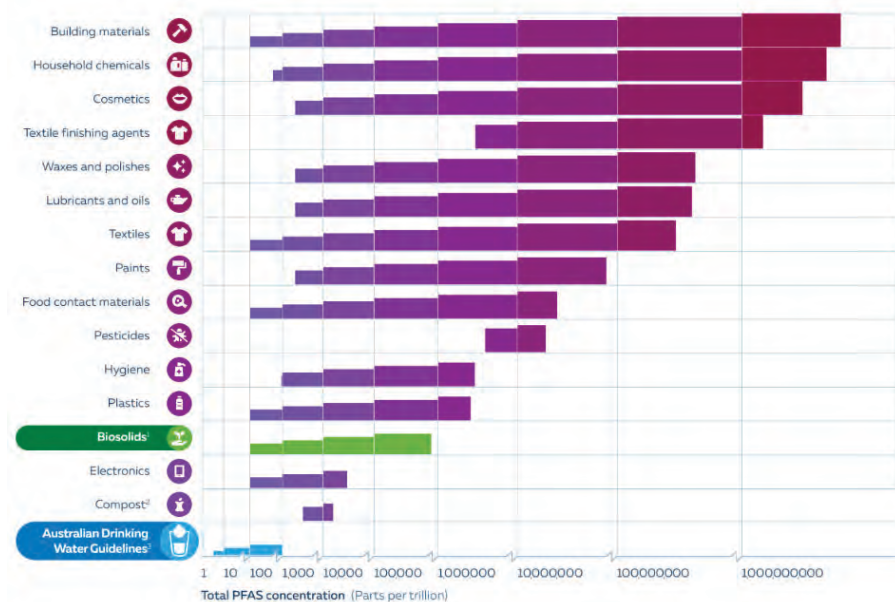
- PFAS (Resources, continued)

Updates in blue bold.
Key points highlighted.

- Water Services Association of Australia PFAS fact sheet:

- <https://www.wsaa.asn.au/Common/Uploaded%20files/library/resource/PFAS%20Resources/WSAA%20Fact%20Sheet%20PFAS%20Drinking%20Water%20Guidelines.pdf>

Relative concentrations of PFAS in consumer products, drinking water guidelines and biosolids



3. Support and Expand Biosolids Land Application

■ CalRecycle SB 1383

- **Advancing slowly. Air district permitting has been a barrier to implementation.**
- AB 643 (2026):
 - Procurement requirement currently limited to compost.
 - **AB 643 would broaden to CDFA certified fertilizers.**
 - **Support letters: CASA, Clean Water SoCal.**
 - **Opposition letters: Environmental non-profits, Waste Management.**
 - **BABC considering submitting a support letter**
 - **Draft sent on April 8th & provided with meeting materials**
 - **Comments/Objections due today at 5 pm.**

Updates in blue bold.
Key points highlighted.

Draft BABC AB 643 Support Letter

RE: AB 643 (Wilson) – Climate Change and Procurement of Diversion Materials
Position: SUPPORT

Dear Chair Wilson,

The Bay Area Biosolids Coalition (BABC) is in support of AB 643 (Wilson). Public agencies across California are responsible for managing the residuals collected and treated through the wastewater treatment process, which are called biosolids. The BABC, a committee of the Bay Area Clean Water Agencies (BACWA), is a collaborative group of public wastewater agencies and industry partners across the San Francisco Bay Area focused on advancing reliable, sustainable, and cost-effective solutions for biosolids management. Our members are committed to maximizing the environmental and agricultural benefits of biosolids while ensuring the availability of diverse, cost-effective, and reliable long-term biosolids reuse and disposal options.

Under SB 1383, biosolids are classified as an organic waste subject to diversion requirements, making reliable and diversified end-use pathways essential for compliance. AB 643 addresses a key need by expanding procurement options for products derived from diverted organic materials. Current procurement limitations constrain market development and reduce long-term reliability for biosolids-derived products. Expanding eligibility would provide our public agencies with additional, viable options to meet procurement requirements while supporting beneficial reuse and locally sourced products.

Supporting AB 643 strengthens biosolids markets, supports agricultural use, and advances California's organic waste diversion and climate goals.

For these reasons, the BABC urges the Assembly Transportation Committee to support AB 643.

Sincerely,

The Executive Committee of the Bay Area Biosolids Coalition

BABCProgramManager@carollo.com

3. Support and Expand Biosolids Land Application

■ CalRecycle Zero Waste Plan

- Zero Waste Plan: <https://calrecycle.ca.gov/zerowasteplan/>
- **CASA commented advocating for wastewater sector/biosolids beneficial use as a critical component:** https://casaweb.org/wp-content/uploads/2025/11/FINAL_CASA_Comments_CalRecycle-ZeroWastePlan-2025-10-176.pdf

Updates in blue bold.
Key points highlighted.

■ CARB Advanced Clean Fleets

- CASA advocating for fleet vehicles to be fueled by biomethane/RNG for resilience in unstable grid.
- **April 2nd amendments decrease fleet flexibility: require contracted vehicles comply with ACF and (likely unintentionally) remove access to low NOx vehicles run on RNG.**
- **Comments due April 17th. CASA is commenting and collaborating with coalitions; the more comments the better.**

■ CARB Natural and Working Lands GHG Model

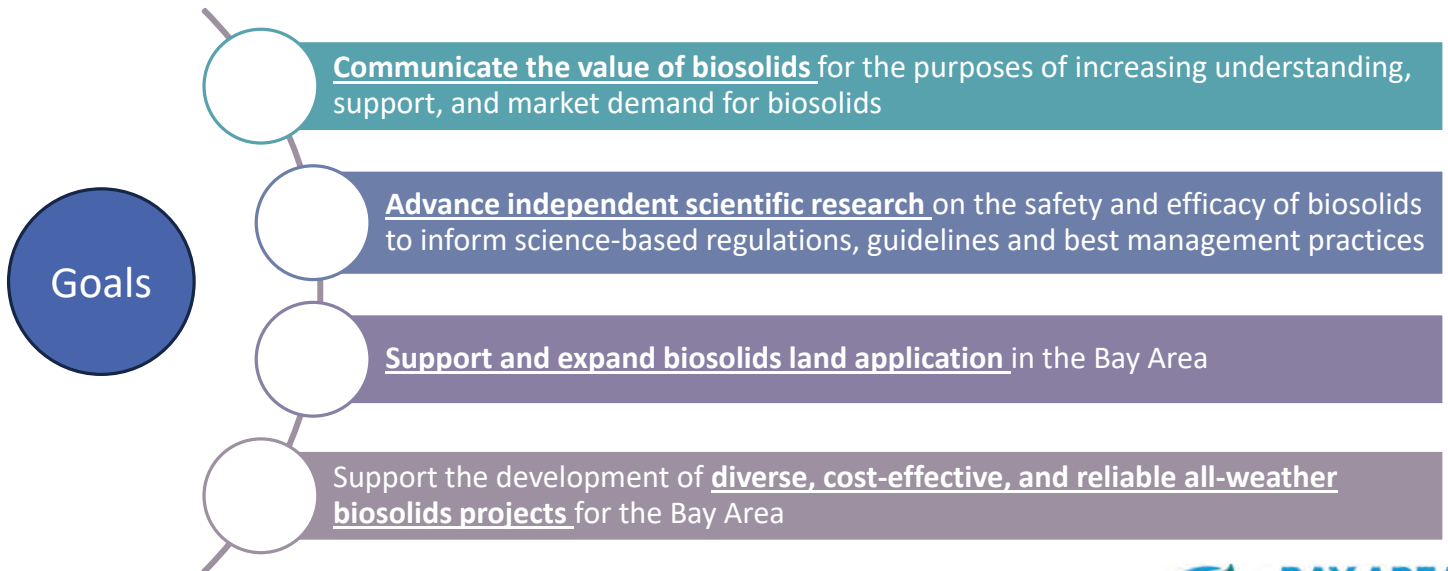
- Released 250-page document estimating carbon sequestration. CASA drafting response.
- CARB wants more info on biosolids benefits beyond carbon sequestration.

3. Support and Expand Biosolids Land Application

Updates in blue bold.
Key points highlighted.

- **CalEPA and CNRA “Institutionalizing Cutting the Green Tape Improvements” Report**
 - <https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Green-Tape/CGT-Secretarial-Memo-20260227.pdf>
- **AB 2447 (2026) Water: Nitrogen Pollution Reduction Act**
 - May lead to nitrogen limits on fertilizers and irrigation water, which may hinder water reuse and biosolids use.
 - Stated focus is on higher nitrogen content fertilizers and not biosolids.
 - https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202520260AB2447
- **San Luis Obispo County biosolids land application ban**
 - Extended until 2029.
 - <https://www.newtimeslo.com/slo-county-ponders-the-future-of-using-treated-sewage-on-land-after-moratorium-extension/>

B. Strategic Plan Goals – Progress Updates



4. Support Biosolids Projects

Silicon Valley Clean Water

Updates in blue bold.
Key points highlighted.

Presentation on SVCW Biodryer and Pyrolysis Facilities by Dario Prezezi, Bioforcetech

C. Recent Events

Updates in blue bold.
Key points highlighted.

- Feb 10th WEF Federal Policy Wrap-Up webcast
- Feb 11th CASA BACEN (Biosolids, Air, Climate, Energy, and Nutrient) webinar.
 - **Presentations:** <https://casaweb.org/resources/speaker-presentations/>
- Feb 13th National Academy of Science (NAS) “PFAS in Agricultural Systems: Guidance for Conservation Programs at USDA” report release webinar.
 - **Recording:** <https://www.nationalacademies.org/projects/DELS-BANR-24-03/event/46333>
- Feb 24th DC Policy Forum
 - **CASA, many wastewater agencies, and other stakeholders met with EPA.**
 - **Many agreed on need for federal interim guidance or a statement that Part 503 is still protective of public health and the environment.**
- Feb 26th Screening of “Unless Something Goes Terribly Wrong” at UC Berkeley
- Mar 11-12th California Bioresources Alliance Symposium, UC Davis
- Apr 7-10th CWEA Annual Conference and Expo



C. Upcoming Events

Updates in blue bold.
Key points highlighted.

- BABC Meetings (2nd Monday every other month):
 - Jun 8th at 10 am to 12 pm (virtual)
 - **Aug 10th at 10 am to 12 pm (in-person/virtual hybrid; host TBD)**
- Other Events:
 - April 14-15th NACWA Water Policy Fly-in in DC <https://www.nacwa.org/docs/default-source/conferences-events/2026-conferences---events/national-water-policy-fly-in/26nwpf-published-agenda.pdf>
 - April 16th CWEA SF Bay Section Plant Tour at DSRSD <https://www.cwea.org/all-events/?sec=San%20Francisco%20Bay>
 - May 11-14th WEF Residuals, Biosolids and Treatment Technology Conference in Kansas City, MO <https://www.wef.org/residualsbiosolids/>
 - May 15th BACWA Annual Members Meeting in Berkeley, CA <https://bacwa.org/bacwa-annual-members-meeting-2026/>
 - Jul 14-16th MABA Summer Symposium in Albany, NY https://www.memberleap.com/members/evr/reg_main.php?evid=49070311&orgcode=MABA
 - Aug 4-7th CASA Annual Conference in Napa, CA <https://casaevents.memberclicks.net/annual-conference>
 - BACWA events calendar: <https://bacwa.org/events/month/2025-08/>
 - CASA events calendar: <https://casaweb.org/https-casa-events-meetings/>



D. February Action Items

Updates in blue bold.
Key points highlighted.

- Website Subgroup** – update website; coordinate with BACWA on communications strategy
 - Contact farmers to gauge interest in creating videos about biosolids benefits** → Thank you, Jim and Zach!
- Research Subgroup** – support research on biosolids benefits and safety
 - ~~Finalize and post summary of BABC funded/supported research to date~~
 - Continue coordination with BluumBio about potential research partnership
 - Explore potential research opportunities, as they arise.
- Steering Committee / Program Management (PM) Team** – other efforts
 - ~~Meet and decide on procedure for submission of comment letters and legislative support letters~~
 - ~~Submit comments following the Feb 26th Solano County meeting on Trihydro PFAS research report~~
 - ~~Submit AB 643 support letter~~



D. April Action Items

Updates in blue bold.
Key points highlighted.

- Website Subgroup** – update website; coordinate with BACWA on communications strategy
 - Continue supporting development of Baywise biosolids fundamentals website**
- Research Subgroup** – support research on biosolids benefits and safety
 - Continue coordination with BluumBio about potential research partnership
 - Explore potential research opportunities, as they arise.
 - Send email requesting voting on funding BluumBio research** (PM Team)
- Steering committee / PM Team** – other efforts



D. February Action Items

Updates in blue bold.
Key points highlighted.

- Member agencies** –
 - Contact PM Team or Christine Polo if interested in:
 - Serving as co-chair or in the website or research subgroups. → Thank you, Joanne Yee!
 - Being featured in agency highlight on the website.
 - ~~Attending the Feb 26th Solano County meeting to discuss biosolids PFAS study~~
 - Serving as host site for BluumBio's research on microbial removal of PFAS from biosolids** → Thank you, San Mateo!

Contacts:

- PM Team: babcprogrammanager@carollo.com
- Christine Polo: cpolo@carollo.com



D. April Action Items

Updates in blue bold.
Key points highlighted.

☐ Member agencies –

- ☐ Contact PM Team or Christine Polo if interested in:
 - ☐ Serving as co-chair or in the website or research subgroups.
 - ☐ Being featured in agency highlight on the website.
 - ☐ **Hosting the Aug 10th BABC meeting.**
- ☐ **Vote on funding BluumBio research** (original member agencies)

Contacts:

- PM Team: babcprogrammanager@carollo.com
- Christine Polo: cpolo@carollo.com



E. Adjourn for All... Thank You!

12-1 pm: Lunch

Thanks to Brown &
Caldwell!

1-2 pm: Tour

Thanks to Silicon Valley
Clean Water!





Executive Director's Report to the Board March 2026

PRACTICE GOOD GOVERNANCE (STRATEGY PLAN GOAL 5)

EXECUTIVE BOARD MEETING AND SUPPORT

- Worked with BACWA staff to plan and manage 3/20 Executive Board meeting
- Conducted the Executive Board agenda review with the BACWA Chair
- Continued to track all action items to completion
- Developed planned and held joint meeting with R2, including EBMUD tour (3/4)

FINANCE:

- Reviewed the monthly BACWA financial reports
- Reviewed and approved invoices
- Worked with AED to update draft FY27 budget and develop draft work plan

COMMITTEES:

- Worked with BABC Executive Committee on procedures for comment letters and support for legislation

ADMINISTRATION:

- Planned for and conducted monthly BACWA staff meeting to prepare for the Board Meeting and to coordinate and prioritize activities.
- Signed off on invoices, reviewed correspondence, prepared for upcoming Board meetings, responded to inquiries on BACWA efforts, oversaw and participated in updating of web page and provided general direction to BACWA staff.
- Developed and responded to numerous emails and phone calls as part of the conduct of BACWA business on a day-to-day basis.
- Began review of BACWA Policies and Procedures with AED
- Met with attorneys to discuss staffing model alternatives, and reached out to HR service providers

EXEMPLIFY SERVICE AND RESPONSIVENESS TO MEMBERS AND PUBLIC (STRATEGIC PLAN GOAL 4)

COMMUNICATIONS

- Met several times with Civic Edge to develop elements of FY27 Work Plan
- Met with Exploratorium Staff and SFEI to plan for Climate Week and Bay Day exhibits
- Worked with RPM in the preparation of the monthly BACWA Bulletin.

PROJECTS OF SPECIAL BENEFIT:

BACC (BAY AREA CHEMICAL CONSORTIUM)

- Worked with administrator on issues that came up during bid process
- Addressed bid protests
- Shared information on bid prices with BACWA community

BACWWE (BAY AREA COALITION FOR WATER/WASTEWATER EDUCATION)

- No update

FOSTER COLLABORATION AND RELATIONSHIP BUILDING WITH REGULATORS AND OTHER STAKEHOLDERS (STRATEGIC PLAN GOAL 2)

COLLABORATIONS:

- Attended CASA Regulatory Workgroup Strategy Session in Orange County (3/2-3/3)
- Attended monthly CASA RWG Biosolids Committee meetings
- Attended SFEI Implementation Committee meeting (3/12)
- Attended CASA State Leg Committee (3/13)
- Met with Green Science Policy Institute to provide update on QACs (3/27)
- Participated in NACWA State/Regional Association call (3/21)
- Served on WRF NBS research planning summit panel

REGULATORY:

- Attended CASA Air Toxics meetings
- Participated in CASA Pooled Emissions SC meetings
- Worked with Air District to finalize Engineering Program Manager Pilot MOU
- Attended Air District Permitting Efficiency Task Force meeting (3/17)
- Met with statewide POTW reps to plan engagement on PFAS strategy for wastewater
- Worked with SFEI meeting to develop contract for PFAS Phase 3 study
- Met with R2 staff to discuss engagement on regulatory issues

ASC (AQUATIC SCIENCE CENTER)

- Reviewed materials sent via email by ASC interim ED
- Met with ASC/SFEI Executive Committee several times to address ED recruitment

ADVOCATE FOR REGULATION BASED ON SCIENCE (STRATEGIC PLAN GOAL 1)

NUTRIENTS:

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

- Attended monthly NMS PSC meetings
- Attended HAB expert meeting (3/11)
- Attended NMS NTW meeting (3/26)
- Attended Office Hours with HDR and members to respond to questions about Compliance Milestone RFI

- Reviewed draft GAR and compliance schedule milestones report
- Discussed CEQA support MOU with R2
- Held interviews with CEQA consultants and made recommendation to Water Board
- Provided feedback to CEQA consultants post-interview
- Met with Water Board staff to discuss compliance schedule basin plan amendment
- Worked with The Freshwater Trust to kick off efforts to establish trading framework
- Met with Water Board to discuss scientific needs to support trading (3/27)
- Participated in CASA OAH Subcommittee meetings
- Planned coastal nutrient engagement events with CASA
- Participated in SCCWRP Management Scenarios Steering Committee meeting (2/4)
- Met with UCB Post-docs to discuss innovative technology

RMP:

- Reviewed RMP materials

CALIFORNIA WATER MONITORING COUNCIL

- Attended CWQMC meeting (2/26)

PURSUE REGIONAL, MULTI-BENEFIT SOLUTIONS TO ENVIRONMENTAL CHALLENGES (STRATEGIC PLAN GOAL 3)

MULTIBENEFIT PROGRAM ADVOCACY

- Followed up with AQPI representatives on next steps of joining BACWA as a project of special benefit
- Attended Transforming Shorelines Collaborative meeting on engaging electeds (3/5)

REGIONAL SOLUTIONS

- Held many group and individual agency meetings to assemble coalition proposal on Nutrient Management to EPA SF Bay Program Office, submitted proposal on 3/2
- Collaborated with SFEP to assemble Coalition proposal to EPA
- Attended EPA Q&A session to discuss elements of SF Bay Program Office NOFO
- Met with SFEP to discuss grant matching strategy



Board Calendar

May thru August 2026

DATE

May 15, 2026
David Brower Center

June 5, 2026
SFPUC

July 2026
No meeting

August 21, 2026
TBD

AGENDA ITEMS

BACWA Annual Meeting

Approvals & Authorizations:

- FY27 Contract Approvals
- Resolution and MOU with UCSD for AQPI
- Board Chair and Vice Chair for FY27

Policy / Strategic Discussion:

- Science program update to Water Board
- Regional planning study update for Water Board

Operational:

- Pardee Planning
- Board Meeting Dates Jan thru June 2027

Approvals & Authorizations:

- NMS payment #1
- FY26 Year End Treasurer's Report

Policy / Strategic Discussion:

-
-

Operational:

- Review of FY26 close
- Plan for Pardee



BACWA ACTION ITEMS

Number	Item	Task	Responsibility	Deadline	Status
Action Items from March 20 2026 BACWA Executive Board Meeting					
			resp.	deadline	status
2026.03.30	GAR Update	BACWA RPM to finalize and submit 2026 Group Annual Report for the Nutrients Watershed Permit by April 1.	ED	4/1/2026	complete
2026.03.31	Nutrient Infoshare - 1st meeting	BACWA ED to determine speaker availability for a Nutrient Infoshare workshop focused on optimization, then schedule the meeting.	ED	4/15/2026	complete
2026.03.32	Strategic Plan Evaluation/ED Performance Plan	BACWA ED to circulate a strategic plan evaluation to the Executive Board. Board Chair to schedule a special closed session meeting to conduct the BACWA ED performance evaluation.	ED	4/1/2026	complete
2026.03.33	Second draft of FY27 Budget, and draft workplan	BACWA ED to propose revisions to BACWA's Contracting Policy to allow great flexibility for consultant contract amendments.	ED	4/16/2026	complete
2026.03.34	May 15 Annual Meeting Preliminary Program	BACWA ED to invite member agency speakers for resiliency and communications sessions.	ED	4/16/2026	complete
Action Items Remaining from Previous BACWA Executive Board Meetings					
2026.08.06	AI Infoshare	BACWA ED would like a list of BACWA agencies working on AI and will start to work on infoshare event.	ED	WIP	
2026.02.23	Discussion: BACWA support for nutrient infoshare	BACWA ED to ask for infoshare ideas from agencies	ED	4/18/2026	WIP
2026.02.24	Discussion: Update on Compliance Schedule Basin Plan Amendment CEQA consultant	BACWA to select consultant and develop SOW and MOU, and bring contract for approval in March 2026.	ED	4/18/2026	WIP
2026.02.26	Discussion: Air District Engineering Program Manager beta period MOU	Before signing MOU for next phase, work with Air District and BACWA principals to facilitate ethics and conflict-of-interest r	ED	6/30/2026	WIP

- FY26: 31 of 34 Action items are complete
- FY25: 49 of 49 Action items are complete
- FY24: 43 of 43 Action Items are complete
- FY23: 58 of 58 Action Items are complete
- FY22: 51 of 52 Action items are completed
- FY21: 51 of 51 Action items completed
- FY20: 70 of 70 Action Items completed
- FY19: 110 of 110 action Items completed
- FY18: 66 of 66 Action Items completed
- FY17: 90 of 90 Action Items completed



Regulatory Program Manager's Report to the Executive Board

March 2026

BACWA BULLETIN: Completed and circulated March Bulletin.

AFFORDABILITY: Assisted with hosting duties for March 30th webinar explaining the State Water Board's 2026 Voluntary Wastewater Rates Questionnaire.

CECs: Prepared comment letter on PFAS in Floor Products, circulated for review, and submitted to DTSC; participated in PFAS strategy session with statewide coalition of wastewater agencies; continued to compile information about PFAS in landfills; coordinated with SFEI regarding schedule for Phase 3 of PFAS Regional Study.

NUTRIENTS: Reviewed draft deliverables from HDR for Group Annual Report, circulated drafts to BACWA members, and provided comments to HDR; prepared final Group Annual Report for submittal to Regional Water Board; participated in NMS Technical Workgroup meeting; conducted interviews of consulting firms to provide CEQA support on Basin Plan Amendment; coordinated with Regional Water Board regarding Basin Plan Amendment and CEQA support; coordinated with The Freshwater Trust on trading study.

COMMITTEE SUPPORT:

Asset Management – Finalized meeting notes from February workshop.

BAPPG – Participated in pesticides committee meeting; assisted with review of public outreach materials for spring 2026 pet pesticides campaign; compiled dioxin data for April meeting.

Collection Systems – Assisted with logistics preparations for May meeting; circulated request for attendance certificates.

Laboratory – Assisted with preparations for April committee meeting at Sunnyvale.

Permits – Prepared for April committee meeting.

Recycled Water – Submitted abstract to WaterReuse CA Conference; attended WaterReuse reg-leg committee meeting; reviewed LAFCO final report on Alameda County water recycling.

Executive Board – Provided regulatory updates at March Executive Board meeting; submitted comment letter on Tribal and Subsistence Fishing Beneficial Uses Basin Plan Amendment; coordinated internally regarding Annual Members Meeting.

ADMINISTRATIVE: Website and email list administration; staff meeting

BACWA MEETINGS ATTENDED:

BACWA Executive Board + Regional
Water Board Meeting at EBMUD (3/4)
Executive Board (3/20)
BAPPG Pesticides Committee (3/26)

EXTERNAL EVENTS ATTENDED:

CASA Regulatory Workgroup Strategic Planning (3/2 – 3/3)
CASA ACE Workgroup (3/12)
PFAS Strategy session with Summit Partners (3/18)
CASA Regulatory Workgroups (3/19)
Nutrient Management Strategy Technical Workgroup (3/26)
WaterReuse CA Reg-Leg Committee (3/27)
CASA – State Water Board Webinar on Rates Survey (3/30)
CASA – State Water Board Sanitary Sewer Systems General
Order Meeting (3/30)