



EAST BAY DISCHARGERS AUTHORITY
2651 Grant Avenue
San Lorenzo, CA 94580-1841
(510) 278-5910
FAX (510) 278-6547

A Joint Powers Public Agency

NOTICE: Pursuant to the Governor's Executive Orders N-25-20 and N-29-20, the Commission meeting scheduled below will be accessible via Zoom video conferencing. Members of the public may participate in the meeting through the Zoom platform or phone number below.

- Zoom link: <https://us02web.zoom.us/j/84820316288>
- Telephone dial-in: 1(669) 900-6833, meeting ID #848 2031 6288

COMMISSION MEETING AGENDA

Thursday, September 23, 2021

9:30 A.M.

EAST BAY DISCHARGERS AUTHORITY
2651 Grant Avenue
San Lorenzo, CA 94580

1. Call to Order
2. ~~Pledge of Allegiance~~ (Deferred Due to Remote Meeting)
3. Roll Call
4. Public Forum

CONSENT CALENDAR

MOTION

5. Commission Meeting Minutes of July 15, 2021
6. List of Disbursements for July and August 2021 – See Item FM4
7. Preliminary Treasurer's Report for July and August 2021 – See Item FM5

REGULAR CALENDAR

INFORMATION

8. General Manager's Report
(The General Manager will report on EBDA issues.)

INFORMATION

9. Report from the Managers Advisory Committee
(The General Manager will report on the meeting.)

INFORMATION

10. Hayward Area Shoreline Protection Agency (HASPA) Presentation
(The Commission will receive a presentation by HASPA Chair Elisa Marquez, Hayward City Council Member; Erik Pearson, Hayward Environmental Services Manager; and Taylor Richardson; Hayward Assistant Planner.)

INFORMATION

11. Report from the Regulatory Affairs Committee
(The General Manager will report on the meeting.)

- INFORMATION 12. Report from the Financial Management Committee**
(The General Manager will report on the meeting.)
- MOTION 13. Motion to Rescind Additional Discretionary Payment of \$65,861 to Reduce the Unfunded Accrued Liability of the Authority's Pension Plan – See Item FM8**
(The Commission will consider the motion.)
- INFORMATION 14. Report from the Operations & Maintenance Committee**
(The Operations & Maintenance and General Managers will report on the meeting.)
- RESOLUTION 15. Resolution to Contribute \$1000 per year for Five Years to the California Association of Sanitation Agencies Education Foundation toward the Creation of a Bruce Wolfe Memorial Scholarship**
(The Commission will consider the Resolution.)
- INFORMATION 16. Items from the Commission and Staff**
(The Commission and staff may address items of general interest.)
- 17. Adjournment**

Any member of the public may address the Commission at the commencement of the meeting on any matter within the jurisdiction of the Commission. This should not relate to any item on the agenda. It is the policy of the Authority that each person addressing the Commission limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Commission on an agenda item should do so at the time the item is considered. It is the policy of the Authority that oral comments be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available in the Boardroom and are to be completed prior to speaking.

In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, please contact the Administrative Assistant at the EBDA office at (510) 278-5910 or juanita@ebda.org. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>.

**The next Commission meeting will be held
Thursday, October 21, 2021 at 9:30 a.m.**

GLOSSARY OF ACRONYMS

ACWA	Association of California Water Agencies	DSRSD	Dublin San Ramon Services District
AQPI	Advanced Quantitative Precipitation Information	DTSC	Department of Toxic Substances Control
AMP	Asset Management Plan	EBDA	East Bay Dischargers Authority
ANPRM	Advanced Notice of Proposed Rulemaking	EBRPD	East Bay Regional Park District
BAAQMD	Bay Area Air Quality Management District	EIS/EIR	Environmental Impact Statement/Report
BACC	Bay Area Chemical Consortium	EPA	United States Environmental Protection Agency
BACWA	Bay Area Clean Water Agencies	FOG	Fats, Oils and Grease
BPA	Basin Plan Amendment	GASB	Government Accounting Standards Board
BCDC	Bay Conservation and Development Commission	HEPS	Hayward Effluent Pump Station
BOD	Biochemical Oxygen Demand	JPA	Joint Powers Agreement
CARB	California Air Resources Board	LAVWMA	Livermore-Amador Valley Water Management Agency
CASA	California Association of Sanitation Agencies	LOCC	League of California Cities
CBOD	Carbonaceous Biochemical Oxygen Demand	MAC	Managers Advisory Committee
CDFA	CA Department of Food & Agriculture	MCC	Motor Control Center
CEC	Compound of Emerging Concern	MCL	Maximum Contaminant Level
CEQA	California Environmental Quality Act	MDF	Marina Dechlorination Facility
CFR	Code of Federal Regulations	MG	Million Gallons
CMMS	Computerized Maintenance Management System	MGD	Million Gallons per Day
COH	City of Hayward	MMP	Mandatory Minimum Penalty
CPUC	California Public Utilities Commission	MOU	Memorandum of Understanding
CSL	City of San Leandro	MSS	Mixed Sea Salt
CTR	California Toxics Rule	N	Nitrogen
CVCWA	Central Valley Clean Water Association	NACWA	National Association of Clean Water Agencies
CVSAN	Castro Valley Sanitary District	NBS	Nature-Based Solutions
CWA	Clean Water Act	NGO	Non-Governmental Organization
CWEA	CA Water Environment Association	NOX	Nitrogen Oxides
DO	Dissolved Oxygen	NPDES	National Pollutant Discharge Elimination System
DPR	Department of Pesticide Regulation	NPS	Non-Point Source

GLOSSARY OF ACRONYMS

O&M	Operations & Maintenance	SSO	Sanitary Sewer Overflow
OLEPS	Oro Loma Effluent Pump Station	SWRCB	State Water Resources Control Board
OLSD	Oro Loma Sanitary District	TDS	Total Dissolved Solids
OMB	Office of Management and Budget	TMDL	Total Maximum Daily Load
P	Phosphorous	TN	Total Nitrogen
PAHs	Polynuclear Aromatic Hydrocarbons	TP	Total Phosphorus
PCBs	Polychlorinated Biphenyls	TRC	Total Residual Chlorine
PLC	Programmable Logic Controller	TSO	Time Schedule Order
PFAS	Per and Polyfluoroalkyl Substances	TSS	Total Suspended Solids
POTW	Publicly Owned Treatment Works	UEPS	Union Effluent Pump Station
PPCPs	Pharmaceutical and Personal Care Products	USD	Union Sanitary District
QA/QC	Quality Assurance / Quality Control	UV	Ultraviolet Treatment
Region IX	Western Region of EPA (CA, AZ, NV & HI)	VFD	Variable Frequency Drive
ReNUWit	Re-Inventing the Nation's Urban Water Infrastructure Engineering Research Center	VOCs	Volatile Organic Compounds
RFP	Request For Proposals	WAS	Waste Activated Sludge
RFQ	Request For Qualifications	WDR	Waste Discharge Requirements
RMP	Regional Monitoring Program	WEF	Water Environment Federation
RO	Reverse Osmosis	WET	Whole Effluent Toxicity or Waste Extraction Test
RWB	Regional Water Board	WIN	Water Infrastructure Network
RWQCB	Regional Water Quality Control Board	WLA	Waste Load Allocation (point sources)
SBS	Sodium Bisulfite	WPCF	Water Pollution Control Facility
SCADA	Supervisory Control and Data Acquisition	WQBEL	Water Quality Based Effluent Limitation
SCAP	Southern California Alliance of POTWs	WQS	Water Quality Standards
SEP	Supplementary Environmental Project	WRDA	Water Resource Development Act
SFEI	San Francisco Estuary Institute	WRF	Water Research Foundation
SLEPS	San Leandro Effluent Pump Station	WWTP	Wastewater Treatment Plant
SRF	State Revolving Fund	WWWIFA	Water and Wastewater Infrastructure Financing Agency
SSMP	Sewer System Management Plan		

CONSENT CALENDAR

Consent calendar items are typically routine in nature and are considered for approval by the Commission with a single action. The Commission may remove items from the Consent Calendar for discussion. Items on the Consent Calendar are deemed to have been read by title. Members of the public who wish to comment on Consent Calendar items may do so during Public Forum.

Item No. 5 Commission Meeting Minutes of July 15, 2021

Item No. 6 List of Disbursements for July and August 2021 – See Item FM4

Item No. 7 Preliminary Treasurer's Report for July and August 2021 – See Item FM5

Recommendation

Approve Consent Calendar

ITEM NO. 5 COMMISSION MEETING MINUTES OF JULY 15, 2021

1. Call to Order

Chair Cutter called the telephonic meeting to order pursuant to the Governor's Executive Order N-25-20 at 9:31 A.M. on Thursday, July 15, 2021. Dial-in information for the meeting was provided in the agenda for public attendees.

2. Pledge of Allegiance – Deferred

3. Roll Call

Present:	Ralph Johnson	Castro Valley Sanitary District
	Angela Andrews	City of Hayward
	Pauline Russo Cutter	City of San Leandro
	Jennifer Toy	Union Sanitary District
	Rita Duncan	Oro Loma Sanitary District

Absent: None

Attendees:	Jacqueline Zipkin	East Bay Dischargers Authority
	Howard Cin	East Bay Dischargers Authority
	Juanita Villasenor	East Bay Dischargers Authority
	Alex Mog	Legal Counsel
	Alex Ameri	City of Hayward
	David Donovan	City of Hayward
	Justin Jenson	City of San Leandro
	Paul Eldredge	Union Sanitary District
	Anjali Lathi	Union Sanitary District
	Angela Stiegler	U.C. Berkeley
	Ian Wren	Consultant
	Mark Lindley	Environmental Science Associates

4. Public Forum

No members of the public requested to address the Commission.

C O N S E N T C A L E N D A R

5. Commission Meeting Minutes of June 17, 2021

6. List of Disbursements for June 2021

7. Preliminary Treasurer's Report for June 2021

Commissioner Johnson moved to approve the consent calendar. The motion was seconded by Commissioner Toy and carried unanimously 5-0, by roll call vote.

Ayes:	Commissioners Johnson, Andrews, Toy, Duncan, Chair Cutter
Noes:	None
Absent:	None
Abstain:	None

REGULAR CALENDAR

8. General Manager's Report

The General Manager (GM) provided a reminder that the Commission will be on hiatus in August and that the September 23 Commission meeting is scheduled to be in-person. Staff will be requesting the Commissioners provide proof of full vaccination prior to resuming in-person meetings.

9. Report from the Managers Advisory Committee (MAC)

The GM deferred to the specific agenda items.

10. Presentation on Nature-based Solutions

Presentations were given by Angela Stiegler of U.C. Berkeley, Consultant Ian Wren, and the EBDA General Manager on Nature-based Solutions studies underway at Member Agencies' sites.

Chair Cutter expressed interest in having access to the slides for use in the City of San Leandro Council's consideration of their Climate Action Plan.

11. Report from the Regulatory Affairs Committee

The GM reported on the Regulatory Affairs Committee, which met on July 12, 2021. The GM provided an update on PFAS and reviewed the Memorandum of Agreement with the Army Corps of Engineers.

12. Motion Authorizing the General Manager to Execute the Restated and Amended Memorandum of Agreement Between the San Francisco Bay Restoration Authority, Funding Entity/Entities, and the United States Army Corps of Engineers, San Francisco District

Commissioner Duncan moved to approve the item. The motion was seconded by Commissioner Johnson and carried unanimously 5-0, by roll call vote.

Ayes: Commissioners Johnson, Andrews, Toy, Duncan, Chair Cutter
Noes: None
Absent: None
Abstain: None

13. Report from the Financial Management Committee

The GM reported on the Financial Management Committee, which met on July 12, 2021, and discussed the draft Emergency Reserves Policy and pension funding. The Committee supports the framework of the draft Emergency Reserves Policy but directed staff to reassess the recommended reserve amount. The Committee recommended approval of the additional discretionary payment to the Authority's pension plan.

14. Motion Authorizing the General Manager to Make an Additional Discretionary Payment of \$65,861 to Reduce the Unfunded Accrued Liability of the Authority's

Pension Plan

Commissioner Andrews moved to approve the item. The motion was seconded by Commissioner Cutter and carried unanimously 5-0, by roll call vote.

Ayes: Commissioners Johnson, Andrews, Toy, Duncan, Chair Cutter
Noes: None
Absent: None
Abstain: None

15. Report from the Operations and Maintenance Committee

The O&M Manager reviewed the proposed agreements for Beecher Engineering, Inc and Currie Engineers. The O&M Committee recommended approval of both agreements.

16. Motion Authorizing the General Manager to Execute a Professional Services Agreement with Beecher Engineering, Inc. in the Amount of \$75,000 for Electrical Engineering Services in Fiscal Years 2021/2022, 2022/2023, and 2023/2024

Commissioner Toy moved to approve the item. The motion was seconded by Commissioner Duncan and carried unanimously 5-0, by roll call vote.

Ayes: Commissioners Johnson, Andrews, Toy, Duncan, Chair Cutter
Noes: None
Absent: None
Abstain: None

17. Motion Authorizing the General Manager to Execute a Professional Services Agreement with Currie Engineers, Inc. in the Amount of \$75,000 for Project and Construction Management Services in Fiscal Years 2021/2022, 2022/2023, and 2023/2024

Commissioner Cutter moved to approve the item. The motion was seconded by Commissioner Toy and carried unanimously 5-0, by roll call vote.

Ayes: Commissioners Johnson, Andrews, Toy, Duncan, Chair Cutter
Noes: None
Absent: None
Abstain: None

18. Bruce Wolfe Memorial

The Commission directed staff to proceed with the establishment of the Bruce Wolfe Memorial Scholarship for women on a STEM and/or water/wastewater career path. The Commission supports making a total contribution of \$6,000 to the following programs: Project satHERate will be given a one-time award of \$1,000, and the CASA Education Foundation will be awarded \$1,000 per year for five years. The EBDA Personnel Committee will recommend a representative to serve on the CASA Education Foundation's selection committee.

19. Items from Commission and Staff

Commissioner Andrews announced a Keep Hayward Clean and Green event will take place at Giuliani Plaza on Saturday, July 24 between the hours of 8:30 a.m. – 12:00 p.m.

Commissioner Duncan has been nominated to the CASA Board at the upcoming meeting in San Diego. Chair Cutter expressed EBDA's support.

Chair Cutter reminded everyone that no meetings will take place in August. Additionally, the September Commission and Committee meetings will take place the week of September 20.

20. Adjournment

Chair Cutter adjourned the meeting at 11:16 A.M.

ITEM NO. 8 GENERAL MANAGER'S REPORT

The General Manager will discuss items of interest to EBDA.

ITEM NO. 9 REPORT FROM THE MANAGERS ADVISORY COMMITTEE

**MANAGERS ADVISORY COMMITTEE
AGENDA**

Thursday, September 9, 2021

1:30 P.M.

Via Zoom

- 1. Brine Project Updates and Discussion**
 - Corrosion Protection Options – Brown & Caldwell
 - Risk Assessment for Submerged Sections
 - Pipeline Ownership/Franchise Rights
 - CEQA Update
 - Union City and Schedule Updates
- 2. NPDES Permit Reissuance Application - EOA**
- 3. Disinfection Master Plan Update**
- 4. Draft Administrative Appeals Process**
- 5. Draft Reserve Policy – Objectives and Amounts**
- 6. EBDA Commission Package**
 - Regulatory
 - Finance
 - O&M
- 7. COVID Response and Recovery**
- 8. EBDA Managers Information Sharing**

ITEM NO. 10 HASPA PRESENTATION

Recommendation

For the Committee's information only; no action is required.

Background

The Hayward Area Shoreline Planning Agency (HASPA) was established in 1970. HASPA is a joint powers agency (JPA) of the Hayward Area Recreation and Park District, East Bay Regional Park District, and the City of Hayward. The primary purpose of HASPA is to coordinate agency planning activities and adopt and carry out policies for the improvement of the Hayward Shoreline for future generations.

Under a grant from Caltrans, HASPA recently completed a [Shoreline Adaptation Master Plan](#) for the area between Highway 92 and Bockman Canal. EBDA staff worked closely with the HASPA team, and the preferred alternative includes projects EBDA and its members are leading. Specifically, the Master Plan includes a horizontal levee south of Bockman Canal consistent with the First Mile project, as well as nature-based features at the oxidation ponds in Hayward (see figure below). It also includes an interim levee around the Oro Loma/Castro Valley Wastewater Treatment Plant that is now in the planning phase.

Discussion

As discussed with the Commission in July 2021, HASPA is looking to expand its membership to other key shoreline stakeholders to facilitate implementation of the Master Plan. On August 13, 2021, EBDA received the attached letter inviting the Authority to join the HASPA JPA. Staff understands that similar invitations were extended to Oro Loma Sanitary District, Alameda County Flood Control and Water Conservation District, and Alameda County Mosquito Abatement District. HASPA's goal is to have a new, expanded JPA in place by July 2022.

Representatives from HASPA will present additional details of their proposal to the EBDA Commission at its September 2021 meeting.



August, 13 2021

Sent via Electronic Mail:
pcutter@sanleandro.org

Pauline Cutter, Chair of the Commission
East Bay Dischargers Authority
2651 Grant Avenue
San Lorenzo, CA 94580

**SUBJECT: Invitation to Join the Hayward Area Shoreline Planning Agency (HASPA)
Joint Powers Authority**

Dear Chair Cutter,

The Hayward Area Shoreline Planning Agency (HASPA) Board of Trustees would like to invite the East Bay Dischargers Authority to join the HASPA Joint Powers Authority. HASPA, established in 1970, is responsible for coordinating planning activities related to sea level rise to ensure the Hayward Regional Shoreline's natural, recreational, and man-made resources are protected for future generations. HASPA is looking to expand its member agencies to support implementation of the projects outlined in the recently adopted Shoreline Adaptation Master Plan. To learn more about the Master Plan, please visit <https://www.hayward-ca.gov/shoreline-master-plan>.

By joining HASPA, East Bay Dischargers Authority would benefit from collaboration on the implementation of projects that protect shared assets along the shoreline. HASPA currently provides protection to critical infrastructure, maintains public access to the Shoreline and enhances ecological assets. HASPA agencies also have direct access to the technical support, events and regional planning networks. HASPA participates in regional planning activities such as BayAdapt, and BayCAN.

Member agencies have one Board member serve on the HASPA Board of Trustees, make an annual contribution of \$12,000 and have at least one staff member serve on HASPA's Technical Advisory Committee (TAC). The HASPA Board of Trustees meets quarterly and the TAC, including staff from the member agencies, meets monthly.

We would appreciate the opportunity to present to your Board this September or October to further explain the benefits of HASPA membership. We would appreciate hearing from you before September 3, 2021 to schedule a presentation. If you have any questions, please contact Taylor Richard at 510-583-5340 or taylor.richard@hayward-ca.gov. The implementation of Hayward Shoreline Adaptation Master Plan is a major endeavor and with your agency's collaboration, HASPA will be better positioned to secure investments, create a resilient shoreline and reduce risk to our community.

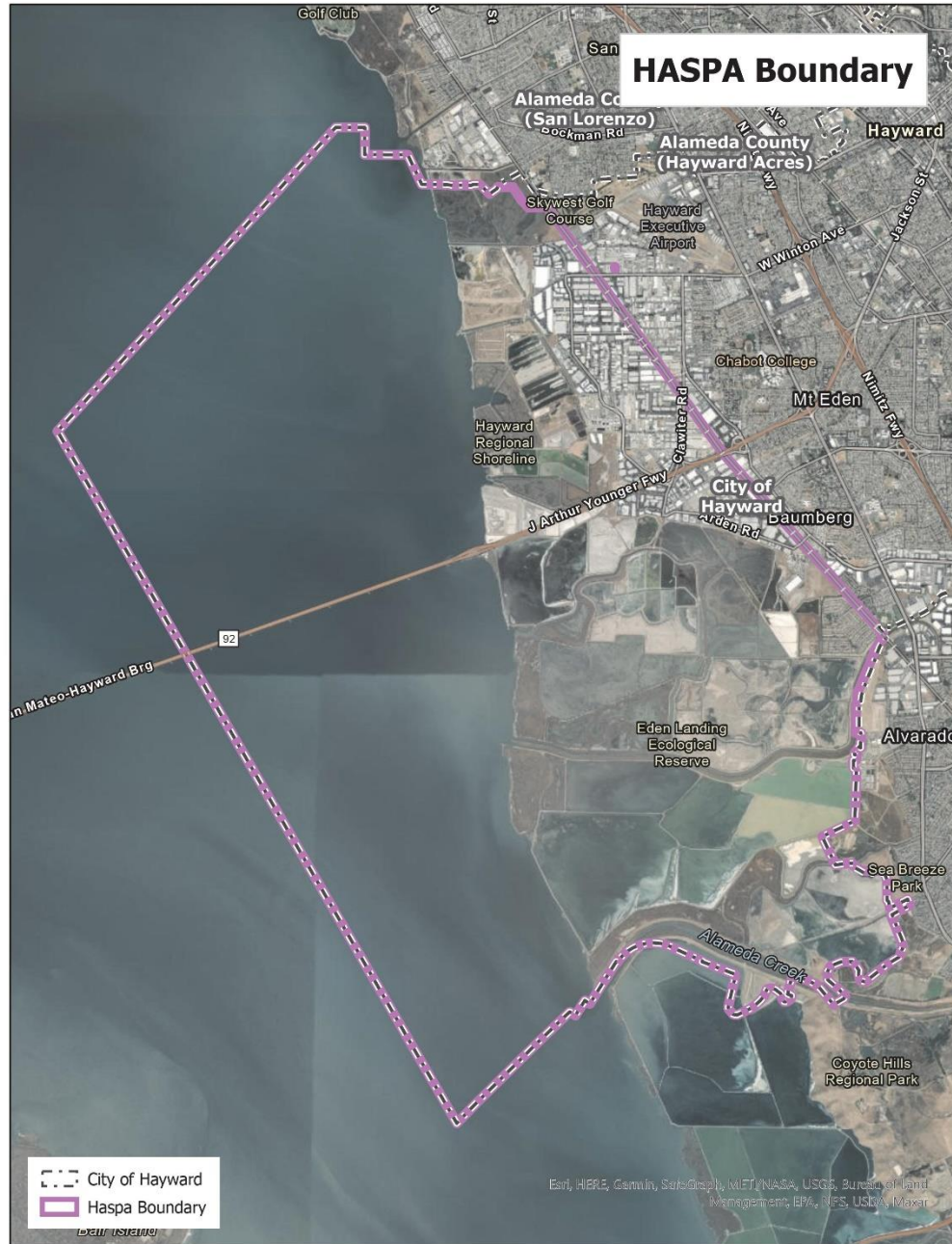
Sincerely,

HASPA Chair Elisa Marquez
City of Hayward

Trustee Dennis Waespi
East Bay Regional Parks District

Trustee Rick Hatcher
Hayward Area Recreation
and Park District

Attachment 1: HASPA Jurisdictional Map



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A Joint Powers Public Agency

NOTICE: Pursuant to the Governor's Executive Orders N-25-20 and N-29-20, the Regulatory Affairs Committee meeting scheduled below will be accessible via Zoom video conferencing. Members of the public may participate in the meeting through the Zoom platform or phone number below.

- Zoom link: <https://us02web.zoom.us/j/86260440932>
- Telephone dial-in: 1(669) 900-6833, meeting ID #862 6044 0932

ITEM NO. 11

REGULATORY AFFAIRS COMMITTEE AGENDA

Monday, September 20, 2021

8:30 A.M.

**East Bay Dischargers Authority
2651 Grant Avenue, San Lorenzo, CA 94580**

Committee Members: Cutter (Chair); Johnson

- RA1. Call to Order**
- RA2. Roll Call**
- RA3. Public Forum**
- RA4. EBDA NPDES Compliance – See Item OM4**
(The Committee will review NPDES Permit compliance data.)
- RA5. Reporting Checklist**
(The Committee will review a checklist of completed regulatory reporting items.)
- RA6. BACWA Key Regulatory Issue Summary**
(The Committee will review the Bay Area Clean Water Agencies' issue summary.)
- RA7. Chlorine Residual Blanket Permit Amendment**
(The Committee will receive an update on this change to the Authority's permit limits.)
- RA8. PFAS Update**
(The Committee will receive an update on a regional study of Per- and Poly-fluoroalkyl Substances.)
- RA9. Climate Adaptation Updates**
(The Committee will receive an update on regional climate adaptation efforts and state funding.)

RA10. Adjournment

Any member of the public may address the Committee at the commencement of the meeting on any matter within the jurisdiction of the Committee. This should not relate to any item on the agenda. Each person addressing the Committee should limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Committee on any agenda item should do so at the time the item is considered. Oral comments should be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available and are to be completed prior to speaking.

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**The next Regulatory Affairs Committee meeting is scheduled on
Monday, November 15, 2021 at 8:30 a.m.**

ITEM NO. RA5 REPORTING CHECKLIST

Recommendation

For the Committee's information only; no action is required.

Background

Authority staff maintains a checklist of all regulatory reporting and related tasks to ensure timely and complete reporting.

Discussion

The following checklist is extracted from a complete list of routine regulatory activities addressed throughout the year. The following items were completed during the period of May 1 through August 31, 2021; there are no outstanding activities.

<i>Regulatory Authority</i>	<i>Required Action</i>	<i>Occurrence</i>	<i>Date</i>
			<i>Submitted</i>
Bay Area Air Quality Management District	Complete <i>Data Update</i> form Plant #14531	Annual	5/7/2021
Bay Area Air Quality Management District	Renew <i>Permit to Operate</i> Plant #14531	Annual	5/7/2021
ADP Business Payroll	Print Payroll Quarter-End Tax Returns	Quarterly	5/24/2021
CalPERS	Post Commission approved Compensation Plan to EBDA website	Annual	6/1/2021
State Compensation Insurance Fund	Workers' Compensation Insurance Renewal	Annual	6/2/2021
County of Alameda, Clerk/Recorder	Statement of Facts/Roster of Public Agencies Filing (FY changes to Commission)	Annual	6/29/2021
Secretary of State	Statement of Facts/Roster of Public Agencies Filing (FY changes to Commission)	Annual	6/30/2021
State Compensation Insurance Fund	Payroll Report, Semi-Annual Jan 01 - Jul 01	Semi-Annual	7/10/2021
Regional Monitoring Program % SFEI	Participant Fee Quarterly Installment (See: annual invoice)	Quarterly	7/15/2021
Bay Area Air Quality Management District	Pay renewal fee for <i>Permit to Operate</i> Plant #14531	Annual	7/15/2021
Department of Toxic Substances Control	EPA ID Number (CAL000072039) Verification Questionnaire and Manifest Fees Assessment	Annual	7/20/2021
State of California	Annual posting of Reimbursements Report to EBDA Website (GC §53065.5)	Annual	7/21/2021
State Water Resources Control Board	NPDES Quarterly Report (Apr-Jun)	Quarterly	7/30/2021
State Water Resources Control Board	NPDES Semi-Annual Report (Jan-Jun)	Semi-Annual	7/30/2021
CalPERS	SSA Annual Information Request	Annual	8/3/2021
ADP Business Payroll	Print Payroll Quarter-End Tax Returns	Quarterly	8/10/2021
Regional Water Quality Control Board	Recycled Water monthly reports	Monthly	8/23/2021
State Water Resources Control Board	NPDES monthly reports	Monthly	8/30/2021
Oro Loma Sanitary District	Lease Fees	Annual	8/31/2021

ITEM NO. RA6 BACWA KEY REGULATORY ISSUE SUMMARY

Recommendation

For the Committee's information only; no action is required.

Background

Periodically, BACWA's Regulatory Program Manager updates a Key Regulatory Issues Summary that contains succinct information on regulatory issues of interest to Bay Area wastewater agencies. The Summary matrix contains background, challenges and recent updates, next steps for BACWA, and links to key resources and documents.

Discussion

The most recent issue summary is attached. Previous versions are available at <https://bacwa.org/regulatory-issues-summaries/>.



KEY REGULATORY ISSUE SUMMARY

Updated July 9, 2021

Action items for member agencies are in **bold**

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Nutrients in San Francisco Bay	1
SF Bay Nutrient Watershed Permit	2
Chlorine Residual Compliance	3
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Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
NUTRIENTS IN SAN FRANCISCO BAY			
<ul style="list-style-type: none"> San Francisco Bay receives some of the highest nitrogen loads among estuaries worldwide, yet has not historically experienced the water quality problems typical of other nutrient-enriched estuaries. It is not known whether this level of nitrogen loading, which will continue to increase in proportion to human population increase, is sustainable over the long term. Because of the complexity of the science behind nutrient impacts in the SF Bay, stakeholders in the region are participating in a steering committee to prioritize scientific studies and ensure that all science to be used for policy decisions is conducted under one umbrella. 	<ul style="list-style-type: none"> For FY22, BACWA is contributing \$2.2M to fund scientific research needed to make management decisions for the third Watershed Permit. This level of funding is required by the second Watershed Permit. The focus of current scientific efforts is improving model representation of biogeochemistry, light attenuation, dissolved oxygen, and Harmful Algal Bloom dynamics. Field and lab observations are supporting these improvements. The science team is developing an Assessment Framework for deep subtidal habitats and Lower South Bay sloughs. The science team is assessing the geographic zone of influence of each plant's discharge, which will aid in developing management approaches. 	<ul style="list-style-type: none"> BACWA and the Regional Water Board are discussing the possibility of an extension of the current permit term to increase scientific certainty prior to making management decisions. Continue to participate in steering committee, Nutrient Management Strategy, Nutrient Technical Workgroup, and planning subcommittee meetings, and provide funding for scientific studies. Continue to engage with Nutrient Technical Team and BACWA's Nutrient Management Strategy technical consultant, Mike Connor, to provide review of work products and charge questions for the science team. 	<p>BACWA Nutrients Page: https://bacwa.org/nutrients/</p> <p>SFEI Nutrient Science Plan Documents: http://sfbaynutrients.sfei.org/books/reports-and-work-products</p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
SF BAY NUTRIENT WATERSHED PERMIT			
<ul style="list-style-type: none"> • The 1st Nutrient Watershed Permit was adopted in 2014, and required a regional study on Nutrient Treatment by Optimization and Upgrades, completed in 2018. • The 2nd Nutrient Watershed Permit was adopted in 2019. It includes: <ul style="list-style-type: none"> ◦ Continued individual POTW nutrient monitoring and reporting; ◦ Continued group annual reporting; ◦ Significantly increased funding for science; ◦ Regional assessment of the feasibility and cost for reducing nutrients through nature-based systems and recycled water; ◦ Establishing current performance for TIN, and “load targets” for nutrient loads based on 2014 to 2017 load data plus a 15% buffer for growth and variability ◦ Recognition of “early actors” who are planning projects that will substantially decrease TIN loads. • Through the nutrient surcharge levied on permittees, BACWA funds compliance with the following provisions on behalf of its members: <ul style="list-style-type: none"> ◦ Group Annual Reporting ◦ Regional Studies on Nature-Based Systems and Recycled Water ◦ Support of scientific studies through the Regional Monitoring Program (RMP) at \$2.2M per year through the five-year permit term. 	<ul style="list-style-type: none"> • Studies related to Recycled Water and Nature-Based Systems are underway, and will be completed by the due date of July 1, 2023. • Each year by February 1, BACWA submits a Group Annual Report on behalf of its members. The report summarizes trends in nutrient concentrations and loading for each agency, and for all the agencies as a whole. The annual reporting period in the 2nd Watershed Permit is based on a water year (October 1 – September 30th). • Each year by February 1, BACWA and SFEI submit an annual science implementation plan and schedule update, as required by the 2nd Watershed Permit. • Agencies with plans to substantially reduce nutrients are recognized in the Fact Sheet of the 2nd watershed permit. 	<ul style="list-style-type: none"> • Agencies continue to report nutrient monitoring to the Water Boards through CIWQS and to BACWA via the data sheet. • Agencies with plans to implement projects that will substantially reduce nutrient loads should keep the Regional Water Board and BACWA apprised, to get credit for “early actions”. • Work with HDR and SFEI as needed to collect information for Nutrient Removal by Recycled Water Evaluation and the Nature-Based Systems study. Outreach to individual agencies is being conducted in several waves in 2021. • Continue working with HDR to develop compliance feasibility information about the use of subembayment vs. individual agency load limits in the 3rd Watershed Permit. • Continue discussions about development of a potential nutrient trading framework. • BACWA has reconvened the Nutrient Strategy Team (NST) that will negotiate with the Regional Water Board to develop the tenets for the 3rd Watershed Permit. 	<p>2nd Nutrient Watershed Permit: https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2019/May/6_ssr.pdf</p> <p>Special Studies of Recycled Water and Nature-Based Systems: https://bacwa.org/document-category/2nd-watershed-permit-studies/</p> <p>Optimization/Upgrade Study Final Report: https://bacwa.org/wp-content/uploads/2018/06/BACWA_Final_Nutrient_Reduction_Report.pdf</p> <p>Optimization/Upgrade Report Brochure: https://bacwa.org/wp-content/uploads/2019/03/BACWA-2019-Nutrient-Brochure_Final_20190301.pdf</p> <p>BACWA Group Nutrient Annual Reports: http://bacwa.org/document-category/nutrient-annual-reports/</p>

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CHLORINE RESIDUAL COMPLIANCE			
<ul style="list-style-type: none"> • The Basin Plan chlorine residual effluent limit is 0.0 mg/L. Chlorine residual is the most frequent parameter for violations for Region 2 POTWs. Because there are 24 hourly reporting events each day, the “opportunities” for violations are enormous. However, the actual violation rates are infinitesimal (~0.001%). • Agencies are overdosing their effluent with the dechlorination agent, sodium bisulfite, to prevent chlorine violations, a practice which costs more than \$1 million regionally each year. 	<ul style="list-style-type: none"> • The Regional Water Board worked with BACWA to develop a Basin Plan Amendment (BPA) modifying the effluent limit for chlorine residual. • The draft BPA includes: <ul style="list-style-type: none"> ○ A 0.013 mg/L Water Quality Objective in marine and estuarine waters, which will be applied as a WQBEL in permits and calculated incorporating dilution. The WQBEL will be applied as a one-hour average. ○ A Minimum Level (ML), or Reporting Limit of 0.05 mg/L for online continuous monitoring system. • The BPA was adopted by the Regional Water Board on November 18, 2020, and was approved by the State Water Board on May 18, 2021. It will not go into effect until it is approved by the Office of Administrative Law and EPA, which is expected by late 2021. • The Regional Water Board is planning to issue a blanket permit amendment to implement the Basin Plan Amendment within each individual NPDES permit. An administrative draft of this blanket permit amendment was circulated for review in June 2021. 	<ul style="list-style-type: none"> • Review the Tentative Order (public review draft) of a regional blanket permit amendment that will implement the new BPA for all Region 2 dischargers at one time. This approach will accelerate implementation compared to a slower, permit-by-permit rollout. • The Tentative Order review period is expected to occur in summer 2021. The earliest possible effective date for a blanket permit amendment is November 1, 2021. 	<p>Background and Status information about BPA on Regional Water Board site: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa.html</p> <p>Final BPA adopted by Regional Water Board https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa/2_Chlorine_Resolution_R2-2020-0031.pdf</p> <p>Final BPA Staff Report: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa/3_Chlorine_BPA_Final_staff_report.pdf</p> <p>BACWA Comment Letter on draft BPA: https://bacwa.org/document/chlorine-basin-plan-amendment-bacwa-comment-letter/</p>

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PESTICIDES			
<ul style="list-style-type: none"> Pesticides are regulated via FIFRA, and not the Clean Water Act. POTWs do not have the authority to regulate pesticide use in their service area, but may be responsible for pesticide impacts to their treatment processes or to surface water. Through BAPPG, BACWA aims to proactively support a scientific and regulatory advocacy program so that pesticides will not impact POTWs' primary functions of collecting and treating wastewater, recycling water, and managing biosolids, or impact receiving waters via the "down the drain" route. 	<ul style="list-style-type: none"> EPA reviews all registered pesticides at least once every 15 years. Each review allows opportunity for public comment. BACWA continues to fund consultant support to write comment letters advocating for the consideration of POTW and surface water issues during EPA's risk assessments as part of reregistration. Funding for pesticide regulatory outreach in FY22 is \$60K. The Regional Water Board leverages BACWA's efforts to provide their own comment letters to EPA. With chronic toxicity limits likely in the near term, POTWs will be in compliance jeopardy if pesticides contribute to toxicity. Baywise.org has launched webpages on flea and tick control messaging to pet owners and veterinarians. 	<ul style="list-style-type: none"> Continue to comment on pesticide re-registrations. Work with veterinary associations on messaging with respect to flea and tick control alternatives. Continue to develop summary of EPA actions on pesticides. Look for opportunities to work with CalDPR on pesticides research. Work with other regional associations, such as the California Stormwater Quality Association (CASQA), to collaborate on funding pesticide regulatory outreach. 	<p>BACWA Pesticides Regulatory Update and Call to action: https://bacwa.org/wp-content/uploads/2016/02/BACWA-Pesticide-Regulatory-Update-2016-1.pdf</p> <p>BACWA Pesticide Regulatory Support Page: https://bacwa.org/document-category/pesticides-regulatory-support/</p> <p>Baywise flea and tick pages: https://baywise.org/</p>
ENTEROCOCCUS LIMITS			
<ul style="list-style-type: none"> In August 2018, the State Water Board adopted new statewide bacteria water quality objectives and implementation options to protect recreational users from the effects of pathogens in California water bodies. The objectives and implementation options are a new part 3 of the Water Quality Control Plan for the SIP and Ocean Plan. The Objectives were approved by the Office of Administrative Law in February 2019 and by EPA in March 2019 	<ul style="list-style-type: none"> The new enterococcus objective for saline waters is a six-week rolling geometric mean of enterococci not to exceed 30 cfu/100 mL, calculated weekly, with a statistical threshold value of 110 cfu/100 mL, not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner. The Regional Water Board has been granting dilution credit upon request when implementing the new objectives in NPDES permits. 	<ul style="list-style-type: none"> BACWA worked with SFEI and funded a study of background enterococcus levels in the SF Bay. Surface water samples were collected in July (dry season) and January (wet season) throughout the Bay. Samples from all stations were below the 30 CFU/100 mL WQO, justifying allowing for dilution credits when implementing the WQO. The study was completed and submitted in June 2020. 	<p>SWB Bacterial Objective page: https://www.waterboards.ca.gov/bacterialobjectives/</p> <p>SFEI Final Report on Enterococci in the SF Bay: https://bacwa.org/wp-content/uploads/2020/08/BACWA-2020-Enterococci-report_final.pdf</p>

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MERCURY AND PCBs			
<ul style="list-style-type: none"> • The Mercury & PCB Watershed Permit was reissued in November 2017 with an effective date of January 1, 2018. The Watershed Permit is based on the TMDLs for each of these pollutants. • Aggregate PCB and mercury loads have been well below waste load allocations through 2019, the last year for which data have been compiled. • Method 1668C for measuring PCB congeners has not been promulgated by EPA. Data collected during the first permit term varied widely depending on which laboratory performed the analyses. BACWA Laboratory Committee developed an updated PCB Protocol to reduce variability between laboratories running Method 1668C, effective January 1, 2014. Data have been more consistent since the distribution of this document. • In 2017, EPA adopted federal pretreatment program rules requiring dental offices to install dental amalgam separators. The rule is intended to reduce dental office discharge of mercury. The compliance date was July 14, 2020. 	<ul style="list-style-type: none"> • The 2017 watershed permit reduces monitoring frequencies via Method 1668C for agencies with design flows of less than 50 MGD. It also incorporates the laboratory guidance from the BACWA PCB Protocol. • The permit requires continued risk reduction program funding. For FY22, BACWA granted an extension to an ongoing contract worth \$12,500 to the California Indian Environmental Alliance to conduct risk reduction activities related to fish consumption. A previous contract for APA Family Support Services is now complete. • In 2016, monitoring requirements for PCBs were modified for some agencies per Order No. R2-2016-0008, <i>Alternate Monitoring and Reporting Requirements for Municipal Wastewater Dischargers for the Purpose of Adding Support to the San Francisco Bay RMP</i>. Additional changes to mercury monitoring are expected when this 2016 Order is replaced, which is expected to occur in FY22. • As part of the 2021 Triennial Review of the Basin Plan, the Regional Water Board is considering whether to designate three new beneficial uses: Tribal Tradition and Culture (CUL), Tribal Subsistence Fishing (T-SUB) and Subsistence Fishing (SUB). Water bodies designated these beneficial uses could also be assigned lower mercury objectives. 	<ul style="list-style-type: none"> • Complete any remaining outreach to dentists to ensure all facilities have completed the one-time compliance report required by the federal pretreatment program. The reports were due October 12, 2020. • Continue outreach to dentists on mandatory amalgam separation through BAPPG and BACWA's pretreatment committee. • Schedule risk reduction presentations by the grantees to the Regional Water Board in 2021. • Continue to work with Regional Water Board staff to develop appropriate mercury and PCB monitoring requirements (as well as other constituents) when replacing the 2016 <i>Alternate Monitoring and Reporting Requirements</i> Order. • Track potential Basin Plan Amendments resulting from the Triennial Review project related to new beneficial use designations. The new designations are not expected to impact the bay-wide mercury TMDL in the near term, but there could be localized or longer-term impacts. 	<p>2017 Mercury/PCB Watershed Permit: http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2012/R2-2012-0096.pdf</p> <p>Risk Reduction Materials: https://bacwa.org/mercury-pcb-risk-reduction-materials/</p> <p>Updated BACWA PCBs Protocol: https://bacwa.org/wp-content/uploads/2014/02/PCBs-Sampling-Analysis-and-Reporting-Protocols-Dec13.pdf</p> <p>One-Time Compliance Report for Dental Offices: https://www.waterboards.ca.gov/water_issues/programs/npdes/docs/drinking_water/one-time_compliance_report_for_dental_offices.pdf</p>

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STATE WATER BOARD TOXICITY PROVISIONS			
<ul style="list-style-type: none"> • The State Water Board has been working since before 2012 to establish Toxicity Provisions in the SIP that would introduce uniform Whole Effluent Toxicity Requirements for the State • During individual permit reissuances since 2015, the Regional Water Board has been performing RPAs for chronic toxicity and giving chronic toxicity limits to agencies with Reasonable Potential. • Proposed Final Statewide Toxicity Provisions were released in October 2020, incorporating revisions to previous versions from 2018 to 2020. The Provisions establish: <ul style="list-style-type: none"> ○ Use of Test of Significant Toxicity (TST) as statistical method to determine toxicity replacing EC25/IC25 (with concerns it will lead to more false positive results); ○ Numeric limits for chronic toxicity for POTWs >5 MGD and with a pretreatment program; smaller POTWs would receive effluent targets and only receive limits if Reasonable Potential is established; ○ Regional Water Board discretion on whether to require RPAs for acute toxicity; ○ For POTWs with <i>Ceriodaphnia dubia</i> as most sensitive species, numeric targets rather than limits until after completion of state-wide study on lab/ testing issues (Dec. 31, 2023). 	<ul style="list-style-type: none"> • The State Water Board adopted the Statewide Toxicity Provisions at its December 2020 meeting. In October 2021, the State Water Board plans to vote on a resolution confirming that the Statewide Toxicity Provisions were adopted as state policy for water quality control for all inland surface waters and estuaries. The Provisions will not go into effect until later in 2022 after this second approval by the State Water Board, followed by review by OAL and EPA. • Implementation is likely to be on a permit-by-permit basis as new individual NPDES permits are issued. • Since 2016, agencies have had the option to skip sensitive species screening upon permit reissuance and pay the avoided funds to the RMP to be used for CECs studies. Once the Statewide Toxicity Provisions come into effect, agencies will once again be required by the provisions to do sensitive species screening once every 15 years. • BACWA has joined SCAP, CVCWA and NACWA in a lawsuit alleging EPA did not follow proper procedure in requiring use of the TST, which has not been officially promulgated. The lawsuit was dismissed on Statute of Limitation grounds, but the group has filed an appeal. 	<ul style="list-style-type: none"> • Continue to work with Regional Water Board on language for implementing Toxicity Provisions in Region 2 NPDES Permits. • Regional Water Board staff presented draft permit language to the BACWA Permits Committee at its December 2020 meeting, and BACWA subsequently provided written feedback. A modified draft will be circulated for BACWA member review later in 2021. The sample permit language will ultimately be copied into each newly adopted permit in the region, filling in details about monitoring and screening requirements that the Provisions leave to Regional Water Board discretion. • Share information on the special study on the <i>Ceriodaphnia dubia</i> test method with agencies who have that species in their permits. • Develop an alternative funding mechanism for RMP CECs studies by seeking reduced monitoring for items other than chronic toxicity screening. A draft plan to replace the 2016 <i>Alternate Monitoring and Reporting Requirements</i> Order is under development by BACWA and Regional Water Board staff. 	<p>SWRCB Toxicity Page: http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.shtml</p> <p>Toxicity Workshop Presentations from 2017 BACWA Workshop: https://bacwa.org/bacwa-toxicity-workshop-september-18-2017/</p> <p>Regional Water Board presentation on implementation of Statewide Toxicity Provisions from December 2020 https://bacwa.org/wp-content/uploads/2021/01/Slides-from-RWQCB-Regarding-R2-Tox-Language-in-NPDES-Permits-2020-12-08.pdf</p>

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COMPOUNDS OF EMERGING CONCERN (CECS)			
<ul style="list-style-type: none"> Pharmaceuticals and other trace compounds of emerging concern (CECs) are ubiquitous in wastewater at low concentrations and have unknown effects on aquatic organisms. The State Water Board is considering developing a Pilot CECs Monitoring Plan for the State. Region 2's CEC strategy focuses on monitoring/tracking concentrations of constituents with high occurrence and high potential toxicity. Much of what the State Water Board is considering for its Pilot Monitoring Plan is already being implemented in Region 2 through the RMP. 	<ul style="list-style-type: none"> The Regional Water Board has stated that voluntary and representative participation in RMP CECs studies is key to avoiding regulatory mandates for CECs monitoring. These studies are informational and not for compliance purposes. BACWA developed a White Paper on representative participation to be used to support facility selection for these studies. It is intended to be a living document with ongoing updates Microplastics have been a focus of the RMP in recent years. BACWA has participated in the Workgroup and developed a POTW Fact Sheet. One conclusion of the RMP work is that POTWs contribute much lower microplastic loads than stormwater. DDW has adopted a definition of Microplastics in Drinking Water (may apply to other matrices such as wastewater and stormwater in the future). The OPC is funding a study in 2021 that will look at microplastic removal through wastewater treatment processes. The study will be carried out by SCCWRP and SFEI, and will commence with a pilot study in summer 2021 and full-scale sampling of about 15 facilities in Fall 2021. 	<ul style="list-style-type: none"> Continue to participate in the RMP CEC Workgroup. Participate in studies by collecting wastewater samples at member facilities. Studies this year will include ethoxylated surfactants follow-up, sunscreens, and the OPC-funded microplastic study. Provide ongoing updates to White Paper for use by the RMP in selecting representative POTWs for participation in CEC studies, and develop a proposal for ongoing monitoring. Continue tracking State Water Board and Ocean Protection Council actions re: microplastics via the CASA Microplastics Workgroup. Work with Regional Water Board to replace the 2016 <i>Alternate Monitoring and Reporting Requirements</i> Order. The new Order will provide a sustainable source of RMP CEC funding in exchange for reduced monitoring and reporting of other parameters. 	<p>RMP CEC Workgroup: http://www.sfei.org/rmp/ecwg#tab-1-4</p> <p>BACWA CECs White Paper: https://bacwa.org/document/bacwa-cec-white-paper-updated-june-2020/</p> <p>BACWA Microplastics Fact Sheet: https://bacwa.org/wp-content/uploads/2019/09/BACWA-Microplastics-flyer.pdf</p> <p>SFEI Microplastics Science Strategy: www.sfei.org/documents/microplastic-monitoring-and-science-strategy-san-francisco-bay</p> <p>SWRCB Microplastics in Drinking Water page: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/microplastics.html</p>

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PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)			
<ul style="list-style-type: none"> Per- and polyfluoroalkyl substances made substances (PFAS) are a large group of human-made substances that are very resistant to heat, water, and oil. PFAS have been used extensively in surface coating and protectant formulations; common PFAS-containing products are non-stick cookware, cardboard/paper food packaging, water-resistant clothing, carpets, and fire-fighting foam. Perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) are two types of PFAS that are no longer manufactured in the US; however, other types of PFAS are still produced and used in the US. All PFAS are persistent in the environment, can accumulate within the human body, and have demonstrated toxicity at relatively low concentrations. PFOA and PFOS were found in the blood of nearly all people tested in several national surveys. Potential regulatory efforts to address PFAS focus on drinking water in order to minimize human ingestion of these chemicals, although regulators have also expressed concern about uptake into food from land applied biosolids. In April 2021, the formation of an “EPA Council on PFAS” was announced. 	<ul style="list-style-type: none"> In Aug 2019, DDW lowered the drinking water notification levels (NLs) to 6.5 ng/L for PFOS and 5.1 ng/L for PFOA (lowest detection possible at the time). In Feb 2020, DDW also lowered the ‘response levels’ (RLs) to 10 ng/L for PFOA and 40 ng/L for PFOS. Under AB756 (July 2019), DDW can order public water systems to monitor PFAS, consumers must be notified if NLs/RLs are exceeded, and water sources must be removed from service or blended/ treated if RLs are exceeded (if possible). DDW has requested OEHHA develop NLs for seven other PFAS compounds and public health goals (PHGs) for both PFOA and PFOS, the next step in establishing drinking water MCLs. In 2019, the SWRCB developed a phased investigation action plan requiring testing of drinking water systems and site investigations at high risk locations for PFAS. Investigative orders are issued as follows: <ul style="list-style-type: none"> Mar/Apr 2019 - landfills and airports and adjacent public water systems Oct 2019 - chrome-platers July 2020 - POTWs March 2021 - refineries & bulk terminals The Summit Partners held three PFAS Workshops on the SWRCB investigative order for POTWs in late 2020 and early 2021. 	<ul style="list-style-type: none"> The July 2020 SWRCB investigative Order for POTWs is not applicable to Region 2 agencies. Instead, BACWA worked with RWB staff and obtained State Water Board approval to fund and conduct a regional study through the RMP. SFEI is conducting this study in two phases: <ul style="list-style-type: none"> In Phase 1, fourteen representative facilities collected samples in Q4 2020 for influent, effluent, RO concentrate, and biosolids. SFEI is analyzing the data and will issue a report in September 2021. Phase 2 will be conducted in Fall 2021 and will be designed based on recommendations from Phase 1 report. BACWA will continue collaboration with Summit Partners and non-governmental organizations on legislation related to pollution prevention, as well as tracking developments at the State and Regional level. A fourth Summit Partners PFAS workshop is planned for August 2021. 	<p>Region 2 PFAS Study Phase 1 Sampling Plan: https://bacwa.org/wp-content/uploads/2020/12/SFEI-Final-PFAS-SAP-Phase-1-2020-11-23.pdf</p> <p>Summit Partners PFAS Workshop presentations: https://casaweb.org/calendar/speaker-presentations/</p> <p>SWRCB Investigative Order for POTWs: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2020/wqo2020_0015_dwq.pdf</p> <p>OEHHA Notification Levels for Drinking Water: https://oehha.ca.gov/water/notification-levels-chemicals-drinking-water</p> <p>EPA PFAS Resources https://www.epa.gov/pfas</p> <p>EPA PFAS Action Plan (updated Feb 2020) https://www.epa.gov/sites/production/files/2020-01/documents/pfas_action_plan_feb2020.pdf</p>

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SSS WDR REISSUANCE			
<ul style="list-style-type: none"> • The State Water Board plans to reissue the statewide Sanitary Sewer System General Order (SSS-WDR) in late 2021. • State Water Board staff have sought out early stakeholder engagement through outreach to CASA and the Regional Associations, and NGOs. • The State Water Board's goals for the update are: <ul style="list-style-type: none"> ○ Updating the 2006 Order ○ Clarifying compliance expectations and enhancing enforceability ○ Addressing system resiliency, including climate change impacts ○ Identifying valuable data and eliminating non-valuable reporting requirements 	<ul style="list-style-type: none"> • In February 2021, the State Water Board released an informal staff draft of the updated SSS-WDR. The informal staff draft proposed the following new components: <ul style="list-style-type: none"> ○ SSMPs must include a detailed risk assessment, with findings to be used for prioritizing remediation actions ○ Spills must be reported to CIWQS within 2 hours ○ Sewershed boundaries must be provided to SWRCB ○ Agencies must report spills from private systems and laterals ○ Exfiltration is included in the definition of a spill ○ Well-performing systems have reduced reporting requirements for "Category 4" SSOs (those less than 50 gallons) ○ Legally Responsible Officials must have a PE license or be a CWEA-certified Grade III collection system operator • BACWA worked with CASA to provide proposed redlines to the informal staff draft, and discussed concerns in several meetings with State Water Board staff. BACWA also provided a comment letter on the informal staff draft. • A public review draft is expected later in summer 2021. 	<ul style="list-style-type: none"> • Review and comment on the public review draft SSS-WDR when available for public comment, expected in Q3 2021. • Continue to coordinate with CASA, CVCWA, and SCAP on proposed revisions and reorganization of the SSMP requirements • Discuss response to issues such as exfiltration via BACWA's Collection Systems Committee. 	<p>SWB SSS WDR page: https://www.waterboards.ca.gov/water_issues/programs/sso/</p> <p>SWB Informal Staff Draft (February 2021) https://www.waterboards.ca.gov/water_issues/programs/sso/docs/workshops/informal_staff_draft_statewide_sso_order.pdf</p> <p>BACWA / CASA Comment Letter on Informal Staff Draft: https://bacwa.org/wp-content/uploads/2021/07/6-30-21-SSS-WDR-Comment-Letter.pdf</p> <p>BACWA / CASA markup of Informal Staff Draft: https://bacwa.org/wp-content/uploads/2021/07/6-30-21-SSS-WDR-Redlines-Submission.docx</p>

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ELAP UPDATE <ul style="list-style-type: none"> • In May 2020, the State Water Board adopted new comprehensive regulations for the Environmental Laboratory Accreditation Program. • Adoption of the new regulations was required by AB 1438, legislation that became effective in 2018. • The new ELAP regulations will replace the current state-specific accreditation standards with a national laboratory standard established by The NELAC Institute (TNI). 			
	<ul style="list-style-type: none"> • The new ELAP regulations became effective as of January 1, 2021. Compliance with TNI standards is required beginning January 1, 2024. • Adoption of TNI standards poses a challenge since there are more than 1,000 individual requirements. Setup costs may include: <ul style="list-style-type: none"> ○ Hiring and/or training staff; ○ Hiring consultants to set up the TNI documentation framework; ○ Purchasing Laboratory Information Management System (LIMS) software; ○ Purchasing documents and training material from TNI, etc. • The new standards will be a particular burden on small laboratories, which may choose to close if they cannot economically meet the new standards. • ELAP's "Roadmap to ELAP Accreditation" Program is the outreach and training component of the new regulations. ELAP staff have presented to the Lab Committee in June 2020, February 2021, and April 2021. ELAP has contracted with A2LA Workplace Training to provide training sessions. • The BACWA Lab Committee is providing a year-long series of monthly TNI training sessions beginning in July 2021. 	<ul style="list-style-type: none"> • Offer monthly training sessions to BACWA members. The free virtual training sessions are open to BACWA members holding a valid copy of the 2016 TNI Standard, and will occur on the 3rd Tuesday of the month. Training is provided by Diane Lawver of Quality Assurance Solutions, LLC. • Continue to work through BACWA's Laboratory Committee to support members as they navigate laboratory accreditation under the new TNI standards. • Publicize training opportunities offered by consultants, ELAP, and others. • Provide a forum for BACWA laboratories to share experiences and lessons learned from various approaches to TNI implementation. 	<p>State Water Board's 'Roadmap to ELAP Accreditation' page: https://www.waterboards.ca.gov/drinking_water/certlic/labs/roadmap_to_elap_accreditation.html</p> <p>Roadmap to Accreditation Presentation to BACWA Lab Committee: https://bacwa.org/wp-content/uploads/2020/06/California-ELAP-Regulations-BACWA_06092020.pdf</p> <p>State Water Board's ELAP regulations page: http://www.waterboards.ca.gov/drinking_water/certlic/labs/elap_regulations.shtml</p> <p>Monthly Training Session flyer: https://bacwa.org/wp-content/uploads/2021/07/BACWA-Lab-TNI-Training-Series-Flyer.pdf</p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
PHASE-OUT OF BIOSOLIDS AS ALTERNATIVE DAILY COVER			
<ul style="list-style-type: none"> Regulatory drivers are indicating that biosolids used as alternative daily cover (ADC) or disposed in landfills will be phased out: <ul style="list-style-type: none"> AB 341 set a goal to recycle 75% of solid waste by 2020 and CalRecycle's plan to achieve that goal called for a marked, but unquantified, reduction of organics to landfills. SB 1383, adopted in September 2016 requires organics diversion: -50% by 2020 (relative to 2014) -75% by 2025 (relative to 2014) In 2020, CalRecycle will count green waste as disposal (per AB 1594), rather than diversion, even when used as ADC. Regulations implementing SB 1383 were approved by the Office of Administrative Law on November 9, 2020. The regulation will become effective on January 1, 2022, when states can begin enforcement on jurisdictions. Jurisdictions can begin local enforcement January 1, 2024, and compliance is required by January 1, 2025. While the regulations implementing SB 1383 do not explicitly forbid biosolids disposal/reuse in landfills, it is assumed that since biosolids are a relatively "clean" waste stream that can be easily diverted, landfills will stop accepting biosolids. 	<ul style="list-style-type: none"> In the 2018 BACWA Biosolids survey, more agencies reported that they are developing plans for the phase-out than in the 2016 Survey. Requirements in the final regulations include: <ul style="list-style-type: none"> Diverted biosolids must be anaerobically digested and/or composted to qualify as landfill reduction. Incineration and surface land disposal sites are designated as "landfills" for accounting purposes. Local ordinances restricting land application are disallowed. Jurisdictions that divert organic waste must also procure the end products of diversion, such as biogas, biomethane, and compost (but not biosolids). If SB 619 (Laird) passes in the 2021 state legislative session, enforcement of SB1383 on local jurisdictions will be delayed by one year to January 1, 2023. In March 2020 and May 2021, the California Conference of Directors of Environmental Health (CCDEH) prepared letters expressing concern over the anticipated expansion of land application due to SB 1383, and requesting a moratorium on land application until new safety standards are developed. 	<ul style="list-style-type: none"> In July 2021, BACWA will distribute a biosolids trends survey covering 2018- 2020 activities and SB 1383 implementation – please respond. Actively work through CASA with California Air Resource Board, CalRecycle, State Water Board, and California Department of Food and Agriculture to develop sustainable long-term options for biosolids beneficial use. Follow efforts of the Bay Area Biosolids Coalition (BABC) to investigate all-weather options for biosolids management. BABC is a BACWA Project of Special Benefit. Coordinate with BABC, SFEI and Sonoma County Land Trust on preparation of a white paper regarding biosolids management in the baylands. Participate in BAAQMD's Organics Recovery Technical Working Group to educate their staff on how to address implementation of SB 1383 at the Air District level. Meet with BAAQMD management regularly in 2021 to discuss alignment of state and local regulations. Work with CASA and others to respond to CCDEH concerns regarding safety standards for land application. 	<p>BACWA 2018 Biosolids Trends Survey Report: https://bacwa.org/document/2018-biosolids-trends-survey-report/</p> <p>CASA White Paper on Biosolids Use in Landfills: https://bacwa.org/wp-content/uploads/2017/01/1-11-17-Sustainability-for-biosolids-use-at-landfills.pdf</p> <p>BABC website: http://www.bayareabiosolids.com/</p> <p>CASA White Paper on SB 1383 Implementation: https://bacwa.org/document/summary-of-sb-1383-and-its-implementation-casa-2020/</p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CLIMATE CHANGE MITIGATION			
<ul style="list-style-type: none"> • CARB's Climate Change Scoping Plan Update lays out the approach for the State to meet its greenhouse gas (GHG) emissions reduction targets through 2030, including additional policies to achieve 40% reduction below 1990 levels by 2030: <ul style="list-style-type: none"> ○ Short-lived climate pollutants ○ Carbon sequestration on Natural and Working Lands ○ Largest emitters (transportation, electricity, and industrial sectors) The Scoping Plan will be updated in 2022 targeting carbon neutrality by 2045. • SB 1383 (Short-Lived Climate Pollutant Reduction) calls for: <ul style="list-style-type: none"> ○ 40% methane reduction by 2030 ○ 75% diversion of organic waste from landfills by 2025 ○ Policy / regulatory development encouraging production/use of biogas • BAAQMD developed a Clean Air Plan requiring GHG emissions supporting CARB's 2050 target. • BAAQMD has proposed the development of Regulation 13 (climate pollutants) targeting GHG reductions related to organics diversion and management. • In October 2020, Governor Newsom signed Executive Order N-82-20 calling for nature-based land management strategies to address climate change, such as natural and working lands restoration. 	<ul style="list-style-type: none"> • CARB states POTWs are part of the solution for reducing fugitive methane, and encourages diversion of organics to POTWs to use excess digester capacity and produce biogas. However, diversion also increases biosolids, which also need to be diverted from landfills. • Many POTWs are exploring energy generation, but BAAQMD TAC regulations could make such programs more difficult to implement. Direct injection of biogas to PG&E's pipelines or use as a transportation fuel may be more efficient. OSHA's PSM Standards, triggered by use of biogas offsite (if managing over 10k lbs of biogas onsite), may cause pipeline injection to be cost-prohibitive. CalOSHA has verbally agreed with scenarios exempt from PSM standards. • CARB's previous interest in nitrous oxide emission estimates and/or emission factors for POTWs has shifted to toxic air contaminants. See Toxic Air Contaminants - BAAQMD Rule 11-18, AB 617, and AB 2588. • BAAQMD is developing a suite of Rules under Regulation 13 for climate pollutants methane and nitrous oxide. However, rule development has been suspended due to COVID-19 and lack of data. The delay is allowing time to summarize information about current best management practices. 	<ul style="list-style-type: none"> • Respond to the July 2021 AIR committee-led survey regarding current methane management practices at anaerobic digesters and sludge lagoons. • For Regulation 13, continue to work with BAAQMD staff to provide information and education about anaerobic digesters and POTW operations. Participate in the Organics Recovery Technical Working Group, as well as comment on draft Rules. • Work with CASA to look for opportunities for POTWs to help the State meet GHG reduction goals. • Look for ways to inform BAAQMD on opportunities and challenges for climate change mitigation by Bay Area POTWs. • Work with PG&E and BAAQMD to explore options for POTWs to inject biogas into PG&E pipelines. Note: CASA has been discussing the barriers to pipeline injection with CPUC staff, proposing a reduction in their standard from 990 Btu/scf to 970 Btu/scf. 	<p>AIR Committee Survey regarding management practices at digesters and lagoons: https://bacwa.org/document/methane-and-voc-survey-pdf-version-not-fillable/</p> <p>Climate Change Scoping Plan, including 2022 Update: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan</p> <p>CARB Short Lived Climate Pollutant Reduction Strategy: https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf</p> <p>SB 1383: https://www.calrecycle.ca.gov/organics/slcp</p> <p>BAAQMD Clean Air Plan: http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans</p> <p>BAAQMD Regulation 13 http://www.baaqmd.gov/rules-and-compliance/rules/regulation-13-climate-pollutants</p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CLIMATE CHANGE ADAPTATION			
<ul style="list-style-type: none"> • In 2017, the State Water Board adopted a Climate Change Resolution addressing mitigation and adaptation. One requirement is Regional Water Boards will make recommendations to modify permits and/or create other regulatory requirements to reduce vulnerability of water and wastewater infrastructure to flooding, storm surges, and sea level rise. • The Regional Water Board is planning to modify the Basin Plan under its Climate Change and Wetland Policy Update. • Climate change and water resilience continue to be a strategic priority of the Regional Water Board in FY21. • In April 2019, Governor Newsom signed Executive Order N-10-19 directing State Agencies to recommend a suite of priorities and actions to build a climate-resilient water system and ensure healthy waterways through the 21st century. 	<ul style="list-style-type: none"> • The State Water Board is planning to send a data request to all permitted facilities (collection systems and POTWs) in the State to better understand to what extent agencies are performing climate change vulnerability assessments and/or investing in adaptation measures. They plan to use this information to determine the need for funding assistance or permit requirements for climate change planning. • The Regional Water Board recently completed a survey of all POTWs in the region in 2021 to collect information about climate vulnerability and adaptation. This survey is more detailed than the State Water Board's survey. Responses were due on July 1. • The Regional Water Board hosted a workshop on its Wetlands Policy 94-086 on August 14 and solicited stakeholder input on potential revisions to the Policy. <ul style="list-style-type: none"> ○ BACWA provided the Regional Water Board staff specific case studies of wetlands projects that are being considered as well as written comments regarding Policy revisions that would help incentivize the development of wetlands projects by wastewater agencies, and reduce permitting hurdles. 	<ul style="list-style-type: none"> • Support the Regional Water Board's efforts to obtain a response from each agency on the climate change survey. Responses were due July 1. • Review a draft Basin Plan Amendment from the Climate Change and Wetland Policy Update project, anticipated to be issued by the Regional Water Board in late 2021 or early 2022. • Continue to coordinate with State Water Board on the status of their data request on climate change planning, so members can provide the information they request as effectively as possible. Survey expected to be released towards the end of 2021. • Continue to work with Regional Water Board and other resource agencies to look for regulatory solutions to encourage wetlands projects for shoreline resiliency. 	<p>State Water Board 2017 Climate Change Resolution: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/rs2017_0012.pdf</p> <p>Regional Water board Wetlands Policy Page: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/climate_change/wetland_policies.html</p> <p>BACWA Comments on Wetlands Policy: https://bacwa.org/wp-content/uploads/2018/09/BACWA-comments-Wetland-Policy-9-14-18.pdf</p> <p>Information about Proposed Basin Plan Amendment (Issue 5.1): https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#triennialreview</p> <p>BACWA Comments on Resilience Portfolio: https://bacwa.org/wp-content/uploads/2019/10/BACWA-Water-Resilience-Portfolio-10-01-19.pdf</p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
TOXIC AIR CONTAMINANTS - BAAQMD RULE 11-18, AB 617, AND AB2588			
<ul style="list-style-type: none"> Regulation 11, Rule 18 (Rule 11-18), adopted November 15, 2017, is BAAQMD's effort to protect public health from toxic air pollution from existing facilities, including POTWs. Per the Rule, BAAQMD will conduct site-specific Health Risk Screening Analyses (HRSAs) and determine each facility's prioritization score (PS). BAAQMD will conduct Health Risk Assessments (HRAs) for all facilities with a cancer PS>10 or non-cancer PS>1.0. After verifying the model inputs, if the facility still has PS above that threshold, that facility would need to implement a Risk Reduction Plan that may include employing Best Available Retrofit Control Technology for Toxics (TBARCT). AB 617 (Community Air Protection Program) – requires CARB to harmonize community air monitoring, reporting, & local emissions reduction programs for air toxics and GHGs). POTWs within communities already impacted by air pollution may have to accelerate implementation of risk reduction measures. AB 2588 (Air Toxics “Hot Spots” Program) - Establishes a statewide program for the inventory of air toxics emissions from individual facilities, as well as requirements for <u>risk assessment and public notification of potential health risks</u>. 2020 updates expanded compound list from >500 to >1,000. 	<ul style="list-style-type: none"> BACWA developed a White Paper on the BAAQMD Rule to describe its potential impacts on the POTW community. In response to a request by BAAQMD, the AIR Committee delivered a letter report summarizing specific challenges that POTWs would face in complying with the rule due to budgeting and planning constraints related to being public agencies. In response, BAAQMD moved all POTWs to Phase 2 to give sufficient time to update the model's inputs, and plan for emissions reduction or TBARCT, as needed. Phase 2 has been slow to roll out and is now expected to begin in Q3 2021 with data collection and verification, followed by the development of HRAs for facilities with a cancer PS>10 or non-cancer PS>1.0. Implementation of the Rule for Phase 2 facilities will be spread out over two years depending on the PS. AIR Committee gathered data on proximity factors from each facility and submitted to BAAQMD for updating prioritization scores, which will be use in HRA development. 	<ul style="list-style-type: none"> Priority: Agencies should use the tool developed by the AIR Committee to address emission contributions from influent flows, which will be used to update emissions inventory values. Respond to BAAQMD data request beginning in Q3 or Q4 2021. There will be a 60-day turn-around to comply with the data request. Meet with BAAQMD management more frequently in 2021 to discuss alignment of state and local regulations Track both AB 617's regulation development and expansion of the toxics compound list under AB 2588's Air Toxics Hot Spots Program. Draft regulatory language under AB 617 stated all uncovered POTWs >5 MGD and covered (primary) POTWs >10 MGD must monitor and report all compounds listed under AB 2588. CARB has provided the wastewater sector time to develop a short-list of relevant compounds and perform a pooled emissions estimating effort to update outdated default emission factors (through 2028). CASA has prepared a one-page handout on this topic. Results could inform Rule 11-18 HRA's. 	<p>BAAQMD Rule 11-18 page: http://www.baaqmd.gov/rules-and-compliance/rules-development/rules-under-development/regulation-11-rule-18</p> <p>BAAQMD Prioritization Scores for AB 11-18: https://www.baaqmd.gov/~media/files/ab617-community-health/facility-risk-reduction/documents/implementation-procedures_august_2020-pdf.pdf?la=en</p> <p>Rule 11-18 Process Flowchart: https://bacwa.org/document/baaqmd-11-18-process-flowchart-08-17-17/</p> <p>CARB page on AB 617 and AB 2588: https://ww2.arb.ca.gov/our-work/programs/criteria-and-toxics-reporting</p> <p>CASA One-Page Handout on Air Toxics Reporting: https://casaweb.org/wp-content/uploads/2021/06/CTR-EICG_CASAPageIssue-Approach_June2021.pdf</p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
BACT FOR STANDBY POWER			
<ul style="list-style-type: none"> In December 2020, BAAQMD made a determination that diesel back-up engines greater than or equal to 1,000 bhp must meet EPA Tier 4 Emissions Standards under the Best Available Control Technology (BACT) Regulation. 	<ul style="list-style-type: none"> The determination was made retroactive to January 2020, affecting projects whose applications had been deemed complete at several BACWA member agencies. BAAQMD did not consider reliability under emergency conditions in determining that Tier 4 Emissions Standards were “achieved-in-practice.” Some Tier 4-compliant engines have malfunctioned during actual emergencies. 	<ul style="list-style-type: none"> Meet with BAAQMD management regularly in 2021 to provide earlier knowledge of new regulations, such as BACT determinations, and encourage a public notification and review process for future BACT determinations. Work with CASA and Regional Associations to encourage consideration of reliability for essential public services in BACT determination being conducted by other Air Boards. 	<p>BAAQMD Program Page: https://www.baaqmd.gov/permits/permitting-manuals/bact-tbact-workbook</p> <p>BACWA Comment Letter on BACT Determination: https://bacwa.org/document/baaqmd-bact-letter-2021-02-23/</p>
RECYCLED WATER GENERAL ORDER			
<ul style="list-style-type: none"> In response to the Governor’s proclamation of a Drought State of Emergency, the State Water Board adopted a General Order on June 3, 2014 to streamline permitting for recycled water. The State Water Board reissued the General Order on June 7, 2016, making enrollment mandatory for Regional Permittees. In 2018, the State Water Board adopted Recycled Water Policy Amendments, which: <ul style="list-style-type: none"> Introduced a goal of increasing recycled water where wastewater is otherwise discharged to saltwater; Resulted in termination of Region 2’s 96-011 Recycled Water General Order; Added procedural burdens for Wastewater Change Petitions. Removed requirements for priority pollutant monitoring. 	<ul style="list-style-type: none"> In April 2020, SF Regional Water Board transitioned 96-011 permittees to the statewide General Order by issuing a NOA and modified MRP. All permittees were transitioned with the exception of Livermore, Delta Diablo, Napa Sanitation, and SASM who have older Title 22 Engineering Reports; they will be enrolled at a later date following a review by DDW. As of 2020, recycled water production must be reported to the state’s GeoTracker.database by April 30 each year. This requirement is being included in all newly issued NPDES permits. 	<ul style="list-style-type: none"> Support member agencies as they implement new monitoring and reporting requirements. BACWA Recycled Water Committee continues to collaborate with Regional Water Board staff. In September 2020, Committee leaders provided an update to Regional Water Board members on the transition to the General Order as well as recycled water projects and activities in the SF Bay area. 	<p>State Recycled Water Policy Amendment Page: https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/index.html#amendment</p> <p>NOA and MRP for enrollment of Bay Area agencies in statewide General Order (Includes 2016 General Order) https://bacwa.org/wp-content/uploads/2020/11/2020-04_NOA-Recycled-Water-04-08-20.pdf</p> <p>September 2020 Regional Water Board staff report: https://www.waterboards.ca.gov/rwqcb2/board_info/agendas/2020/September/7_ssr.pdf</p>

“Parking lot” issues with no updates can be found in previous [BACWA issues summaries](#).

ACRONYMS

ADC	Alternate Daily Cover
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BTU/SCF	British thermal units per standard cubic foot
CARB	California Air Resources Board
CASA	California Association of Sanitation Agencies
CAP	Criteria Air Pollutant
CEC	Compound of Emerging Concern
CIWQS	California Integrated Water Quality System
CVCWA	Central Valley Clean Water Agencies
CWEA	California Water Environment Association
EC25/IC25	25% Effect Concentration/25% Inhibition Concentration
ELAP	Environmental Laboratory Accreditation Program
ELTAC	Environmental Laboratory Technical Advisory Committee
EPA	United States Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FY	Fiscal Year
GHG	Greenhouse Gas
HRSA	Health Risk Screening Analyses
HRA	Health Risk Assessment
MCL	Minimum Contaminant Level (Drinking Water)
MGD	Million Gallons per Day
NACWA	National Association of Clean Water Agencies
NELAC	National Environmental Laboratory Accreditation Conference
PCB	Polychlorinated Biphenyl
POTW	Publicly Owned Treatment Works
PS	Prioritization Score
RMP	Regional Monitoring Program
RPA	Reasonable Potential Analysis
SCAP	Southern California Alliance of POTWs
SF Bay	San Francisco Bay
SFEI	San Francisco Estuary Institute
TAC	Toxic Air Contaminant
TMDL	Total Maximum Daily Load
TIN	Total Inorganic Nitrogen
TNI	The NELAC Institute
TST	Test of Significant Toxicity
WQBEL	Water Quality Based Effluent Limitation
WQO	Water Quality Objective

ITEM NO. RA7 CHLORINE RESIDUAL BLANKET PERMIT AMENDMENT

Recommendation

For the Committee's information only; no action is required.

Background

EBDA's current NPDES permit, as well as those of every other wastewater discharger into the Bay, contains a limit for total residual chlorine of 0.0 mg/L or parts per million (ppm), expressed as an instantaneous maximum. This limit stems from the performance-based 0.0 mg/L instantaneous maximum limit contained in the Basin Plan, the regional document that sets water quality standards. In order to ensure consistent compliance with the 0.0 limit, EBDA and other dischargers overdose the dechlorinating chemical sodium bisulfite (SBS). By documenting that there is excess SBS in the effluent, we can demonstrate that there is no possibility for chlorine, and thereby we are compliant even if an online chlorine analyzer temporarily shows the presence of chlorine.

At the request of the discharger community, through the Bay Area Clean Water Agencies (BACWA), the Regional Water Quality Control Board (RWB) adopted a Basin Plan Amendment concerning total residual chlorine in November 2020. The Basin Plan's performance-based 0.0 mg/L instantaneous maximum limit was replaced with a water quality-based objective and averaging period. The new limit is based on EPA's 1984 Ambient Water Quality Criteria for chlorine, which sets a one-hour average concentration of 13 ug/L for estuarine discharges. Because it is water quality-based, this approach allows effluent limits for deep-water dischargers to be calculated considering dilution.

Discussion

In order for wastewater dischargers to begin seeing the benefits of this change to chlorine residual compliance limits prior to their individual NPDES permits coming up for renewal, RWB staff has developed a Blanket Permit Amendment. This Blanket Permit Amendment would modify each existing permit to insert a new limit for total residual chlorine calculated consistent with the new Basin Plan objective and use of dilution.

For EBDA, this means that instead of complying with an instantaneous maximum limit of 0.0 ppm, with the new objective and EBDA's current 75:1 dilution factor, EBDA's compliance will be based on 0.98 ppm, measured as a one-hour average concentration. Compliance with this limit can be achieved with minimal SBS dosing, and at times, no SBS addition.

The Blanket Permit Amendment is scheduled for adoption by the RWB on October 12, 2021. Because the Basin Plan Amendment that facilitates these changes is still awaiting adoption by the Environmental Protection Agency (EPA) and the California Office of Administrative Law (OAL), the Permit Amendment will not take effect immediately. Rather, it is drafted to take effect automatically shortly after all Basin Plan approvals are completed.

ITEM NO. RA8 PFAS UPDATE

Recommendation

For the Committee's information only; no action is required.

Background

Per- and polyfluoroalkyl substances (PFAS) are a large group of human-made substances that are very resistant to heat, water, and oil. PFAS have been used extensively in surface coating and protectant formulations. Common PFAS-containing products are non-stick cookware, cardboard/paper food packaging, water-resistant clothing, carpets, and fire-fighting foam. All PFAS are persistent in the environment, can accumulate within the human body, and have demonstrated toxicity at relatively low concentrations. PFOA and PFOS, two of the PFAS compounds, were found in the blood of nearly all people tested in several national surveys.

Regulatory efforts to address PFAS have focused on drinking water in order to minimize human ingestion of these chemicals. In August 2019, California's Division of Drinking Water (DDW) lowered the drinking water notification levels to 6.5 ng/L for PFOS and 5.1 ng/L for PFOA (lowest detection possible at the time). In February 2020, DDW also lowered the response levels to 10 ng/L for PFOA and 40 ng/L for PFOS.

Regulators have also expressed concern about land applied biosolids, including migration of the chemicals into drinking water aquifers and uptake into food. A recent [study](#) conducted by University of Arizona investigated the impact of long-term land application of Class B biosolids on PFAS presence in soils. The study found that even after decades of land application, the concentration and accumulation of PFAS in soils receiving the biosolids was comparatively low, and significant attenuation of PFAS occurred near the soil surface. These results suggest that the potential for groundwater contamination is relatively small.

Discussion

In July 2020, the State Water Resources Control Board issued an investigative order requiring all wastewater treatment plants (WWTPs) to monitor for PFAS in influent, effluent, and biosolids quarterly for one year. The San Francisco Bay Region was exempted from that order in favor of conducting a regional study through the Regional Monitoring Program. In Phase 1 of the study, influent, effluent, and biosolids samples were analyzed at a select number of Bay Area WWTPs, which included Dublin San Ramon Services District, Union Sanitary District, and EBDA's combined outfall.

A Fact Sheet summarizing the study and key findings is attached. Levels detected in wastewater effluent and biosolids from Bay Area agencies were lower than in other household products, and concentrations of individual PFAS compounds in effluent were well below DDW action levels. The study also showed that levels of PFAS in influent were not correlated with the number of industrial dischargers in an agency's service area,

leading to the conclusion that PFAS is primarily coming from residential and commercial sources. This is consistent with analysis of the statewide PFAS data to date. Another interesting finding was that effluent PFAS concentrations consistently exceed influent concentrations. This is not because wastewater plants are creating or contributing PFAS, but rather because significant quantities of PFAS precursors can be found in influent, and those precursors are converted to detectable PFAS compounds through the treatment process.

The Bay Area Clean Water Agencies (BACWA) and the San Francisco Estuary Institute (SFEI) are currently working to scope Phase 2 of the regional study, which would be conducted this Fall. The focus is on gathering information that is actionable and can inform management of PFAS. Since source control appears to be the most effective way to reduce PFAS in effluent and biosolids, the study will seek to better understand sources in the sewershed by sampling upstream in several sewer service areas.

In parallel, University of Arizona researchers are gathering funding and participants for a national study looking at the fate and transport of PFAS in biosolids land application, including soil concentrations and plant uptake.

Lastly, on September 8, 2021, the U.S. Environmental Protection Agency announced plans to propose a rule that would limit PFAS wastewater discharges from facilities that produce the chemicals, as well as from chromium electroplating sites. This is consistent with the wastewater community's message that PFAS compounds are best managed and regulated through source control.

PFAS Fact Sheet

San Francisco Bay Region Phase I Study Results

Per- and polyfluoroalkyl substances (PFAS) are a large group of human-made compounds that are very resistant to heat, water, and oil. Common PFAS-containing products are non-stick cookware, cardboard/paper food packaging, water-resistant clothing, carpets, personal care products, and fire-fighting foam. All PFAS are persistent in the environment, can accumulate within the human body, and have demonstrated toxicity at relatively low concentrations.

Publicly owned treatment works (POTWs) are receivers of PFAS from residential and industrial customers in their sewershed. PFAS in influent are transformed to other PFAS species, but are not destroyed during treatment. PFAS received in POTW influent ultimately partition into effluent or biosolids depending on the individual compound's chemical characteristics.

KEY POINTS

- PFAS are ubiquitous in numerous everyday products and in the environment
- The State Water Board is investigating the sources that could impact drinking water supplies
- We expect to measure low levels of PFAS in wastewater and from landfills as long as we continue to utilize these chemicals in common products

Region 2 PFAS Study – Phase I

In 2019, the State Water Board developed a phased investigation action plan requiring testing of drinking water systems and site investigations at high-risk locations for PFASⁱ. Investigative orders were issued as follows:

- Mar/Apr 2019 - Landfills and airports and adjacent public water systems
- Oct 2019 – Industrial Chrome-platers
- July 2020 - POTWs
- March 2021 - Refineries & bulk terminals

The July 2020 State Water Board Investigative Order for POTWs is not applicable to Water Board Region 2 (San Francisco Bay Area) agencies. Instead, the Bay Area Clean Water Agencies (BACWA) worked with Water Board staff and obtained approval to fund and conduct a regional study through the Regional Monitoring Program at the San Francisco Estuary Institute (SFEI)ⁱⁱ. SFEI is conducting this study in two phases:

- In Phase 1, fourteen representative facilities collected influent, effluent, and biosolids samples in Fall of 2020. SFEI is currently continuing to analyze the data and will issue a technical memorandum in September 2021.



- Phase 2 will be conducted in Fall 2021 and will be designed based on recommendations from Phase 1 technical memorandum.

The facilities participating in Phase 1 were selected based on their size, location, level of industry in their service area, treatment technology, and whether they had participated in previous SFEI PFAS studies, so that trends in individual PFAS compounds could be tracked over time. While the Water Board's Investigative Orders required 31 individual PFAS analytes to be measured, the SFEI study is looking at 40 individual analytes, as well as performing a total organic precursor (TOP) analysis on influent and biosolid samples. The TOP analysis involves oxidizing the sample to convert PFAS to their terminal transformation products, then measuring those products. The advantage of the TOP analysis is that it gives a better estimate of the total PFAS in a sample, and not just the individual analytes that are being targeted by a specific analytical method.

Phase I Results

In the Phase I data, total PFAS levels were generally comparable across all agencies treating municipal wastewater, although the levels of individual compounds differed. This result confirms that using a representative selection of POTWs is an appropriate strategy for this investigation.

In recent years new PFAS compounds, such as GenX and ADONA, have been introduced to replace other compounds, such as perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), that have been phased out in the United States. Some of these shorter chain replacement chemicals have been detected and others have not.

KEY POINTS

- Levels detected in wastewater effluent and biosolids from Bay Area agencies are lower than in other household products
- We are supporting research to understand if even these very, very low levels in land-applied biosolids could impact plants
- Maximum concentrations of individual PFAS in effluent are well below DDW drinking water response levels
- We can reduce PFAS in the environment by utilizing products that are PFAS-free

The median sum of the analytes as well as the results of the TOP analysis across all participating agencies are presented in Figures 1 and 2 below. There is a significant presence of non-targeted PFAS precursors in influent and biosolids. As expected based on data collected in other regions, the sum of effluent PFAS concentrations are higher than influent concentrations. This is not because POTWs are adding, making, or concentrating PFAS, but because of the transformation of precursors during biological treatment. These results highlight the need to consider PFAS as a class rather than as a sum of individual compounds, since there are more PFAS than are being measured by individual analytical methods, and the specific compounds are changing over time as industries shift to different PFAS mixtures.

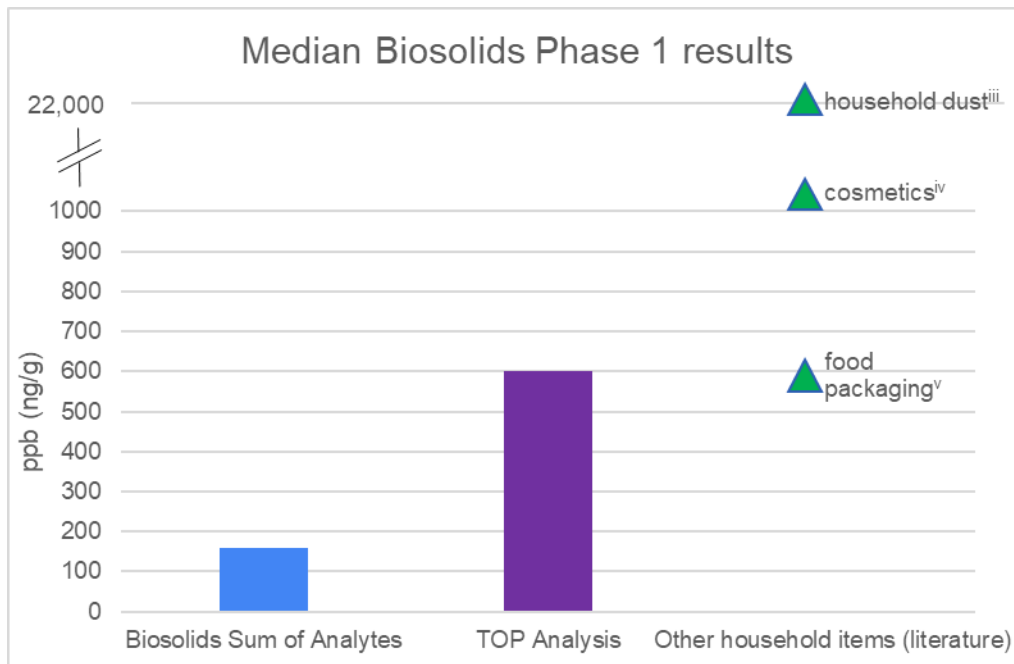


Figure 1: Median biosolids concentrations (ng/g) as measured as the sum of individual analytes, as well as total organic precursors (TOP) shown with typical concentrations found in other sources.

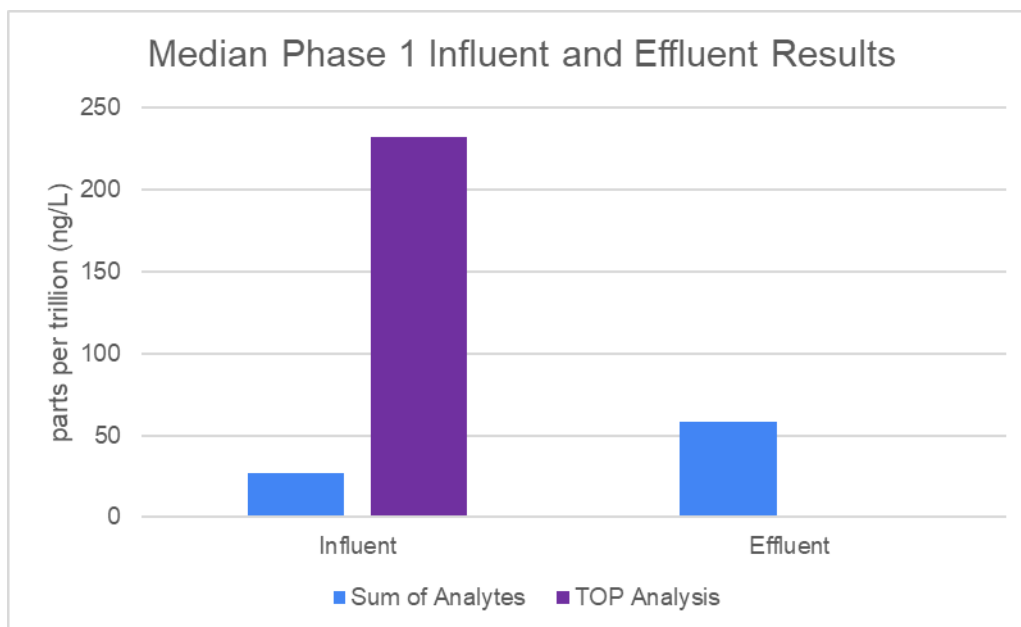


Figure 2: Median influent and effluent concentrations (ng/l) or parts per trillion as measured as the sum of individual analytes, as well as total organic precursors (TOP), which was only performed on influent samples

What does it mean?

Levels of PFAS in Biosolids

Biosolids concentrations, while detectable, are lower than concentrations in common consumer products and in household dust. Levels in some of these other matrices are listed below, although a true apples-to-apples comparison isn't possible since different studies look at different individual PFAS analytes.

- Median sum of analytes in biosolids = 178 ng/g
- Median TOP analysis in biosolids = 594 ng/g
- *Average sum of analytes in household dust = 22,000 ng/gⁱⁱⁱ*
- *Median sum of analytes in cosmetics = 1,050 ng/g^{iv}*
- *Median sum of analytes in takeout food packaging > 580 ng/g^v*

The Bay Area Biosolids Coalition (BABC), a project of Special Benefit of BACWA, is currently sponsoring research through UC Davis to investigate plant uptake rates of PFAS from fields amended with biosolids. This study will add to the existing body of research investigating if there is a health concern related to these levels of PFAS in biosolids. This study is unique in that it will include fields that are amended with food waste compost in addition to control fields that have not received any amendment.

Levels of PFOA, PFOS, and PFBS in Effluent

Most PFAS compound do not have a regulatory threshold. PFOS and PFOA are two types of PFAS that are no longer manufactured in the US although they still are measured in the environment, and have been found in the blood of nearly all people tested in several national surveys. The State Water Board's Division of Drinking Water (DDW) has set notification and response levels for PFOA, PFOS, and perfluorobutane sulfonic acid (PFBS). A response level is the level at which DDW recommends removal of a drinking water source from service. Although no major Bay Area POTW's effluent contributes to a drinking water supply, the median maximum levels of these compounds were compared to the drinking water response levels to provide context (Table 1). Maximum levels in effluent are below drinking water response levels.

Analyte Abbrev.	DDW Drinking Water Response Level (ppt or ng/L)	Median Observed in Effluent (ng/L)	Max Observed in Effluent (ng/L)
PFOS	40	5.6	9.7
PFOA	10	6.3	9.1
PFBS	5,000	4.1	4.8

Table 1. Bay Area POTW concentrations compared to drinking water response levels.

Phase II and other next steps

BACWA and its members are continuing to work with SFEI and the Water Board to make recommendations on the best use of resources for Phase 2 of the study. BACWA and its members are particularly interested in developing actionable data that will inform future source control or other management efforts. To this end, analysis may focus on the fate and transport within treatment processes or work to identify specific sources within sewersheds.

References

ⁱ SWRCB Investigative Order for POTWs:

https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2020/wqo2020_0015_dwq.pdf

ⁱⁱ Region 2 PFAS Study Phase 1 Sampling Plan:

<https://bacwa.org/wp-content/uploads/2020/12/SFEI-Final-PFAS-SAP-Phase-1-2020-11-23.pdf>

ⁱⁱⁱ Hall, S. et al., 2020, Per- and Polyfluoroalkyl Substances in Dust Collected from Residential Homes and Fire Stations in North America, *Ecotoxicology and Public Health*; Available at

<https://pubs.acs.org/doi/pdf/10.1021/acs.est.0c04869>

^{iv} Whitehead et al., 2021, Fluorinated Compounds in North American Cosmetics, *Ecotoxicology and Public Health*; Available at: <https://pubs.acs.org/doi/10.1021/acs.estlett.1c00240?ref=pdf>

^v Strakova et al., 2021 Throwaway Packaging, Forever Chemicals European wide survey of PFAS in disposable food packaging and tableware; Available at https://www.env-health.org/wp-content/uploads/2021/05/FINAL_pfas_fcm_study_web.pdf

ITEM NO. RA9 CLIMATE ADAPTATION UPDATES

Recommendation

For the Committee's information only; no action is required.

Background

As has been discussed with the Commission, there are multiple efforts underway to develop climate adaptation measures in the Bay Area. The Bay Conservation and Development Commission (BCDC) has been working on adaptation issues for over a decade, having launched their Adapting to Rising Tides Program in 2010. BCDC's latest effort to facilitate regional collaboration and planning is the [BayAdapt Program](#). Staff provided the Committee with an introduction to this effort in July 2020.

At the same time, the California Legislature and Governor have made climate adaptation a high priority for use of surplus funding identified in this year's state budget. Staff will provide the Committee with updates on these two efforts.

Discussion

BayAdapt

It is widely acknowledged that regional planning and coordination will be necessary for the Bay Area to effectively adapt to sea level rise, since actions to adapt in one part of the Bay can directly impact others. Yet one of the greatest identified challenges to regional planning has been the dispersed responsibilities and a lack of regional leadership. The stated goal of BayAdapt is "to establish regional agreement on the actions necessary to protect people and the natural and built environment from rising sea levels." The initiative aims to identify a common set of principles and actions that will guide agencies in their adaptation planning efforts going forward.

For the past year, hundreds of stakeholders, including EBDA staff, have engaged at different levels in a process facilitated by BCDC to develop a Joint Platform for addressing sea level rise in the Bay. The result is a Joint Platform that includes nine actions and twenty-one subtasks aimed on improving the regional response. The attached document summarizes the drivers and the Joint Platform.

State Budget

On September 9 and 10, 2021, the Legislature approved the Climate Resilience Package in the State Budget, which consists of \$3.688 billion over the next three years, with \$369.2 million allocated to Fiscal Year 2021/2022. The Package is part of [AB-155](#) and [AB-170](#) in the Assembly and [SB-155](#) and [SB-170](#) in the Senate. A summary of the programs contained within the package and their funding levels is attached.

The budget package includes both policy direction and \$35 Million in funding (in this fiscal year) to:

1. Direct the Office of Planning and Research (OPR), to create a state grant program to support collaborative, multi-agency efforts to establish regional climate adaptation plans and their implementation, and to
2. Provide state grants to local, regional and tribal communities to develop and implement regional climate adaptation plans.

In addition, the package includes an \$240 Million in future years to expand this grant program. Staff expects that following signature by the Governor, discussions will begin regarding implementation. Ultimately, the goal of EBDA and other regional agencies will be to ensure funds flow equitably to the Bay Area for collaboration and implementation of projects consistent with the BayAdapt Joint Platform.

The Bay is Rising

The time to come together to *act* is now.

Sea level rise is no longer a distant threat and the San Francisco Bay Area stands to be one of the hardest hit places in North America. It's past time for us to get ready.

As we walk the dog along our favorite waterfront, the waves don't seem any taller. As we wait in traffic at the Bay Bridge toll plaza, the water level looks the same as ever. But the Bay has already started rising onto our highways and streets during storms. Another foot or two will seriously impact our homes, jobs, habitats, and safety. The San Francisco Bay Area has an enormous amount at stake—and an unprecedented opportunity to address these risks.



At risk of flooding in the next 40 years

28,000 socially vulnerable residents

13,000 existing housing units and
another **70,000** new housing units

104,000 existing jobs and another
85,000 new jobs

20,000 acres of wetlands,
lagoon and tidal marsh habitat

5 million daily highway
vehicle trips

60,000 daily rail
commuters

Impacts from flooding that could occur at 48" Total Water Level from the [ART Bay Area Regional Sea Level Rise Vulnerability and Adaptation Study](#). 48" TWL may occur between 2060 and 2100.

Why *shared* solutions?

- ▶ Sea level rise will **impact everyone** in the Bay Area, no matter where you live.
- ▶ A regional problem requires **regional solutions**.
- ▶ **Flooding know no boundaries** and doesn't care about jurisdictional lines.
- ▶ Solutions should **center on the most vulnerable people** and environments.
- ▶ Bay Adapt is building **regional consensus** to address our strengths and weaknesses, enabling us to respond faster, better and together.
- ▶ Only with **strong local and regional actions** can we ensure the safety and welfare of all the Bay Area.



The Joint Platform:

A regional strategy for a rising Bay

Bay Adapt established regional agreement on the actions necessary to protect the Bay Area's people and natural and built environments from sea level rise.

Bay Adapt is convened by the San Francisco Bay Conservation and Development Commission, a state agency, in partnership with a broad range of Bay Area leaders.

Through dozens of expert working groups, public forums, ten community and stakeholder focus groups, over 50 presentations, an environmental justice caucus, and led by a Leadership Advisory Group—hundreds of people from across the Bay came together to achieve a consensus-driven strategy and regional agreement on a path forward.

Rather than identifying specific projects, the Joint Platform lays out guiding principles and region-wide actions and tasks to achieve **faster, better, and more equitable adaptation** to a rising Bay. It will result in:

- **Reduced flood risk** for communities, businesses, infrastructure, and habitats.
- **Protection of natural areas and wildlife.**
- Robust integration of adaptation into **community-focused local plans.**
- Recognition and **equitable support for low income communities.**
- Accelerated permitting and **project construction.**
- **Technical assistance** for local governments.
- **More funding** for adaptation.



Guiding Principles

- ▶ Support socially vulnerable communities
- ▶ Put nature first whenever possible
- ▶ Solve interconnected problems at the same time
- ▶ Practice inclusive, community-led governance and decision-making
- ▶ Support existing efforts but plan for the long term
- ▶ Pick the right strategy for the right place at the right time

Working together as *one* region to preserve what we care about.

The Bay Area's cultural and environmental diversity is what makes it an incredible place to live. The impacts of sea level rise, and the resources necessary to address them, are unequal across the Bay Area. Healthy Bay ecosystems are inextricably linked to our quality of life — and are also our first line of defense from rising seas. This is why all nine actions in the Joint Platform emphasize achieving **equitable** outcomes to improve the lives of people, the quality of our **environment**, and a thriving **economy** for all.

Nobody can solve these challenges alone. Bay Adapt has been working with partners across the region to integrate and embed Joint Platform actions into existing regional plans and practices. MTC/ABAG's Plan Bay Area 2050, set to be adopted in 2021, now incorporates multiple hazards, including sea level rise. The Estuary Blueprint, a map for regional actions on the health and resilience of Bay ecosystems, is also aligning with Bay Adapt actions. We need everyone to come together to help us collectively create a resilient Bay Area region.

The Joint Platform

9 actions, 21 tasks, 1 region *moving forward together*

PEOPLE



Action 1: Collaborate on a “One Bay” vision to adapt to rising sea levels.

Task 1.1: Create a long-term regional vision rooted in communities.

Task 1.2: Lay the foundation for a proactive regional legislative agenda.

Action 2: Elevate communities to lead.

Task 2.1: Improve how communities and public agencies learn from each other and work together.

Task 2.2: Fund the participation and leadership of community-based organizations (CBOs) and frontline communities in adaptation planning.

INFORMATION



Action 3: Broaden public understanding of climate change science and impacts.

Task 3.1: Tell local and regional stories about people and places adapting to climate change.

Task 3.2: Weave climate literacy into school programs.

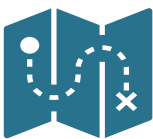
Action 4: Base plans and projects on the best science, data, and knowledge.

Task 4.1: Align research and monitoring with information gaps.

Task 4.2: Make scientific data, information, and guidance easier to use.

Task 4.3: Increase access to technical consultants for local adaptation partners.

PLANS



Action 5: Align local and regional plans into a unified adaptation approach.

Task 5.1: Provide incentives for robust, coordinated adaptation plans.

Task 5.2: Align state-mandated planning processes around adaptation.

Action 6: Figure out how to fund adaptation.

Task 6.1: Expand understanding of the financial costs and revenues associated with regional adaptation.

Task 6.2: Establish a framework for funding plans and projects.

Task 6.3: Help cities and counties expand ways to fund adaptation planning and projects.

PROJECTS



Action 7: Refine and accelerate regulatory approvals processes.

Task 7.1: Accelerate permitting for equitable, multi-benefit projects.

Task 7.2: Tackle environmental regulations and policies that slow down progress on projects.

Action 8: Fund and facilitate faster adaptation projects.

Task 8.1: Incentivize projects that meet regional guidelines.

Task 8.2: Encourage collaboration among people doing projects in the same places.

Task 8.3: Facilitate faster construction of nature-based projects.

PROGRESS



Action 9: Track and report progress to guide future actions.

Task 9.1: Measure regional progress using metrics and share results.

Task 9.2: Monitor and learn from pilot projects.



What can you do?

The draft Joint Platform is now ready for you! Examine the opportunities it can provide to help us decide what to do next. We're all in this together.

For local leaders

- ☑ Share the Joint Platform with your staff and colleagues **and identify which actions** you'd like support for implementation.
- ☑ **Provide feedback on the Joint Platform** using our [online form](#) or email us at BayAdapt@bcdca.gov
- ☑ Write a **letter of support** for the Bay Adapt Joint Platform to help us advocate for regional implementation.

For the interested public

- ☑ Learn more and provide feedback on the **40-page, easy-to-read Joint Platform**. Where can the Joint Platform help?
- ☑ **Understand your community's vulnerability** by using online tools such as the [ART Shoreline Flood Explorer](#) for exploring risks of flooding in your area
- ☑ **Talk to your community** about resilience and preparing for climate change.

Read the Joint Platform, provide feedback through our online form or email us at BayAdapt@bcdca.gov, and learn more at

www.BayAdapt.org

Leadership Advisory Group

Ana Alvarez, East Bay Regional Parks
Tessa Beach, Ph.D., US Army Corps of Engineers
David Behar, SF Public Utilities Commission/ Bay Area Climate Adaptation Network (BayCAN)
John Bourgeois, Valley Water/ CHARG
Allison Brooks, Bay Area Regional Collaborative
Amanda-Brown Stevens, Greenbelt Alliance
Paul Campos, Building Industry Association
Warner Chabot, San Francisco Estuary Institute
John Coleman, Bay Planning Coalition
Dina El-Tawansy, Caltrans District 4
Tian Feng, BART
Julio Garcia, Environmental Justice Caucus Member
Ms. Margaret Gordon, West Oakland Indicators Project
Terrie Green, Shore Up Marin City
Alicia John-Baptiste, SPUR
Melissa Jones, Bay Area Regional Health Inequities Initiative (BARHII)
David Lewis, Save the Bay
Mark Lubell, UC Davis
Therese McMillan, MTC / ABAG
Mike Mielke, Silicon Valley Leadership Group
Michael Montgomery, SF Regional Water Quality Control Board
Barry Nelson, BCDC
Sheridan Noelani Enomoto, NorCal Resilience Network
David Pine, San Mateo County/ San Francisco Bay Restoration Authority
Erika Powell, US Army Corp
Bruce Riordan, Bay Area Climate Adaptation Network (BayCAN)
Amy Hutzel, State Coastal Conservancy
Caitlin Sweeney, San Francisco Estuary Partnership
Laura Tam, Resources Legacy Fund
Will Travis, Independent Consultant
Zack Wasserman, BCDC
Jim Wunderman, Bay Area Council

Photo credits | Page 1 - Side Bar photo courtesy of the California King Tides Project, middle photo by John Morgan licensed under CC BY 2.0; Page 2 - Photo by Annie Frankel; Page 3 - SF Baykeeper, Robb Most, and LightHawk; Page 4 - Photo by LEI from Estuary News from March 2021.

2021-22 Climate Resilience Package (\$ in millions)

FY 2021-22 Climate Resilience Budget | Assembly Floor Report

PROGRAM	BU	DEPARTMENT	2021-22 (GF)	2022-23 (GF)	2023-24 (GF)	TOTAL FUNDING
Extreme Heat						
Urban Greening/Forestry	0540	CNRA	\$50	\$100	\$100	\$250
Low Income Weatherization	4700	CSD	-	\$25	\$25	\$50
Community Resilience Centers/Extreme Heat and Community Resilience Program	0650	SGC	-	\$50	\$150	\$200
Extreme Heat Set Aside	Various	Various	-	\$150	\$150	\$300
Multi-Benefit and Nature-Based Solutions						
Climate Change Impacts on Wildlife	3600	DFW	\$15	\$35	-	\$50
Habitat Restoration	3860	DWR	-	\$125	\$75	\$200
Multi-Benefit and Nature-Based Solutions Set Aside	Various	Various	-	\$593	\$175	\$768
Protect Fish and Wildlife from Changing Conditions	3640	WCB	\$31	\$222	\$100	\$353
Building Ocean and Coastal Resilience						
State Parks Sea Level Rise Adaptation Strategy	3790	Parks	\$12	-	-	\$12
Coastal Protection and Adaptation	3760	SCC	-	\$350	\$150	\$500
Ocean Protection Trust Fund	0540	OPC	-	\$50	\$50	\$100
Building Community and Regional Climate Resilience						
Transformative Climate Communities	0650	SGC	\$115	\$165	\$140	\$420
Regional Climate Collaboratives	0650	SGC	\$10	\$10	-	\$20
Climate Adaptation & Resilience Planning Grants	0650	OPR	\$10	\$10	\$5	\$25
Vulnerable Communities Platform & Cal-Adapt Mapping	0650	OPR	\$5	-	-	\$5
Environmental Justice Initiative	0555	Cal EPA	\$10	\$10	\$5	\$25
California Climate Action Corps	0650	Cal Volunteers	\$5	\$5	\$5	\$14
Regional Climate Resilience Planning and Implementation	0650	OPR/SGC	\$25	\$125	\$100	\$250
State Conservancies <i>Additional funding in out years carved out in Multi-Benefit/Nature-Based Solutions Set Aside</i>	Various	Various	\$60	-	-	\$60
Strategic Climate Resilience Investments & Projects						
Biomass to Hydrogen/Biofuels Pilot	3480	DOC	-	\$50	-	\$50
Fifth Climate Assessment	0540	CNRA	\$6	-	-	\$6
	0650	OPR	\$11	-	-	\$11
	3360	CEC	\$5	-	-	\$5
Fluorinated Gas Reduction Incentive Program	3900	CARB	-	\$15	-	\$15
TOTAL FUNDING			\$369.2	\$2,089.7	\$1,229.7	\$3,688.5

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EAST BAY DISCHARGERS AUTHORITY
2651 Grant Avenue
San Lorenzo, CA 94580-1841
(510) 278-5910
FAX (510) 278-6547

A Joint Powers Public Agency

NOTICE: Pursuant to the Governor's Executive Orders N-25-20 and N-29-20, the Financial Management Committee meeting scheduled below will be accessible via Zoom video conferencing. Members of the public may participate in the meeting through the Zoom link or phone number below.

- Zoom link: <https://us02web.zoom.us/j/82261534447>
- Telephone dial-in: 1(669) 900-6833, meeting ID #822 6153 4447

ITEM NO. 12

FINANCIAL MANAGEMENT COMMITTEE AGENDA

Monday, September 20, 2021

10:00 A.M.

**East Bay Dischargers Authority
2651 Grant Avenue, San Lorenzo, CA 94580**

Committee Members: Duncan (Chair); Andrews

- FM1. Call to Order**
- FM2. Roll Call**
- FM3. Public Forum**
- FM4. List of Disbursements for July and August 2021**
(The Committee will review the List of Disbursements for the months of July and August.)
- FM5. Preliminary Treasurer's Reports for July and August 2021**
(The Committee will review the Treasurer's Report for July and August 2021.)
- FM6. Preliminary Fourth Quarter Expense Summary, Fiscal Year 2020/2021**
(The Committee will review the fourth quarter expenses.)
- FM7. CalPERS Annual Valuation Reports as of June 30, 2020**
(The Committee will review the Authority's pension valuation reports.)
- FM8. Motion to Rescind Additional Discretionary Payment of \$65,861 to Reduce the Unfunded Accrued Liability of the Authority's Pension Plan**
(The Committee will consider the motion.)
- FM9. Draft Budget Policy**
(The Committee will review and provide feedback on the draft policy.)
- FM10. Adjournment**

Agenda Explanation
East Bay Dischargers Authority
Financial Management Committee
September 20, 2021

Any member of the public may address the Committee at the commencement of the meeting on any matter within the jurisdiction of the Committee. This should not relate to any item on the agenda. Each person addressing the Committee should limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Committee on any agenda item should do so at the time the item is considered. Oral comments should be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available and are to be completed prior to speaking.

In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, please contact the Juanita Villasenor at juanita@ebda.org or (510) 278-5910. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are also posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>.

<p>The next Financial Management Committee meeting is scheduled on Monday, October 18, 2021 at 10:00 a.m.</p>
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ITEM NO. FM4 LIST OF DISBURSEMENTS FOR JULY AND AUGUST 2021

The itemized List of Disbursements for the months of July and August 2021 totaled \$1,195,290.42.

Reviewed and Approved by:

Rita Duncan, Chair Financial Management Committee	Date
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Jacqueline T. Zipkin Treasurer	Date
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EAST BAY DISCHARGERS AUTHORITY
Cash Disbursement
July - August 2021

Check #	Payment Date	Invoice #	Vendor Name	Description	Invoice Amount	Disbursement Amount
25304	08/16/2021	EBM-BDO-01484	EBMUD	BACWA MEMBERSHIP	478,728.00	478,728.00
25265	07/15/2021	3021071	REGIONAL MONITORING PROGRAM C/O SFEI	QUARTERLY PARTICIPANT FEE FOR THE RMP 2021 BUDGET	62,009.50	62,009.50
25295	07/30/2021	11414761	BROWN & CALDWELL	ENGINEERING SERVICES - BRINE ASSESSMENT	38,069.74	38,069.74
25301	08/16/2021	383611	CITY OF SAN LEANDRO	O&M - JUN	36,898.02	36,898.02
25303	08/16/2021	002744	UNION SANITARY DISTRICT	O&M - JUN	34,877.08	34,877.08
35338	08/31/2021	002745	UNION SANITARY DISTRICT	O&M - JUL	31,641.50	31,641.50
25275	07/15/2021	0046041-2021-1	THE WATER RESEARCH FOUNDATION	UTILITY MEMBERSHIP	25,580.00	25,580.00
25281	07/30/2021	347889	CITY OF HAYWARD	QUARTERLY O&M APR-JUN	24,071.77	24,071.77
25263	07/15/2021	6832	CSRMA	ALLIANT PROPERTY INSURANCE PROGRAM RENEWAL	22,103.36	22,103.36
25323	08/31/2021	11416971	BROWN & CALDWELL	ENGINEERING SERVICES - BRINE ASSESSMENT	21,615.90	21,615.90
25309	08/16/2021	FB13453	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 3	16,408.00	17,714.50
25309	08/16/2021	FB13292	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 1	1,306.50	
25296	07/30/2021	165733	ENVIRONMENTAL SCIENCE ASSOCIATES	FIRST MILE PROJECT WORK ORDER NO. 1	13,860.68	16,839.97
25296	07/30/2021	165734	ENVIRONMENTAL SCIENCE ASSOCIATES	HAYWARD FEASIBILITY STUDY WORK ORDER NO. 2	2,979.29	
25316	08/16/2021	11415465	BROWN & CALDWELL	ENGINEERING SERVICES - BRINE ASSESSMENT	16,108.84	16,108.84
25329	08/31/2021	166751	ENVIRONMENTAL SCIENCE ASSOCIATES	FIRST MILE PROJECT WORK ORDER NO. 1	11,954.67	15,389.72
25329	08/31/2021	166757	ENVIRONMENTAL SCIENCE ASSOCIATES	HAYWARD FEASIBILITY STUDY WORK ORDER NO. 2	3,435.05	
25320	08/31/2021	20210105.01-1	ASCENT ENVIRONMENTAL, INC	CONSULTING SERVICES - CARGILL CEQA	13,113.75	13,113.75
35339	08/31/2021	49380996	UNIVAR	SODIUM BISULFITE - DELIVERED 08/18/2021	6,497.79	12,992.88
35339	08/31/2021	49343274	UNIVAR	SODIUM BISULFITE - DELIVERED 08/02/2021	6,495.09	
35334	08/31/2021	6489	ORO LOMA SANITARY DISTRICT	ADMIN BUILDING LAND RENT, JANITORIAL SUPPLIES, & RECYCLING SERVICES	8,880.00	8,880.00
25270	07/15/2021	49287699	UNIVAR	SODIUM BISULFITE - DELIVERED 07/09/2021	4,068.89	7,772.71
25270	07/15/2021	49266284	UNIVAR	SODIUM BISULFITE - DELIVERED 06/29/2021	3,703.82	
35331	08/31/2021	12575569	HACH COMPANY	WIMS SOFTWARE SUBSCRIPTION RENEWAL	6,538.00	6,538.00
25293	07/30/2021	49309113	UNIVAR	SODIUM BISULFITE - DELIVERED 07/19/2021	6,070.91	6,070.91
25271	07/15/2021	0621-20	BEECHER ENGINEERING, INC	PROFESSIONAL ELECTRICAL ENGINEERING SERVICES	5,000.00	5,000.00
25322	08/31/2021	8/15/2021	AZYURA	WATERBITS LICENSING AND SMR/EDMR REPORT SERVICES	4,750.00	4,750.00
35335	08/31/2021	17636	PACIFIC ECORISK	CHRONIC AND ACUTE TOXICITY TESTING	4,726.00	4,726.00
25272	07/15/2021	378288	E&M ELECTRIC & MACHINERY, INC	CITECT SCADA RENEWAL	3,808.35	4,408.35
25272	07/15/2021	378286	E&M ELECTRIC & MACHINERY, INC	TOPVIEW SUPPORT RENEWAL	600.00	
25264	07/15/2021	FB12026	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 3	4,329.00	4,329.00
25307	08/16/2021	Jun-21	DEBORAH QUINN	ACCOUNTING SERVICES - JUN	4,186.88	4,186.88
35342	08/31/2021	0911086	VINCENT ELECTRIC MOTOR CO	OLEPS PUMP NO 4 MOTOR REBUILD	3,839.35	3,839.35
25253	07/15/2021	APR-JUN2021	KARL D. ROYER	QUARTERLY HEALTH PREMIUM REIMBURSEMENT	3,462.84	3,462.84
25290	07/30/2021	FB12549	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 1	3,216.00	3,216.00
25260	07/15/2021	Apr-21	DEBORAH QUINN	ACCOUNTING SERVICES - APR	2,990.63	2,990.63
25315	08/16/2021	378265	E&M ELECTRIC & MACHINERY, INC	HISTORIAN & AVEVA REPORTS RENEWAL	2,929.50	2,929.50
25286	07/30/2021	May-21	DEBORAH QUINN	ACCOUNTING SERVICES - MAY	2,681.25	2,681.25
25268	07/15/2021	EA06-0521	EOA, INC	NPDES PERMIT REISSUANCE ASSISTANCE	2,593.59	2,593.59
25274	07/15/2021	901039	LOCAL GOVERNMENT COMMISSION	BAYCAN ANNUAL MEMBERSHIP	2,500.00	2,500.00
25267	07/15/2021	4246044555687620	US BANK	PURCHASING CARD EXPENSES	2,414.63	2,414.63
35333	08/31/2021	22403614	JOHNSON CONTROLS	FIRE ALARM SERVICE, TESTING, & MONITORING	2,278.00	2,278.00
25285	07/30/2021	49271	CALCON	HEPS PMS	1,046.10	2,228.36
25285	07/30/2021	49265	CALCON	MDF SERVICE CALL	912.26	
25285	07/30/2021	49270	CALCON	SKYWEST PMS	270.00	
25255	07/15/2021	570197	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 07/15/2021	2,030.67	2,030.67

EAST BAY DISCHARGERS AUTHORITY
Cash Disbursement
July - August 2021

Check #	Payment Date	Invoice #	Vendor Name	Description	Invoice Amount	Disbursement Amount
25300	08/16/2021	586295	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 08/15/2021	1,830.67	1,830.67
35340	08/31/2021	594895	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 08/31/2021	1,830.67	1,830.67
25280	07/30/2021	578069	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 07/31/2021	1,830.67	1,830.67
25314	08/16/2021	EA06-0621	EOA, INC	NPDES PERMIT REISSUANCE ASSISTANCE	1,760.81	1,760.81
25312	08/16/2021	523915	R-COMPUTER	IT PRODUCTS	1,717.70	1,717.70
25302	08/16/2021	52205702	CITY OF HAYWARD	BENEFIT PREMIUMS - AUG	1,345.92	1,345.92
25256	07/15/2021	52205701	CITY OF HAYWARD	BENEFIT PREMIUMS - JULY	1,345.92	1,345.92
25327	08/31/2021	652974	CORRPRO COMPANIES, INC	FORCE MAIN BI-ANNUAL CATHODIC PROTECTION SYSTEM SURVEY	1,320.00	1,320.00
35332	08/31/2021	1299490	HANSON BRIDGETT	LEGAL SERVICES	1,280.00	1,280.00
25258	07/15/2021	1746192-21	SCIF	WORKERS COMPENSATION PREMIUM - JUL	679.25	1,001.94
25258	07/15/2021	1746192-21	SCIF	WORKERS COMPENSATION PREMIUM SURCHARGES	322.69	
25325	08/31/2021	624144	CALTEST	LAB TESTING SERVICES - JUL	864.90	864.90
25298	07/30/2021	623197	CALTEST	LAB TESTING SERVICES - JUNE	864.90	864.90
25276	07/15/2021	P225072	CORE & MAIN LP	SKYWEST PUMP STATION VALVE	832.84	832.84
25324	08/31/2021	49456	CALCON	OPS CENTER SCADA DATA BACKUP	453.60	733.60
25324	08/31/2021	49455	CALCON	OPS CENTER LAVWMA FLOW DATA	280.00	
25306	08/16/2021	1746192-21	SCIF	WORKERS COMPENSATION PREMIUM - AUG	679.25	679.25
25313	08/16/2021	4246044555687620	US BANK	PURCHASING CARD EXPENSES	660.51	660.51
25297	07/30/2021	SI168640	WATSON MARLOW, INC	MDF SBS PUMP PARTS	602.59	602.59
25254	07/15/2021	APR-JUN2021	CHARLES V. WEIR	QUARTERLY HEALTH PREMIUM REIMBURSEMENT	527.88	527.88
25279	07/15/2021	14308	CITY OF FOSTER CITY	CALOPPS JOB POSTING SERVICE	510.00	510.00
25269	07/15/2021	39551	BA MORRISON	HVAC SERVICE - ADMIN	480.00	480.00
25310	08/16/2021	8299	CAYUGA INFORMATION SYSTEMS	IT SERVICES	446.25	446.25
25259	07/15/2021	4KK07	BAAQMD	PERMIT TO OPERATE HEPS	441.00	441.00
25317	08/16/2021	Jul-21	EVERARDO OROZCO LANDSCAPE MANAGEMENT	LANDSCAPING SERVICES - JUL	375.00	375.00
25273	07/15/2021	Jun-21	EVERARDO OROZCO LANDSCAPE MANAGEMENT	LANDSCAPING SERVICES - JUN	375.00	375.00
25319	08/31/2021	1082424	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	340.00
25319	08/31/2021	1083190	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25319	08/31/2021	1084315	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25319	08/31/2021	1085037	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25294	07/30/2021	1075075	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	340.00
25294	07/30/2021	1073952	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25294	07/30/2021	1072967	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25294	07/30/2021	1072588	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25257	07/15/2021	510 278-5910	AT&T	TELEPHONE SERVICE - ADMIN BUILDING	338.82	338.82
25305	08/16/2021	510 278-5910	AT&T	TELEPHONE SERVICE - ADMIN BUILDING	337.78	337.78
25328	08/31/2021	10110000001	EBMUD	WATER & SEWER, MDF JUN-AUG	329.24	329.24
25289	07/30/2021	00013.11-8	LARRY WALKER ASSOCIATES	PROFESSIONAL SERVICES - WORK ORDER NO. 2	274.00	274.00
25277	07/15/2021	48272	COMPUTER COURAGE	WEBSITE HOSTING - JULY	150.00	232.50
25277	07/15/2021	48412	COMPUTER COURAGE	GENERAL WEBSITE UPDATES	82.50	
25283	07/30/2021	510-483-0439	AT&T	TELEPHONE SERVICE - MDF	208.37	208.37
25311	08/16/2021	217598795	ORKIN	PEST CONTROL SERVICES - MDF	200.00	200.00
25321	08/31/2021	510-483-0439	AT&T	TELEPHONE SERVICE - MDF	197.27	197.27
35336	08/31/2021	16349	TOWN & COUNTRY	JANITORIAL SERVICES - AUG	165.00	165.00
25292	07/30/2021	15882	TOWN & COUNTRY	JANITORIAL SERVICES - JULY	165.00	165.00
25284	07/30/2021	Nov-98	GFOA	ANNUAL MEMBERSHIP DUES	160.00	160.00

EAST BAY DISCHARGERS AUTHORITY
Cash Disbursement
July - August 2021

Check #	Payment Date	Invoice #	Vendor Name	Description	Invoice Amount	Disbursement Amount
35330	08/31/2021	9020492717	GRAINGER	FORCE MAIN SUPPLIES	83.39	155.26
35330	08/31/2021	9020981628	GRAINGER	FORCE MAIN SUPPLIES	71.87	
25262	07/15/2021	9943067588	GRAINGER	REPAIRS & MAINTENANCE SUPPLIES	153.94	153.94
25318	08/16/2021	48478	COMPUTER COURAGE	WEBSITE HOSTING - AUG	150.00	150.00
35337	08/31/2021	1417262021	UNDERGROUND SERVICE ALERT 811	ANNUAL MEMBERSHIP RENEWAL	150.00	150.00
25299	07/30/2021	3294562	CALTRONICS	COPIER USAGE AND MAINTENANCE	107.45	107.45
25291	07/30/2021	8293	CAYUGA INFORMATION SYSTEMS	IT SERVICES	105.00	105.00
25282	07/30/2021	44777800001	EBMUD	WATER & SEWER, ADMIN MAY-JUL	97.48	97.48
25266	07/15/2021	1683255	ALLIANT INSURANCE	ALLIANT MOBILE VEHICLE PROGRAM RENEWAL	93.00	93.00
25308	08/16/2021	9885271100	VERIZON WIRELESS	WIRELESS PHONE SERVICES	60.07	60.07
25261	07/15/2021	9883102301	VERIZON WIRELESS	WIRELESS PHONE SERVICES	60.07	60.07
25278	07/15/2021	04352	CALGOVHR	ANNUAL MEMBERSHIP DUES	60.00	60.00
25326	08/31/2021	3315209	CALTRONICS	COPIER USAGE AND MAINTENANCE	49.99	49.99
25288	07/30/2021	9962767258	GRAINGER	FORCE MAIN SUPPLIES	30.63	30.63
25287	07/30/2021	9883891249	VERIZON WIRELESS	MODEM FOR SCADA	16.15	16.15
35341	08/31/2021	9886061196	VERIZON WIRELESS	MODEM FOR SCADA	5.19	5.19
25178			CITY OF HAYWARD	VOID	(1,330.77)	(1,330.77)
TOTAL CHECK PAYMENTS					984,490.66	984,490.66
ELECTRONIC PAYMENTS						
08/25/2021	5105948980-0	PG&E		GAS & ELECTRIC SERVICE	39,855.66	39,855.66
07/13/2021	5105948980-0	PG&E		GAS & ELECTRIC SERVICE	33,172.94	33,172.94
07/16/2021	100000016476991	CALPERS		ANNUAL UAL	20,864.00	20,864.00
08/09/2021	100000016496640	CALPERS		HEALTH PREMIUMS - AUG	6,907.99	6,907.99
07/07/2021	100000016462789	CALPERS		HEALTH PREMIUMS - JULY	6,907.08	6,907.08
08/03/2021	100000016460552	CALPERS		PENSION CONTRIBUTION, CLASSIC 07/16 - 31/2021	4,575.23	4,575.23
08/19/2021	100000016483782	CALPERS		PENSION CONTRIBUTION, CLASSIC 08/01 - 15/2021	4,575.23	4,575.23
07/19/2021	100000016460547	CALPERS		PENSION CONTRIBUTION, CLASSIC 07/01 - 15/2021	4,575.23	4,575.23
07/02/2021	100000016430358	CALPERS		PENSION CONTRIBUTION, CLASSIC 06/16 - 30/2021	4,521.26	4,521.26
08/26/2021	100000016511536	CALPERS		GASB 68 REPORT AND SCHEDULES FEES	700.00	700.00
08/11/2021		WELLS FARGO		CLIENT ANALYSIS SERVICE CHARGE	43.32	43.32
07/12/2021		WELLS FARGO		CLIENT ANALYSIS SERVICE CHARGE	14.77	14.77
TOTAL ELECTRONIC PAYMENTS					126,712.71	126,712.71
PAYROLL						
07/29/2021		ADP, LLC		PAYROLL PERIOD: 07/16-31/2021	22,947.83	22,947.83
08/12/2021		ADP, LLC		PAYROLL PERIOD: 08/01-15/2021	20,356.42	20,356.42
08/30/2021		ADP, LLC		PAYROLL PERIOD: 08/16-31/2021	20,307.83	20,307.83
07/14/2021		ADP, LLC		PAYROLL PERIOD: 07/01-15/2021	20,156.42	20,156.42
07/02/2021	4527175	ADP, LLC		PAYROLL FEES, PERIOD: 06/16-30/2021	88.25	88.25
08/06/2021	585467213	ADP, LLC		PAYROLL FEES, PERIOD: 07/16-31/2021	85.60	85.60
08/20/2021	586370801	ADP, LLC		PAYROLL FEES, PERIOD: 08/01-15/2021	72.35	72.35
07/23/2021	5489683	ADP, LLC		PAYROLL FEES, PERIOD: 07/01-15/2021	72.35	72.35
TOTAL PAYROLL					84,087.05	84,087.05
TOTAL DISBURSEMENTS					1,195,290.42	1,195,290.42

**ITEM NO. FM5 PRELIMINARY TREASURER'S REPORT FOR JULY AND AUGUST
2021**

The beginning cash balance on July 1, 2021 was \$3,393,358.21. The ending cash balance on August 31, 2021 was \$5,112,513.00. Total receipts for the period were \$2,914,445.21 and disbursements totaled \$1,195,290.42. EBDA's LAIF balance is \$2,258,744.16 and the interest rate for August was 0.22%.

EBDA currently has a two-pronged investment approach that includes Local Agency Investment Fund (LAIF) and traditional bank accounts. Staff will work with the Committee on investment strategy going forward.

Approval is recommended.

EAST BAY DISCHARGERS AUTHORITY
PRELIMINARY
TREASURER'S REPORT
JULY 31, 2021

FUND	DESCRIPTION	BEGINNING CASH BALANCE	DEBITS (INCREASE)	CREDITS (DECREASE)	ENDING CASH BALANCE
12	OPERATIONS & MAINTENANCE	1,071,445.77	677,340.23	204,263.15	1,544,522.85
13	PLANNING & SPECIAL STUDIES	279,416.30	225,235.83	152,911.80	351,740.33
14	RECLAMATION O & M (SKYWEST)	37,200.06	27,000.00	1,442.84	62,757.22
15	BRINE ACCEPTANCE	0.00			0.00
31	RENEWAL & REPLACEMENT	2,005,296.08	157,842.70	5,000.00	2,158,138.78
TOTALS		3,393,358.21	1,087,418.76	363,617.79	4,117,159.18

Jul-21

9/15/2021

SUPPLEMENTAL TREASURERS REPORT

DATE	TRANSACTION	RECEIPT	DISBURSEMENT CHECKING	DISBURSEMENT PAYROLL	PAYROLL TRANSFER	LAIF TRANSFER	CD TRANSFER	CD INTEREST & EXPENSES	WELLS FARGO CHECKING BALANCE	WELLS FARGO PAYROLL BALANCE	LAIF BALANCE	WELLS FARGO CERTIFICATES OF DEPOSIT	TOTAL CASH
06/30/21	BALANCE								1,115,049.50	19,808.82	2,256,901.46	1,598.43	3,393,358.21
07/02/21	ELECTRONIC BILL PAY		4,521.26						1,110,528.24	19,808.82	2,256,901.46	1,598.43	3,388,836.95
07/02/21	PAYROLL FEES			88.25					1,110,528.24	19,720.57	2,256,901.46	1,598.43	3,388,748.70
07/07/21	ELECTRONIC BILL PAY		6,907.08						1,103,621.16	19,720.57	2,256,901.46	1,598.43	3,381,841.62
07/12/21	ANALYSIS FEE		14.77						1,103,606.39	19,720.57	2,256,901.46	1,598.43	3,381,826.85
07/12/21	PAYROLL TRANSFER				20,000.00				1,083,606.39	39,720.57	2,256,901.46	1,598.43	3,381,826.85
07/13/21	ELECTRONIC BILL PAY		33,172.94						1,050,433.45	39,720.57	2,256,901.46	1,598.43	3,348,653.91
07/14/21	PAYROLL			20,156.42					1,050,433.45	19,564.15	2,256,901.46	1,598.43	3,328,497.49
07/15/21	DISBURSEMENT		153,648.19						896,785.26	19,564.15	2,256,901.46	1,598.43	3,174,849.30
07/15/21	INTEREST	1,842.70				1,842.70			896,785.26	19,564.15	2,258,744.16	1,598.43	3,176,692.00
07/16/21	ELECTRONIC BILL PAY		20,864.00						875,921.26	19,564.15	2,258,744.16	1,598.43	3,155,828.00
07/19/21	DEPOSIT - HAYWARD	27,000.00							902,921.26	19,564.15	2,258,744.16	1,598.43	3,182,828.00
07/19/21	ELECTRONIC BILL PAY		4,575.23						898,346.03	19,564.15	2,258,744.16	1,598.43	3,178,252.77
07/22/21	VOID CHECK		(1,330.77)						899,676.80	19,564.15	2,258,744.16	1,598.43	3,179,583.54
07/23/21	PAYROLL FEES			72.35					899,676.80	19,491.80	2,258,744.16	1,598.43	3,179,511.19
07/26/21	PAYROLL TRANSFER				25,000.00				874,676.80	44,491.80	2,258,744.16	1,598.43	3,179,511.19
07/26/21	DEPOSIT - USD	1,053,076.06							1,927,752.86	44,491.80	2,258,744.16	1,598.43	4,232,587.25
07/29/21	PAYROLL			22,947.83					1,927,752.86	21,543.97	2,258,744.16	1,598.43	4,209,639.42
07/30/21	DEPOSIT	5,500.00							1,933,252.86	21,543.97	2,258,744.16	1,598.43	4,215,139.42
07/30/21	DISBURSEMENT		97,980.24						1,835,272.62	21,543.97	2,258,744.16	1,598.43	4,117,159.18
TOTAL		1,087,418.76	320,352.94	43,264.85	45,000.00	1,842.70	-	-	1,835,272.62	21,543.97	2,258,744.16	1,598.43	4,117,159.18
CURRENT BALANCE									①	②	③	④	
Reconciliation													
①	Per Bank Statement @ 07/31/21	\$ 1,934,658.78											
	Less: Outstanding Checks	99,386.16											
		\$ 1,835,272.62											
②	Per Bank Statement @ 07/31/21	\$ 21,543.97											
③	Per LAIF Statement @ 07/31/21	\$ 2,258,744.16											
④	Per Treasurer's Report @ 07/31/21	\$ 1,598.43											
	Fair Market Value Increase/Decrease	(1,598.42)											
	Per Investment Statement @ 7/31/21	\$ 0.01											

The Supplemental Treasurer's Report is prepared monthly by the General Manager. It also serves as EBDA's cash and investments reconciliation.

EAST BAY DISCHARGERS AUTHORITY
PRELIMINARY
TREASURER'S REPORT
AUGUST 31, 2021

FUND	DESCRIPTION	BEGINNING CASH BALANCE	DEBITS (INCREASE)	CREDITS (DECREASE)	ENDING CASH BALANCE
12	OPERATIONS & MAINTENANCE	1,544,522.85	888,888.64	449,163.76	1,984,247.73
13	PLANNING & SPECIAL STUDIES	351,740.33	474,137.81	339,298.28	486,579.86
14	RECLAMATION O & M (SKYWEST)	62,757.22		340.00	62,417.22
15	BRINE ACCEPTANCE	0.00	80,000.00	39,031.24	40,968.76
31	RENEWAL & REPLACEMENT	2,158,138.78	384,000.00	3,839.35	2,538,299.43
TOTALS		4,117,159.18	1,827,026.45	831,672.63	5,112,513.00

Aug-21

9/15/2021

SUPPLEMENTAL TREASURERS REPORT

DATE	TRANSACTION	RECEIPT	DISBURSEMENT CHECKING	DISBURSEMENT PAYROLL	PAYROLL TRANSFER	LAIF TRANSFER	CD TRANSFER	CD INTEREST & EXPENSES	WELLS FARGO CHECKING BALANCE	WELLS FARGO PAYROLL BALANCE	LAIF BALANCE	WELLS FARGO CERTIFICATES OF DEPOSIT	TOTAL CASH
07/31/21	BALANCE								1,835,272.62	21,543.97	2,258,744.16	1,598.43	4,117,159.18
08/03/21	ELECTRONIC BILL PAY		4,575.23						1,830,697.39	21,543.97	2,258,744.16	1,598.43	4,112,583.95
08/06/21	DEPOSIT - DSRSD	80,000.00							1,910,697.39	21,543.97	2,258,744.16	1,598.43	4,192,583.95
08/06/21	DEPOSIT - CVSD	250,249.51							2,160,946.90	21,543.97	2,258,744.16	1,598.43	4,442,833.46
08/06/21	PAYROLL FEES			85.60					2,160,946.90	21,458.37	2,258,744.16	1,598.43	4,442,747.86
08/09/21	DEPOSIT - CARGILL	78,129.48							2,239,076.38	21,458.37	2,258,744.16	1,598.43	4,520,877.34
08/09/21	DEPOSIT - CSL	162,516.87							2,401,593.25	21,458.37	2,258,744.16	1,598.43	4,683,394.21
08/09/21	ELECTRONIC BILL PAY		6,907.99						2,394,685.26	21,458.37	2,258,744.16	1,598.43	4,676,486.22
08/10/21	PAYROLL TRANSFER				23,000.00				2,371,685.26	44,458.37	2,258,744.16	1,598.43	4,676,486.22
08/11/21	ANALYSIS FEE		43.32						2,371,641.94	44,458.37	2,258,744.16	1,598.43	4,676,442.90
08/12/21	PAYROLL			20,356.42					2,371,641.94	24,101.95	2,258,744.16	1,598.43	4,656,086.48
08/13/21	DEPOSIT - LAVWMA	465,342.96							2,836,984.90	24,101.95	2,258,744.16	1,598.43	5,121,429.44
08/16/21	DEPOSIT - OLSD	506,347.76							3,343,332.66	24,101.95	2,258,744.16	1,598.43	5,627,777.20
08/16/21	DISBURSEMENT		601,006.78						2,742,325.88	24,101.95	2,258,744.16	1,598.43	5,026,770.42
08/19/21	DEPOSIT - CERBT	65,861.00							2,808,186.88	24,101.95	2,258,744.16	1,598.43	5,092,631.42
08/19/21	ELECTRONIC BILL PAY		4,575.23						2,803,611.65	24,101.95	2,258,744.16	1,598.43	5,088,056.19
08/20/21	PAYROLL FEES			72.35					2,803,611.65	24,029.60	2,258,744.16	1,598.43	5,087,983.84
08/24/21	DEPOSIT - ABAG	90,328.87							2,893,940.52	24,029.60	2,258,744.16	1,598.43	5,178,312.71
08/25/21	ELECTRONIC BILL PAY		39,855.66						2,854,084.86	24,029.60	2,258,744.16	1,598.43	5,138,457.05
08/26/21	PAYROLL TRANSFER				50,000.00				2,804,084.86	74,029.60	2,258,744.16	1,598.43	5,137,757.05
08/26/21	ELECTRONIC BILL PAY		700.00						2,803,384.86	74,029.60	2,258,744.16	1,598.43	5,137,757.05
08/30/21	DEPOSIT - COH	128,250.00							2,931,634.86	74,029.60	2,258,744.16	1,598.43	5,266,007.05
08/30/21	PAYROLL			20,307.83					2,931,634.86	53,721.77	2,258,744.16	1,598.43	5,245,699.22
08/31/21	DISBURSEMENT		133,186.22						2,798,448.64	53,721.77	2,258,744.16	1,598.43	5,112,513.00
	TOTAL	1,827,026.45	790,850.43	40,822.20	73,000.00	-	-	-	2,798,448.64	53,721.77	2,258,744.16	1,598.43	5,112,513.00
	CURRENT BALANCE								2,798,448.64	53,721.77	2,258,744.16	1,598.43	5,112,513.00

Reconciliation

① Per Bank Statement @ 08/31/21 \$ 2,963,150.24
Less: Outstanding Checks 164,701.60
\$ 2,798,448.64

② Per Bank Statement @ 08/31/21 \$ 53,721.77

③ Per LAIF Statement @ 08/31/21 \$ 2,258,744.16

④ Per Treasurer's Report @ 08/31/21 \$ 1,598.43
Fair Market Value Increase/Decrease (1,598.42)
Per Investment Statement @ 8/31/21 \$ 0.01

The Supplemental Treasurer's Report is prepared monthly by the General Manager. It also serves as EBDA's cash and investments reconciliation.

ITEM NO. FM6 PRELIMINARY FOURTH QUARTER EXPENSE SUMMARY, FISCAL YEAR 2020/2021

Recommendation

Review year end expenses and provide direction to staff on use of unspent budget.

Background

This staff summary presents agency preliminary final expense summary for FY 2020/2021.

Discussion

Overall, EBDA's annual expenses were 21% under budget. The O&M Fund was 19% under budget, thanks largely to optimization of operations and maintenance and a dry winter resulting in decreased chemical and energy costs. In addition, reimbursement for labor hours spent on the Cargill project further offset salary and benefit costs. The Skywest Fund was close to budget, as reduced and optimized operation was offset by the \$100,000 insurance deductible paid for the May 2020 pipeline leak.

The Special Projects Fund ended the year 25% under budget. All consultant expenses incurred for both the Cargill project and the EPA-funded Nature-based Solutions Project are reimbursable. Work on several projects is continuing in FY 2021/2022, including NPDES Permit Reissuance, AQPI, and Disinfection Master Plan. Per the adopted FY 2021/2022 Budget, funds will be carried over for ongoing projects.

The Year End Expense Summary for FY 2020/2021 is attached for the Committee's review. Expenses are presented by Program and by Account Number. These categories have been grouped to provide a summary overview of Authority expenses. The tables include discussion of particular items that varied significantly (>10%) from the budget. These tables have also been modified to show revenues from Cargill and the EPA grant, which total over \$600,000 this year, offsetting costs. Staff notes that this is a preliminary summary, and additional expenses may come in before the fiscal year is officially closed.

Accounting for the carryover of \$195,000 in project funds as approved in the FY 2021/2022 Budget, the FY 2020/2021 credit available to the agencies is approximately \$869,000. Staff is seeking direction on distribution of these funds. Historically, funds were returned to the agencies as a credit against the subsequent fiscal year's bills, and this would be the default approach for this year. In recent years, funds were used to prefund OPEB and pension liabilities, however as discussed in Items No. FM7 and FM8, funding levels for the Authority's OPEB trust and CalPERS pension fund now exceed the target level. The Commission could also consider moving unspent funds into the Renewal and Replacement Fund or other reserve fund to offset future costs.

East Bay Dischargers Authority

EXPENSE SUMMARY BY PROGRAM

FY 2020/21 THROUGH JUNE 30, 2021 (100% of YEAR)

	YTD Expenses	Budget	Revenues - Cargill and Grant	Variance	% of Budget	Explanations for Variance Over 10%
O&M EFFLUENT DISPOSAL						
General Administration	\$935,954	\$1,254,764	(\$44,321)	(\$363,131)	71%	Benefits lower than budgeted, CERBT disbursement (\$65,861) was credited to this program to offset costs, and some salary costs were defrayed by the Cargill brine project.
Outfall & Force mains	\$155,688	\$181,336		(\$25,648)	86%	Low due to labor efficiencies.
San Leandro Pump Station	\$11,392	\$0		\$11,392	100%	SLEPS is now San Leandro's responsibility, but some costs were incurred to close out projects that were initiated last fiscal year.
Marina Dechlor Facility	\$365,597	\$506,003		(\$140,406)	72%	Low due to minimal wet weather and labor efficiencies.
Oro Loma Pump Station	\$430,263	\$463,920		(\$33,657)	93%	
Hayward Pump Station	\$136,247	\$163,336		(\$27,089)	83%	Low due to minimal wet weather.
Union Pump Station	\$320,904	\$365,336		(\$44,432)	88%	Low due to minimal wet weather.
Bay & Effluent Monitoring	\$484,733	\$534,550		(\$49,817)	91%	
TOTAL O&M EFFLUENT DISPOSAL	\$2,840,778	\$3,469,245	(\$44,321)	(\$672,788)	81%	
SPECIAL PROJECTS						
NPDES Permit Fees	\$538,685	\$555,483		(\$16,798)	97%	
NPDES Permit Issues	\$22,669	\$200,000		(\$177,331)	11%	Reserve funds in case of enforcement. Funds expended have been used for NPDES reissuance activities.
Regional Monitoring Program	\$246,184	\$280,000		(\$33,816)	88%	Fees were lower than anticipated.
Nutrient Surcharge	\$269,479	\$269,479		\$0	100%	
Water Environment Research Foundation	\$23,407	\$25,000		(\$1,593)	94%	
Transport System Evaluation	\$7,210	\$20,000		(\$12,790)	36%	Work has been carried over to next FY.
JPA Legal Support	\$35,037	\$42,000		(\$6,963)	83%	These funds carried over from JPA negotiation legal support were used to develop Procurement Policy.
AQPI	\$0	\$29,000		(\$29,000)	0%	EBDA will be invoiced by Sonoma Water next FY due to project delays.
Operator Training Modules	\$0	\$16,000		(\$16,000)	0%	Work has been carried over to next FY.
Brine Project Development	\$467,843	\$30,000	(\$472,844)	(\$35,002)	0%	All work performed is reimbursed by Cargill.
Strategic Planning	\$0	\$10,000		(\$10,000)	0%	Work deferred to next FY.
Disinfection Master Plan	\$27,560	\$40,000		(\$12,440)	69%	Work initiated in Q3 and carries over to next FY.
Contingency - Admin Support	\$0	\$22,246		(\$22,246)	0%	Funds to be left in contingency per new Classification Plan.
PFAS Sampling	\$0	\$15,000		(\$15,000)	0%	Costs were covered through BACWA for a regional study, and individual sampling was not required for all dischargers.
Nature-Based Solutions Study	\$90,329	\$0	(\$90,329)	\$0	0%	Costs were reimbursed through EPA grant.
NPDES Testing - CSL	\$1,500	\$1,500		\$0	100%	
NPDES Testing - OLSD	\$1,500	\$1,500		\$0	100%	
NPDES Testing - HAY	\$1,500	\$1,500		\$0	100%	
NPDES Testing - USD	\$1,500	\$1,500		\$0	100%	
TOTAL SPECIAL PROJECTS	\$1,734,403	\$1,560,208	(\$563,173)	(\$388,978)	75%	
WATER RECYCLING						
Skywest Golf Course	\$118,013	\$120,000		(\$1,987)	98%	Includes insurance claim deductible for incident that occurred in May 2020.
TOTAL WATER RECYCLING	\$118,013	\$120,000	\$0	(\$1,987)	98%	
TOTAL PROGRAMS	\$4,693,194	\$5,149,453	(\$607,494)	(\$1,063,753)	79%	

East Bay Dischargers Authority

EXPENSE SUMMARY BY ACCOUNT

FY 2020/21 THROUGH JUNE 30, 2021 (100% OF YEAR)

	YTD Expenses	Budget	Revenues - Cargill and Grant	Variance	% of Budget	Explanations for Variance Over 10%
4010 - Salary	\$540,706	\$543,442	(\$27,881)	(\$30,617)	94%	
4020 - Benefits	\$159,202	\$282,582	(\$16,440)	(\$139,820)	51%	Reduction in number of retirees supported; budgeted CalPERS UAL was higher than actual due to recent discretionary payment; CERBT disbursement (\$65,861) was credited to this account to offset costs.
4030 - Commissioner Compensation	\$33,840	\$45,000		(\$11,160)	75%	Budget assumes maximum number of meetings and several Committees are currently on reduced schedules.
4070 - Insurance	\$143,526	\$60,000		\$83,526	239%	Includes \$100,000 deductible for Skywest claim.
4080 - Memberships & Subscriptions	\$143,364	\$155,677		(\$12,313)	92%	
4100 - Supplies, Variable	\$224,676	\$287,000		(\$62,324)	78%	Low due to minimal wet weather.
4100 - Supplies, Fixed	\$4,261	\$24,000		(\$19,739)	18%	Significant spending on supplies for office and facilities was not required.
4110 - Contract Services	\$53,910	\$132,320		(\$78,410)	41%	Minimal contract services for the force main and pump stations were required.
4120 - Professional Services	\$905,285	\$712,190	(\$538,509)	(\$345,414)	51%	Several Special Studies were deferred (see Expenses by Program), and expenses for Cargill and the Nature-based Solutions Project were reimbursed.
4140 - Rents & Fees	\$1,071,719	\$1,107,242		(\$35,523)	97%	
4141 - NPDES Fines	\$0	\$209,000		(\$209,000)	0%	Reserve funds in case of enforcement.
4150 - Maintenance & Repair	\$618,270	\$711,500		(\$93,230)	87%	Low due to minimal wet weather.
4160 - Monitoring	\$165,564	\$185,000		(\$19,436)	89%	Lower spending than anticipated on monitoring for Skywest due to decreased operation.
4170 - Travel	\$2,949	\$18,000		(\$15,051)	16%	Reduced travel due to COVID pandemic.
4190 - Utility, Fixed	\$16,877	\$21,500		(\$4,623)	78%	Lower than expected utility costs.
4191 - Utility, Variable (PG&E)	\$605,429	\$615,000		(\$9,571)	98%	
4200 - Acquisitions & Other	\$3,618	\$40,000	(\$24,664)	(\$61,046)	0%	Deferred capital spending on the Skywest recycled water system; revenue from Cargill contract markups.
TOTAL ALL ACCOUNTS	\$4,693,194	\$5,149,453	(\$607,494)	(\$1,063,753)	79%	

ITEM NO. FM7 CALPERS ANNUAL VALUATION REPORTS AS OF JUNE 30, 2020

Recommendation

For the Committee's information only, and no action is required.

Background

The Authority participates in the California Public Employees' Retirement System (CalPERS) for its pension benefits. In addition, on April 21, 2011, the EBDA Commission approved an agreement with CalPERS to participate in its California Employers Retiree Benefit Trust (CERBT) Fund to pre-fund other post-employment benefits (OPEB) including retiree health. The fund operates much like the CalPERS pension fund in that it is designed to increase the value of employer contributions through investment earnings.

In 2019, the Authority adopted OPEB and Pension Funding Policies, including target funding levels of 80% and 95%, respectively. The Authority made lump sum pre-payments to both funds in 2020, prior to the effective date of the Amended and Restated Joint Powers Agreement (JPA), with the intention of reaching these targets.

Discussion

Each year, staff presents the latest actuarial valuations of both the CERBT and pension funds for the Committee's information. These valuations always lag one year, and therefore are presented as of June 30, 2020.

OPEB

The financial status of the Authority's CERBT fund as of June 30, 2020, is summarized below.

CERBT Account Summary as of June 30, 2020	
Present value of all future benefits	\$875,076
Accumulated assets in the CERBT fund	\$743,350
Portion not yet funded	\$131,726
Funded Ratio	84.9%
Current Asset Allocation Strategy Selection	CERBT Strategy 1

As shown above, based on the Authority's most recent actuarial valuation, the Authority's OPEB liability is 84.9% funded, exceeding the target. The estimate on which the lump sum was based underestimated investment earnings, and assumed a higher accrued liability based on a previous actuarial valuation.

Per Commission direction, the Authority took its first disbursement in FY 2020/2021 of \$65,861. The Authority's qualifying OPEB expenditures included expenses paid on behalf

of retirees to Kaiser Permanente, CalPERS' medical provider; expenses paid directly to retirees whose contracts included medical benefit stipends, and the implicit rate subsidy. The implicit rate subsidy reflects the benefit to retirees of accessing the Authority's group health insurance plan.

Pension

The table below summarizes the status of the Authority's pension funds as of June 30, 2020. The majority of the Authority's assets and liabilities are in the CalPERS "Classic" Plan, which is for employees employed by a CalPERS or reciprocal agency prior to January 1, 2013. The Authority has one former employee enrolled in the Public Employees' Pension Reform Act (PEPRA) Plan. Complete actuarial reports for each fund are attached.

CalPERS Account Summaries as of June 30, 2020		
	Classic	PEPRA
1. Present Value of Projected Benefits	\$ 5,625,333	\$ 135,748
2. Entry Age Accrued Liability (AL)	\$ 4,858,986	\$ 9,514
3. Plan's Market Value of Assets (MVA)	\$ 4,444,457	\$ 9,265
4. Unfunded Accrued Liability (UAL) [2-3]	\$ 414,529	\$ 249
5. Funded Ratio [3/2]	91.5%	97.4%



California Public Employees' Retirement System

Actuarial Office

400 Q Street, Sacramento, CA 95811 | Phone: (916) 795-3000 | Fax: (916) 795-2744

888 CalPERS (or 888-225-7377) | TTY: (877) 249-7442 | www.calpers.ca.gov

July 2021

Miscellaneous Plan of the East Bay Dischargers Authority

(CalPERS ID: 5860828298)

Annual Valuation Report as of June 30, 2020

Dear Employer,

Attached to this letter, you will find the June 30, 2020 actuarial valuation report of your CalPERS pension plan. **Provided in this report is the determination of the minimum required employer contributions for fiscal year 2022-23.** In addition, the report contains important information regarding the current financial status of the plan as well as projections and risk measures to aid in planning for the future.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2020.

Section 2 can be found on the CalPERS website (calpers.ca.gov). From the home page, go to "Forms & Publications" and select "View All". In the search box, enter "Risk Pool" and from the results list download the Miscellaneous Risk Pool Actuarial Valuation Report for June 30, 2020.

Your June 30, 2020 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you.

Actuarial valuations are based on assumptions regarding future plan experience including investment return and payroll growth, eligibility for the types of benefits provided, and longevity among retirees. The CalPERS Board of Administration adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution rates as needed. This valuation is based on an investment return assumption of 7.0% which was adopted by the board in December 2016. Other assumptions used in this report are those recommended in the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017.

Required Contribution

The exhibit below displays the minimum employer contributions for fiscal year 2022-23 along with estimates of the required contributions for fiscal year 2023-24. Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. **The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees.**

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability
2022-23	12.21%	\$30,528
<i>Projected Results</i>		
2023-24	12.2%	\$37,000

The actual investment return for fiscal year 2020-21 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 7.00%. ***To the extent the actual investment return for fiscal year 2020-21 differs from 7.00%, the actual contribution requirements for fiscal year 2023-24 will differ from those shown above.*** For additional details regarding the assumptions and methods used for these projections please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This section also contains projected required contributions through fiscal year 2027-28.

Changes from Previous Year's Valuation

There are no significant changes in actuarial assumptions or policies in your 2020 actuarial valuation. Your annual valuation report is an important tool for monitoring the health of your CalPERS pension plan. Your report contains useful information about future required contributions and ways to control your plan's funding progress. In addition to your annual actuarial report my office has developed tools for employers to plan, project and protect the retirement benefits of your employees. Pension Outlook is a tool to help plan and budget pension costs into the future with easy to understand results and charts.

You will be able to view the projected funded status and required employer contributions for pension plans in different potential scenarios for up to 30 years into the future — which will make budgeting more predictable. While Pension Outlook can't predict the future, it can provide valuable planning information based on a variety of future scenarios that you select.

Pension Outlook can help you answer specific questions about your plans, including:

- When is my plan's funded status expected to increase?
- What happens to my required contributions in a down market?
- How does the discount rate assumption affect my contributions?
- What is the impact of making an additional discretionary payment to my plan?

To get started, visit our Pension Outlook page at www.calpers.ca.gov/page/employers/actuarial-resources/pension-outlook-overview and take the steps to register online.

CalPERS will be completing an Asset Liability Management (ALM) review process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. In addition, the Actuarial Office will be completing its Experience Study to review the demographic experience within the pension system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A of the Section 2 report, "Actuarial Methods and Assumptions."

Questions

We understand that you might have questions about these results, and your assigned CalPERS actuary whose signature is on the valuation report is available to discuss. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or (888-225-7377).

Sincerely,



SCOTT TERANDO, ASA, EA, MAAA, FCA, CFA
Chief Actuary



**Actuarial Valuation
as of June 30, 2020**

**for the
Miscellaneous Plan
of the
East Bay Dischargers Authority
(CalPERS ID: 5860828298)**

**Required Contributions
for Fiscal Year
July 1, 2022 - June 30, 2023**

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Section 1 – Plan Specific Information

Section 2 – Risk Pool Actuarial Valuation Information

Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the Miscellaneous Plan of the East Bay Dischargers Authority

**(CalPERS ID: 5860828298)
(Rate Plan ID: 1172)**

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Actuarial Certification

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2020 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2020 provided by employers participating in the Miscellaneous Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the risk pool containing your Miscellaneous Plan has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2020 and employer contribution as of July 1, 2022 have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary who satisfies the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States with regard to pensions.



EDDIE W. LEE, ASA, EA, FCA, MAAA
Senior Pension Actuary, CalPERS

Highlights and Executive Summary

- **Introduction**
- **Purpose of Section 1**
- **Required Employer Contributions**
- **Additional Discretionary Employer Contributions**
- **Plan's Funded Status**
- **Projected Employer Contributions**
- **Other Pooled Miscellaneous Risk Pool Rate Plans**
- **Cost**
- **Changes Since the Prior Year's Valuation**
- **Subsequent Events**

Introduction

This report presents the results of the June 30, 2020 actuarial valuation of the Miscellaneous Plan of the East Bay Dischargers Authority of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for fiscal year 2022-23.

Purpose of Section 1

This Section 1 report for the Miscellaneous Plan of the East Bay Dischargers Authority of CalPERS was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2020;
- Determine the minimum required employer contribution for this plan for the fiscal year July 1, 2022 through June 30, 2023; and
- Provide actuarial information as of June 30, 2020 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available on the CalPERS website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in actuarial policies; and changes in plan provisions or applicable law.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the recommendations of Actuarial Standards of Practice No. 51 and recommended by the California Actuarial Advisory Panel (CAAP) in the Model Disclosure Elements document:

- A "Scenario Test," projecting future results under different investment income returns.
- A "Sensitivity Analysis," showing the impact on current valuation results using alternative discount rates of 6.0% and 8.0%.
- A "Sensitivity Analysis," showing the impact on current valuation results assuming rates of mortality are 10% lower or 10% higher than our current post- retirement mortality assumptions adopted in 2017.
- Pension Plan maturity measures quantifying the risks the employer bears.

Required Employer Contributions

	Fiscal Year
Required Employer Contributions	2022-23
Employer Normal Cost Rate	12.21%
Plus	
Required Payment on Amortization Bases ¹	\$30,528
<i>Paid either as</i>	
1) Monthly Payment	\$2,544.00
<i>Or</i>	
2) Annual Prepayment Option*	\$29,513
<i>The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll and paid as payroll is reported) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly (1) or prepaid annually (2) in dollars).</i>	
<i>* Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31).</i>	

	Fiscal Year 2021-22	Fiscal Year 2022-23
Development of Normal Cost as a Percentage of Payroll		
Base Total Normal Cost for Formula	19.55%	19.55%
Surcharge for Class 1 Benefits ²		
a) FAC 1	0.61%	0.62%
Phase out of Normal Cost Difference ³	0.00%	0.00%
Plan's Total Normal Cost	20.16%	20.17%
Formula's Expected Employee Contribution Rate	7.96%	7.96%
Employer Normal Cost Rate	12.20%	12.21%

¹ The required payment on amortization bases does not take into account any additional discretionary payment made after April 30, 2021.

² Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

³ The normal cost change is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for the 2022-23 fiscal year is \$30,528. CalPERS allows employers to make additional discretionary payments (ADPs) at any time and in any amount. These optional payments serve to reduce the UAL and future required contributions and can result in significant long-term savings. Employers can also use ADPs to stabilize annual contributions as a fixed dollar amount, percent of payroll or percent of revenue.

Provided below are select ADP options for consideration. Making such an ADP during fiscal year 2022-23 does not require an ADP be made in any future year, nor does it change the remaining amortization period of any portion of unfunded liability. For information on permanent changes to amortization periods, see the "Amortization Schedule and Alternatives" section of the report.

If you are considering making an ADP, please contact your actuary for additional information.

Minimum Required Employer Contribution for Fiscal Year 2022-23

Estimated Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
\$58,091	\$30,528	\$0	\$30,528	\$88,619

Alternative Fiscal Year 2022-23 Employer Contributions for Greater UAL Reduction

Funding Target	Estimated Normal Cost	Minimum UAL Payment	ADP ¹	Total UAL Contribution	Estimated Total Contribution
20 years	\$58,091	\$30,528	\$9,189	\$39,717	\$97,808
15 years	\$58,091	\$30,528	\$15,670	\$46,198	\$104,289
10 years	\$58,091	\$30,528	\$29,380	\$59,908	\$117,999
5 years	\$58,091	\$30,528	\$72,093	\$102,621	\$160,712

¹ The ADP amounts are assumed to be made in the middle of the fiscal year. A payment made earlier or later in the fiscal year would have to be less or more than the amount shown to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected Unfunded Accrued Liability as of June 30, 2022 as determined in the June 30, 2020 actuarial valuation. New unfunded liabilities can emerge in future years due to assumption or method changes, changes in plan provisions and actuarial experience different than assumed. Making an ADP illustrated above for the indicated number of years will not result in a plan that is exactly 100% funded in the indicated number of years. Valuation results will vary from one year to the next and can diverge significantly from projections over a period of several years.

Plan's Funded Status

	June 30, 2019	June 30, 2020
1. Present Value of Projected Benefits (PVB)	\$5,590,592	\$5,625,333
2. Entry Age Accrued Liability (AL)	4,751,432	4,858,986
3. Plan's Market Value of Assets (MVA)	3,827,649	4,444,457
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	923,783	414,529
5. Funded Ratio [(3) / (2)]	80.6%	91.5%

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plan. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Projected Employer Contributions

The table below shows the required and projected employer contributions (before cost sharing) for the next six fiscal years. The projection assumes that all actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period. Actual contribution rates during this projection period could be significantly higher or lower than the projection shown below.

	Required Contribution	Projected Future Employer Contributions (Assumes 7.00% Return for Fiscal Year 2020-21)				
Fiscal Year	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
	Rate Plan 1172 Results					
Normal Cost %	12.21%	12.2%	12.2%	12.2%	12.2%	12.2%
UAL Payment	\$30,528	\$37,000	\$44,000	\$48,000	\$51,000	\$52,000

For some sources of UAL, the change in UAL is amortized using a 5-year ramp up. For more information, please see "Amortization of the Unfunded Actuarial Accrued Liability" under "Actuarial Methods" in Appendix A of the Section 2 Report. This method phases in the impact of the change in UAL over a 5-year period in order to reduce employer cost volatility from year to year. As a result of this methodology, dramatic changes in the required employer contributions in any one year are less likely. However, required contributions can change gradually and significantly over the next five years. In years when there is a large increase in UAL, the relatively small amortization payments during the ramp up period could result in a funded ratio that is projected to decrease initially while the contribution impact of the increase in the UAL is phased in.

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section.

Our online pension plan modeling and projection tool, Pension Outlook, is available in the Employers section of the CalPERS website. Pension Outlook is a tool to help plan and budget pension costs into the future with results and charts that are easy to understand.

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown below, correspond to rate plan 1172. In many cases, employers have additional rate plans within the same risk pool. For cost analysis and budgeting it is useful to consider contributions for these rate plans as a whole rather than individually. The estimated contribution amounts and rates for all of the employer's rate plans in the Miscellaneous Risk Pool are shown below and assume that the payroll for each rate plan will grow according to the overall payroll growth assumption of 2.75% per year for three years.

	Fiscal Year 2021-22	Fiscal Year 2022-23
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	\$493,683	\$569,930
Estimated Employer Normal Cost	\$60,229	\$65,125
Required Payment on Amortization Bases	\$21,582	\$30,595
Estimated Total Employer Contributions	\$81,811	\$95,720
Estimated Total Employer Contribution Rate (illustrative only)	16.57%	16.80%

Cost

Actuarial Determination of Pension Plan Cost

Contributions to fund the pension plan are comprised of two components:

- Normal Cost, expressed as a percentage of total active payroll
- Amortization of the Unfunded Accrued Liability (UAL), expressed as a dollar amount

For fiscal years prior to 2016-17, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with fiscal year 2016-17, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There continues to be an option to prepay this amount during July of each fiscal year.

The Normal Cost component is expressed as a percentage of active payroll with employer and employee contributions payable as part of the regular payroll reporting process.

The determination of both components requires complex actuarial calculations. The calculations are based on a set of actuarial assumptions which can be divided into two categories:

- Demographic assumptions (e.g., mortality rates, retirement rates, employment termination rates, disability rates)
- Economic assumptions (e.g., future investment earnings, inflation, salary growth rates)

These assumptions reflect CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 5.5% over the 20 years ending June 30, 2020, yet individual fiscal year returns have ranged from -23.6% to +20.7%. In addition, CalPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2017.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective, even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

There are no significant changes to the actuarial methods or assumptions for the 2020 actuarial valuation.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2020. Changes in the value of assets subsequent to that date are not reflected. Investment returns below the assumed rate of return will increase future required contributions while investment returns above the assumed rate of return will decrease future required contributions.

CalPERS will be completing an Asset Liability Management (ALM) process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. As part of the ALM process the Actuarial Office will be completing an Experience Study to review the demographic experience of the retirement system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

The projected employer contributions on Page 6 are calculated under the assumption that the discount rate remains at 7.0% going forward and that the realized rate of return on assets for fiscal year 2020-21 is 7.0%.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2021. Any subsequent changes or actions are not reflected.

Assets and Liabilities

- **Breakdown of Entry Age Accrued Liability**
- **Allocation of Plan's Share of Pool's Experience/Assumption Change**
- **Development of Plan's Share of Pool's Market Value of Assets**
- **Schedule of Plan's Amortization Bases**
- **Amortization Schedule and Alternatives**
- **Employer Contribution History**
- **Funding History**

Breakdown of Entry Age Accrued Liability

Active Members	\$447,495
Transferred Members	0
Terminated Members	0
Members and Beneficiaries Receiving Payments	<u>4,411,491</u>
Total	\$4,858,986

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1. Plan's Accrued Liability	\$4,858,986
2. Projected UAL balance at 6/30/2020	294,407
3. Pool's Accrued Liability ¹	19,314,480,060
4. Sum of Pool's Individual Plan UAL Balances at 6/30/2020 ¹	4,306,566,797
5. Pool's 2019/20 Investment (Gain)/Loss ¹	344,968,792
6. Pool's 2019/20 Non-Investment (Gain)/Loss ¹	60,428,629
7. Plan's Share of Pool's Investment (Gain)/Loss: $[(1) - (2)] \div [(3) - (4)] \times (5)$	104,920
8. Plan's Share of Pool's Non-Investment (Gain)/Loss: $(1) \div (3) \times (6)$	15,202
9. Plan's New (Gain)/Loss as of 6/30/2020: $(7) + (8)$	120,123

¹ Does not include plans that transferred to Pool on the valuation date.

Development of the Plan's Share of Pool's Market Value of Assets

10. Plan's UAL: $(2) + (9)$	\$414,529
11. Plan's Share of Pool's MVA: $(1) - (10)$	\$4,444,457

Schedule of Plan's Amortization Bases

Note that there is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2020.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: fiscal year 2022-23.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their required employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the expected payment on the UAL for the fiscal year and adjusting for interest. The expected payment for the first fiscal year is determined by the actuarial valuation two years ago and the contribution for the second year is from the actuarial valuation one year ago. Additional discretionary payments are reflected in the Expected Payments column in the fiscal year they were made by the agency.

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Share of Pre-2013 Pool UAL	6/30/13	No Ramp		2.75%	11	434,398	43,578	419,728	44,776	402,792	46,008
Non-Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	(4,342)	(295)	(4,341)	(303)	(4,331)	(311)
Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	296,993	20,147	296,942	20,701	296,315	21,270
Investment (Gain)/Loss	6/30/14	100%	Up/Down	2.75%	24	(387,997)	(25,657)	(388,617)	(26,363)	(388,550)	(27,088)
Side Fund	2013 or Prior	No Ramp		2.75%	9	(414,022)	(47,290)	(394,086)	(48,591)	(371,409)	(49,927)
Assumption Change	6/30/14	100%	Up/Down	2.75%	14	216,372	20,575	210,235	21,140	203,084	21,722
Non-Investment (Gain)/Loss	6/30/15	100%	Up/Down	2.75%	25	(18,016)	(942)	(18,303)	(1,210)	(18,333)	(1,244)
Non-Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	(32,014)	(1,258)	(32,954)	(1,724)	(33,477)	(2,214)
Assumption Change	6/30/16	100%	Up/Down	2.75%	16	78,400	4,268	79,473	5,848	78,987	7,511
Non-Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(6,592)	(175)	(6,872)	(270)	(7,074)	(370)
Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(136,439)	(3,627)	(142,238)	(5,590)	(146,412)	(7,658)
Assumption Change	6/30/17	80%	Up/Down	2.75%	17	88,890	3,241	91,760	4,996	93,015	6,844
Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	(44,582)	(609)	(47,073)	(1,251)	(49,074)	(1,929)
Assumption Change	6/30/18	60%	Up/Down	2.75%	18	143,959	2,684	151,260	5,516	156,142	8,501
Method Change	6/30/18	60%	Up/Down	2.75%	18	39,664	740	41,675	1,520	43,020	2,342
Non-Investment (Gain)/Loss	6/30/19	No Ramp		0.00%	19	19,620	0	20,993	1,916	20,481	1,916
Investment (Gain)/Loss	6/30/19	40%	Up Only	0.00%	19	20,115	0	21,523	471	22,542	941
Non-Investment (Gain)/Loss	6/30/20	No Ramp		0.00%	20	15,202	0	16,266	0	17,405	1,588
Investment (Gain)/Loss	6/30/20	20%	Up Only	0.00%	20	104,920	0	112,264	0	120,122	2,626
Total						414,529	15,380	427,635	21,582	435,245	30,528

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed in "Allocation of Plan's Share of Pool's Experience/Assumption Change" earlier in this section. These (gain)/loss bases will be amortized in accordance with the CalPERS amortization policy in effect at the time the base was established.

Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to the CalPERS amortization policy. Many agencies have expressed a desire for a more stable pattern of payments or have indicated interest in paying off the unfunded accrued liabilities more quickly than required. As such, we have provided alternative amortization schedules to help analyze the current amortization schedule and illustrate the potential savings of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternative "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. To initiate a Fresh Start, please consult with your plan actuary.

The Current Amortization Schedule typically contains both positive and negative bases. Positive bases result from plan changes, assumption changes, method changes or plan experience that increase unfunded liability. Negative bases result from plan changes, assumption changes, method changes, or plan experience that decrease unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years, such as:

- When a negative payment would be required on a positive unfunded actuarial liability; or
- When the payment would completely amortize the total unfunded liability in a very short time period, and results in a large change in the employer contribution requirement.

In any year when one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy.

Amortization Schedule and Alternatives (continued)

Date	<u>Current Amortization Schedule</u>		<u>Alternate Schedules</u>			
	Balance	Payment	10 Year Amortization		5 Year Amortization	
			Balance	Payment	Balance	Payment
6/30/2022	435,245	30,528	435,245	59,908	435,245	102,621
6/30/2023	434,135	37,023	403,743	59,908	359,560	102,621
6/30/2024	426,228	43,994	370,036	59,908	278,577	102,621
6/30/2025	410,556	47,938	333,969	59,908	191,925	102,621
6/30/2026	389,706	51,431	295,378	59,908	99,208	102,622
6/30/2027	363,785	52,323	254,085	59,908		
6/30/2028	335,127	53,241	209,902	59,908		
6/30/2029	303,513	54,184	162,626	59,908		
6/30/2030	268,712	55,149	112,041	59,908		
6/30/2031	230,473	119,879	57,915	59,908		
6/30/2032	122,602	116,952				
6/30/2033	10,209	10,560				
6/30/2034						
6/30/2035						
6/30/2036						
6/30/2037						
6/30/2038						
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6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		673,202		599,080		513,106
Interest Paid		237,957		163,835		77,861
Estimated Savings				74,122		160,096

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan. The amounts are based on the actuarial valuation from two years prior and does not account for prepayments or benefit changes made during a fiscal year. Additional discretionary payments before July 1, 2019 or after June 30, 2020 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment (\$)	Additional Discretionary Payments
2016 - 17	10.069%	\$13,053	N/A
2017 - 18	10.110%	21,947	N/A
2018 - 19	10.609%	30,942	N/A
2019 - 20	11.432%	44,901	645,000
2020 - 21	12.361%	50,334	
2021 - 22	12.20%	21,582	
2022 - 23	12.21%	30,528	

Funding History

The table below shows the recent history of the actuarial accrued liability, share of the pool's market value of assets, unfunded accrued liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Unfunded Accrued Liability (UAL)	Funded Ratio	Annual Covered Payroll
06/30/2011	\$3,176,316	\$2,789,638	\$386,678	87.8%	\$365,500
06/30/2012	3,329,338	2,730,187	599,151	82.0%	373,134
06/30/2013	3,494,779	3,009,248	485,531	86.1%	376,164
06/30/2014	3,806,425	3,407,986	398,439	89.5%	376,707
06/30/2015	3,898,690	3,303,082	595,608	84.7%	393,594
06/30/2016	3,918,330	3,134,508	783,822	80.0%	377,034
06/30/2017	4,064,725	3,286,636	778,089	80.9%	509,484
06/30/2018	4,634,973	3,784,258	850,715	81.6%	373,529
06/30/2019	4,751,432	3,827,649	923,783	80.6%	455,096
06/30/2020	4,858,986	4,444,457	414,529	91.5%	438,576

Risk Analysis

- **Future Investment Return Scenarios**
- **Discount Rate Sensitivity**
- **Mortality Rate Sensitivity**
- **Maturity Measures**
- **Maturity Measures History**
- **Hypothetical Termination Liability**

Future Investment Return Scenarios

Analysis was performed to determine the effects of various future investment returns on required employer contributions. The projections below provide a range of results based on five investment return scenarios assumed to occur during the next four fiscal years (2020-21, 2021-22, 2022-23 and 2023-24). The projections also assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

For fiscal years 2020-21, 2021-22, 2022-23, and 2023-24, each scenario assumes an alternate fixed annual return. The fixed return assumptions for the five scenarios are 1.0%, 4.0%, 7.0%, 9.0% and 12.0%.

These alternate investment returns were chosen based on stochastic analysis of possible future investment returns over the four-year period ending June 30, 2024. Using the expected returns and volatility of the asset classes in which the funds are invested, we produced five thousand stochastic outcomes for this period based on the most recently completed Asset Liability Management process. We then selected annual returns that approximate the 5th, 25th, 50th, 75th, and 95th percentiles for these outcomes. For example, of all the 4-year outcomes generated in the stochastic analysis, approximately 25% had an average annual return of 4.0% or less.

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 1.0% or greater than 12.0% over this four-year period, the likelihood of a single investment return less than 1.0% or greater than 12.0% in any given year is much greater.

Assumed Annual Return From 2020-21 through 2023-24	Projected Employer Contributions			
	2023-24	2024-25	2025-26	2026-27
1.0%				
Normal Cost	12.2%	12.2%	12.2%	12.2%
UAL Contribution	\$44,000	\$64,000	\$88,000	\$119,000
4.0%				
Normal Cost	12.2%	12.2%	12.2%	12.2%
UAL Contribution	\$40,000	\$54,000	\$68,000	\$86,000
7.0%				
Normal Cost	12.2%	12.2%	12.2%	12.2%
UAL Contribution	\$37,000	\$44,000	\$48,000	\$51,000
9.0%				
Normal Cost	12.5%	12.7%	13.0%	13.2%
UAL Contribution	\$36,000	\$40,000	\$39,000	\$36,000
12.0%				
Normal Cost	12.5%	12.7%	13.0%	13.2%
UAL Contribution	\$32,000	\$0	\$0	\$0

Discount Rate Sensitivity

The discount rate assumption is calculated as the sum of the assumed real rate of return and the assumed annual price inflation, currently 4.50% and 2.50%, respectively. Changing either the price inflation assumption or the real rate of return assumption will change the discount rate. The sensitivity of the valuation results to the discount rate assumption depends on which component of the discount rate is changed. Shown below are various valuation results as of June 30, 2020 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 7.0% as well as alternate discount rates of 6.0% and 8.0%. The rates of 6.0% and 8.0% were selected since they illustrate the impact of a 1.0% increase or decrease to the 7.0% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	6.0%	7.0%	8.0%
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	3.5%	4.5%	5.5%
a) Total Normal Cost	25.25%	20.17%	16.29%
b) Accrued Liability	\$5,382,662	\$4,858,986	\$4,416,717
c) Market Value of Assets	\$4,444,457	\$4,444,457	\$4,444,457
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$938,205	\$414,529	(\$27,740)
e) Funded Status	82.6%	91.5%	100.6%

Sensitivity to the Price Inflation Assumption

As of June 30, 2020	1% Lower Inflation Rate	Current Assumptions	1% Higher Inflation Rate
Discount Rate	6.0%	7.0%	8.0%
Inflation	1.5%	2.5%	3.5%
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	21.54%	20.17%	18.57%
b) Accrued Liability	\$5,093,645	\$4,858,986	\$4,547,224
c) Market Value of Assets	\$4,444,457	\$4,444,457	\$4,444,457
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$649,188	\$414,529	\$102,767
e) Funded Status	87.3%	91.5%	97.7%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2020 plan costs and funded status under two different longevity scenarios, namely assuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2017. This type of analysis highlights the impact on the plan of improving or worsening mortality over the long-term.

As of June 30, 2020	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	20.51%	20.17%	19.85%
b) Accrued Liability	\$4,968,287	\$4,858,986	\$4,759,209
c) Market Value of Assets	\$4,444,457	\$4,444,457	\$4,444,457
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$523,830	\$414,529	\$314,752
e) Funded Status	89.5%	91.5%	93.4%

Maturity Measures

As pension plans mature they become more sensitive to risks. Understanding plan maturity and how it affects the ability of a pension plan sponsor to tolerate risk is important in understanding how the pension plan is impacted by investment return volatility, other economic variables and changes in longevity or other demographic assumptions. Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only.

One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	June 30, 2019	June 30, 2020
1. Retired Accrued Liability	4,433,469	4,411,491
2. Total Accrued Liability	4,751,432	4,858,986
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.93	0.91

Another measure of maturity level of CalPERS and its plans is to look at the ratio of actives to retirees, also called the Support Ratio. A pension plan in its infancy will have a very high ratio of active to retired members. As the plan matures, and members retire, the ratio starts declining. A mature plan will often have a ratio near or below one. The average support ratio for CalPERS public agency plans is 1.25.

Support Ratio	June 30, 2019	June 30, 2020
1. Number of Actives	3	3
2. Number of Retirees	14	14
3. Support Ratio [(1) / (2)]	0.21	0.21

Maturity Measures (Continued)

The actuarial calculations supplied in this communication are based on various assumptions about long-term demographic and economic behavior. Unless these assumptions (e.g., terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Shown in the table below is the asset volatility ratio (AVR), which is the ratio of market value of assets to payroll. Plans that have higher AVR experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 4. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Also shown in the table below is the liability volatility ratio (LVR), which is the ratio of accrued liability to payroll. Plans that have a higher LVR experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with LVR ratio of 8 is expected to have twice the contribution volatility of a plan with LVR of 4. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The AVR, described above, will tend to move closer to the LVR as a plan matures.

Contribution Volatility	June 30, 2019	June 30, 2020
1. Market Value of Assets	\$3,827,649	\$4,444,457
2. Payroll	455,096	438,576
3. Asset Volatility Ratio (AVR) [(1) / (2)]	8.4	10.1
4. Accrued Liability	\$4,751,432	\$4,858,986
5. Liability Volatility Ratio (LVR) [(4) / (2)]	10.4	11.1

Maturity Measures History

Valuation Date	Ratio of Retiree Accrued Liability to Total Accrued Liability	Support Ratio	Asset Volatility Ratio	Liability Volatility Ratio
06/30/2017	0.83	0.33	6.5	8.0
06/30/2018	0.94	0.21	10.1	12.4
06/30/2019	0.93	0.21	8.4	10.4
06/30/2020	0.91	0.21	10.1	11.1

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2020. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed. This measure of funded status is not appropriate for assessing the need for future employer contributions in the case of an ongoing plan, that is, for an employer that continues to provide CalPERS retirement benefits to active employees.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while limiting the funding risk. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 19-month period from 12 months before the valuation date to 7 months after.

Market Value of Assets (MVA)	Hypothetical Termination Liability^{1,2} at 0.75%	Funded Status	Unfunded Termination Liability at 0.75%	Hypothetical Termination Liability^{1,2} at 2.50%	Funded Status	Unfunded Termination Liability at 2.50%
\$4,444,457	\$10,144,662	43.8%	\$5,700,205	\$8,139,501	54.6%	\$3,695,044

¹ The hypothetical liabilities calculated above include a 5% mortality contingency load in accordance with Board policy. Other actuarial assumptions can be found in Appendix A of the Section 2 report.

² The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 1.18% on June 30, 2020, and was 1.68% on January 31, 2021.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2019	June 30, 2020
Active Members		
Counts	3	3
Average Attained Age	N/A	49.1
Average Entry Age to Rate Plan	N/A	45.1
Average Years of Credited Service	N/A	3.9
Average Annual Covered Pay	\$151,699	\$146,192
Annual Covered Payroll	\$455,096	\$438,576
Projected Annual Payroll for Contribution Year	\$493,683	\$475,763
Present Value of Future Payroll	\$3,528,011	\$3,332,310
Transferred Members	0	0
Separated Members	0	0
Retired Members and Beneficiaries		
Counts*	14	14
Average Annual Benefits*	N/A	\$27,119

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- One Year Final Compensation (FAC 1)

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

Member Category	Benefit Group			
	Misc	Misc	Misc	
Demographics				
Actives	No	Yes	No	
Transfers/Separated	No	No	No	
Receiving	Yes	Yes	Yes	
Benefit Provision				
Benefit Formula		2.5% @ 55		
Social Security Coverage		No		
Full/Modified		Full		
Employee Contribution Rate		8.00%		
Final Average Compensation Period		One Year		
Sick Leave Credit		Yes		
Non-Industrial Disability		Standard		
Industrial Disability		No		
Pre-Retirement Death Benefits				
Optional Settlement 2		Yes		
1959 Survivor Benefit Level		No		
Special		No		
Alternate (firefighters)		No		
Post-Retirement Death Benefits				
Lump Sum	\$500	\$500	\$500	
Survivor Allowance (PRSA)	No	No	No	
COLA	2%	2%	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

**Section 2 may be found on the CalPERS website
(calpers.ca.gov) in the Forms and
Publications section**



California Public Employees' Retirement System

Actuarial Office

400 Q Street, Sacramento, CA 95811 | Phone: (916) 795-3000 | Fax: (916) 795-2744

888 CalPERS (or 888-225-7377) | TTY: (877) 249-7442 | www.calpers.ca.gov

July 2021

**PEPRA Miscellaneous Plan of the East Bay Dischargers Authority
(CalPERS ID: 5860828298)**

Annual Valuation Report as of June 30, 2020

Dear Employer,

Attached to this letter, you will find the June 30, 2020 actuarial valuation report of your CalPERS pension plan. **Provided in this report is the determination of the minimum required employer contributions for fiscal year 2022-23.** In addition, the report contains important information regarding the current financial status of the plan as well as projections and risk measures to aid in planning for the future.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2020.

Section 2 can be found on the CalPERS website (calpers.ca.gov). From the home page, go to "Forms & Publications" and select "View All". In the search box, enter "Risk Pool" and from the results list download the Miscellaneous Risk Pool Actuarial Valuation Report for June 30, 2020.

Your June 30, 2020 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you.

Actuarial valuations are based on assumptions regarding future plan experience including investment return and payroll growth, eligibility for the types of benefits provided, and longevity among retirees. The CalPERS Board of Administration adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution rates as needed. This valuation is based on an investment return assumption of 7.0% which was adopted by the board in December 2016. Other assumptions used in this report are those recommended in the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017.

Required Contribution

The exhibit below displays the minimum employer contributions and the Employee PEPRA Rate for fiscal year 2022-23 along with estimates of the required contributions for fiscal year 2023-24. Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. **The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees.**

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability	PEPRA Employee Rate
2022-23	7.47%	\$67	6.75%
<i>Projected Results</i>			
2023-24	7.5%	\$67	TBD

The actual investment return for fiscal year 2020-21 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 7.00%. ***To the extent the actual investment return for fiscal year 2020-21 differs from 7.00%, the actual contribution requirements for fiscal year 2023-24 will differ from those shown above.*** For additional details regarding the assumptions and methods used for these projections please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This section also contains projected required contributions through fiscal year 2027-28.

Changes from Previous Year's Valuation

There are no significant changes in actuarial assumptions or policies in your 2020 actuarial valuation. Your annual valuation report is an important tool for monitoring the health of your CalPERS pension plan. Your report contains useful information about future required contributions and ways to control your plan's funding progress. In addition to your annual actuarial report my office has developed tools for employers to plan, project and protect the retirement benefits of your employees. Pension Outlook is a tool to help plan and budget pension costs into the future with easy to understand results and charts.

You will be able to view the projected funded status and required employer contributions for pension plans in different potential scenarios for up to 30 years into the future — which will make budgeting more predictable. While Pension Outlook can't predict the future, it can provide valuable planning information based on a variety of future scenarios that you select.

Pension Outlook can help you answer specific questions about your plans, including:

- When is my plan's funded status expected to increase?
- What happens to my required contributions in a down market?
- How does the discount rate assumption affect my contributions?
- What is the impact of making an additional discretionary payment to my plan?

To get started, visit our Pension Outlook page at www.calpers.ca.gov/page/employers/actuarial-resources/pension-outlook-overview and take the steps to register online.

CalPERS will be completing an Asset Liability Management (ALM) review process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. In addition, the Actuarial Office will be completing its Experience Study to review the demographic experience within the pension system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A of the Section 2 report, "Actuarial Methods and Assumptions."

Questions

We understand that you might have questions about these results, and your assigned CalPERS actuary whose signature is on the valuation report is available to discuss. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or (888-225-7377).

Sincerely,



SCOTT TERANDO, ASA, EA, MAAA, FCA, CFA
Chief Actuary



**Actuarial Valuation
as of June 30, 2020**

**for the
PEPRA Miscellaneous Plan
of the
East Bay Dischargers Authority
(CalPERS ID: 5860828298)**

**Required Contributions
for Fiscal Year
July 1, 2022 - June 30, 2023**

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Section 2 – Risk Pool Actuarial Valuation Information

Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the PEPRA Miscellaneous Plan of the East Bay Dischargers Authority

**(CalPERS ID: 5860828298)
(Rate Plan ID: 26753)**

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Actuarial Certification

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2020 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2020 provided by employers participating in the Miscellaneous Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the risk pool containing your PEPRA Miscellaneous Plan has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2020 and employer contribution as of July 1, 2022 have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary who satisfies the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States with regard to pensions.



EDDIE W. LEE, ASA, EA, FCA, MAAA
Senior Pension Actuary, CalPERS

Highlights and Executive Summary

- **Introduction**
- **Purpose of Section 1**
- **Required Employer Contributions**
- **Additional Discretionary Employer Contributions**
- **Plan's Funded Status**
- **Projected Employer Contributions**
- **Other Pooled Miscellaneous Risk Pool Rate Plans**
- **Cost**
- **Changes Since the Prior Year's Valuation**
- **Subsequent Events**

Introduction

This report presents the results of the June 30, 2020 actuarial valuation of the PEPRA Miscellaneous Plan of the East Bay Dischargers Authority of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for fiscal year 2022-23.

Purpose of Section 1

This Section 1 report for the PEPRA Miscellaneous Plan of the East Bay Dischargers Authority of CalPERS was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2020;
- Determine the minimum required employer contribution for this plan for the fiscal year July 1, 2022 through June 30, 2023; and
- Provide actuarial information as of June 30, 2020 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available on the CalPERS website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in actuarial policies; and changes in plan provisions or applicable law.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the recommendations of Actuarial Standards of Practice No. 51 and recommended by the California Actuarial Advisory Panel (CAAP) in the Model Disclosure Elements document:

- A "Scenario Test," projecting future results under different investment income returns.
- A "Sensitivity Analysis," showing the impact on current valuation results using alternative discount rates of 6.0% and 8.0%.
- A "Sensitivity Analysis," showing the impact on current valuation results assuming rates of mortality are 10% lower or 10% higher than our current post-retirement mortality assumptions adopted in 2017.
- Pension Plan maturity measures quantifying the risks the employer bears.

Required Employer Contributions

	Fiscal Year
Required Employer Contributions	2022-23
Employer Normal Cost Rate	7.47%
Plus	
Required Payment on Amortization Bases¹	\$67
<i>Paid either as</i>	
1) Monthly Payment	\$5.58
<i>Or</i>	
2) Annual Prepayment Option*	\$65
<i>The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll and paid as payroll is reported) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly (1) or prepaid annually (2) in dollars).</i>	
<i>* Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31).</i>	

	Fiscal Year 2021-22	Fiscal Year 2022-23
Development of Normal Cost as a Percentage of Payroll		
Base Total Normal Cost for Formula	N/A	14.22%
Surcharge for Class 1 Benefits ²		
None	0.00%	0.00%
Phase out of Normal Cost Difference ³	N/A	0.00%
Plan's Total Normal Cost	N/A	14.22%
Plan's Employee Contribution Rate ⁴	N/A	6.75%
Employer Normal Cost Rate	N/A	7.47%

¹ The required payment on amortization bases does not take into account any additional discretionary payment made after April 30, 2021.

² Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

³ The normal cost change is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

⁴ For detail regarding the determination of the required PEPRA employee contribution rate see Section on PEPRA Member Contribution Rates.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for the 2022-23 fiscal year is \$67. CalPERS allows employers to make additional discretionary payments (ADPs) at any time and in any amount. These optional payments serve to reduce the UAL and future required contributions and can result in significant long-term savings. Employers can also use ADPs to stabilize annual contributions as a fixed dollar amount, percent of payroll or percent of revenue.

Provided below are select ADP options for consideration. Making such an ADP during fiscal year 2022-23 does not require an ADP be made in any future year, nor does it change the remaining amortization period of any portion of unfunded liability. For information on permanent changes to amortization periods, see the "Amortization Schedule and Alternatives" section of the report.

If you are considering making an ADP, please contact your actuary for additional information.

Minimum Required Employer Contribution for Fiscal Year 2022-23

Estimated Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
\$7,034	\$67	\$0	\$67	\$7,101

Alternative Fiscal Year 2022-23 Employer Contributions for Greater UAL Reduction

Funding Target	Estimated Normal Cost	Minimum UAL Payment	ADP ¹	Total UAL Contribution	Estimated Total Contribution
5 years	N/A	N/A	N/A	N/A	N/A

¹ The ADP amounts are assumed to be made in the middle of the fiscal year. A payment made earlier or later in the fiscal year would have to be less or more than the amount shown to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected Unfunded Accrued Liability as of June 30, 2022 as determined in the June 30, 2020 actuarial valuation. New unfunded liabilities can emerge in future years due to assumption or method changes, changes in plan provisions and actuarial experience different than assumed. Making an ADP illustrated above for the indicated number of years will not result in a plan that is exactly 100% funded in the indicated number of years. Valuation results will vary from one year to the next and can diverge significantly from projections over a period of several years.

Plan's Funded Status

	June 30, 2019	June 30, 2020
1. Present Value of Projected Benefits (PVB)	N/A	\$135,748
2. Entry Age Accrued Liability (AL)	N/A	9,514
3. Plan's Market Value of Assets (MVA)	N/A	9,265
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	N/A	249
5. Funded Ratio [(3) / (2)]	N/A	97.4%

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plan. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Projected Employer Contributions

The table below shows the required and projected employer contributions (before cost sharing) for the next six fiscal years. The projection assumes that all actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period. Actual contribution rates during this projection period could be significantly higher or lower than the projection shown below.

	Required Contribution	Projected Future Employer Contributions (Assumes 7.00% Return for Fiscal Year 2020-21)				
Fiscal Year	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
	Rate Plan 26753 Results					
Normal Cost %	7.47%	7.5%	7.5%	7.5%	7.5%	7.5%
UAL Payment	\$67	\$67	\$67	\$68	\$68	\$0

For some sources of UAL, the change in UAL is amortized using a 5-year ramp up. For more information, please see "Amortization of the Unfunded Actuarial Accrued Liability" under "Actuarial Methods" in Appendix A of the Section 2 Report. This method phases in the impact of the change in UAL over a 5-year period in order to reduce employer cost volatility from year to year. As a result of this methodology, dramatic changes in the required employer contributions in any one year are less likely. However, required contributions can change gradually and significantly over the next five years. In years when there is a large increase in UAL, the relatively small amortization payments during the ramp up period could result in a funded ratio that is projected to decrease initially while the contribution impact of the increase in the UAL is phased in.

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section.

Our online pension plan modeling and projection tool, Pension Outlook, is available in the Employers section of the CalPERS website. Pension Outlook is a tool to help plan and budget pension costs into the future with results and charts that are easy to understand.

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown below, correspond to rate plan 26753. In many cases, employers have additional rate plans within the same risk pool. For cost analysis and budgeting it is useful to consider contributions for these rate plans as a whole rather than individually. The estimated contribution amounts and rates for all of the employer's rate plans in the Miscellaneous Risk Pool are shown below and assume that the payroll for each rate plan will grow according to the overall payroll growth assumption of 2.75% per year for three years.

	Fiscal Year 2021-22	Fiscal Year 2022-23
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	\$0	\$569,930
Estimated Employer Normal Cost	\$0	\$65,125
Required Payment on Amortization Bases	\$0	\$30,595
Estimated Total Employer Contributions	\$0	\$95,720
Estimated Total Employer Contribution Rate (illustrative only)	0.00%	16.80%

Cost

Actuarial Determination of Pension Plan Cost

Contributions to fund the pension plan are comprised of two components:

- Normal Cost, expressed as a percentage of total active payroll
- Amortization of the Unfunded Accrued Liability (UAL), expressed as a dollar amount

For fiscal years prior to 2016-17, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with fiscal year 2016-17, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There continues to be an option to prepay this amount during July of each fiscal year.

The Normal Cost component is expressed as a percentage of active payroll with employer and employee contributions payable as part of the regular payroll reporting process.

The determination of both components requires complex actuarial calculations. The calculations are based on a set of actuarial assumptions which can be divided into two categories:

- Demographic assumptions (e.g., mortality rates, retirement rates, employment termination rates, disability rates)
- Economic assumptions (e.g., future investment earnings, inflation, salary growth rates)

These assumptions reflect CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 5.5% over the 20 years ending June 30, 2020, yet individual fiscal year returns have ranged from -23.6% to +20.7%. In addition, CalPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2017.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective, even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

There are no significant changes to the actuarial methods or assumptions for the 2020 actuarial valuation.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2020. Changes in the value of assets subsequent to that date are not reflected. Investment returns below the assumed rate of return will increase future required contributions while investment returns above the assumed rate of return will decrease future required contributions.

CalPERS will be completing an Asset Liability Management (ALM) process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. As part of the ALM process the Actuarial Office will be completing an Experience Study to review the demographic experience of the retirement system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

The projected employer contributions on Page 6 are calculated under the assumption that the discount rate remains at 7.0% going forward and that the realized rate of return on assets for fiscal year 2020-21 is 7.0%.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2021. Any subsequent changes or actions are not reflected.

Assets and Liabilities

- **Breakdown of Entry Age Accrued Liability**
- **Allocation of Plan's Share of Pool's Experience/Assumption Change**
- **Development of Plan's Share of Pool's Market Value of Assets**
- **Schedule of Plan's Amortization Bases**
- **Amortization Schedule and Alternatives**
- **Employer Contribution History**
- **Funding History**

Breakdown of Entry Age Accrued Liability

Active Members	\$9,514
Transferred Members	0
Terminated Members	0
Members and Beneficiaries Receiving Payments	0
Total	\$9,514

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1. Plan's Accrued Liability	\$9,514
2. Projected UAL balance at 6/30/2020	0
3. Pool's Accrued Liability ¹	19,314,480,060
4. Sum of Pool's Individual Plan UAL Balances at 6/30/2020 ¹	4,306,566,797
5. Pool's 2019/20 Investment (Gain)/Loss ¹	344,968,792
6. Pool's 2019/20 Non-Investment (Gain)/Loss ¹	60,428,629
7. Plan's Share of Pool's Investment (Gain)/Loss: $[(1) - (2)] \div [(3) - (4)] \times (5)$	219
8. Plan's Share of Pool's Non-Investment (Gain)/Loss: $(1) \div (3) \times (6)$	30
9. Plan's New (Gain)/Loss as of 6/30/2020: $(7) + (8)$	248

¹ Does not include plans that transferred to Pool on the valuation date.

Development of the Plan's Share of Pool's Market Value of Assets

10. Plan's UAL: $(2) + (9)$	\$249
11. Plan's Share of Pool's MVA: $(1) - (10)$	\$9,265

Schedule of Plan's Amortization Bases

Note that there is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2020.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: fiscal year 2022-23.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their required employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the expected payment on the UAL for the fiscal year and adjusting for interest. The expected payment for the first fiscal year is determined by the actuarial valuation two years ago and the contribution for the second year is from the actuarial valuation one year ago. Additional discretionary payments are reflected in the Expected Payments column in the fiscal year they were made by the agency.

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escalation Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Fresh Start	6/30/20	No Ramp		0.00%	5	249	0	266	0	285	67
Total						249	0	266	0	285	67

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed in "Allocation of Plan's Share of Pool's Experience/Assumption Change" earlier in this section. These (gain)/loss bases will be amortized in accordance with the CalPERS amortization policy in effect at the time the base was established.

Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to the CalPERS amortization policy. Many agencies have expressed a desire for a more stable pattern of payments or have indicated interest in paying off the unfunded accrued liabilities more quickly than required. As such, we have provided alternative amortization schedules to help analyze the current amortization schedule and illustrate the potential savings of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternative "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. To initiate a Fresh Start, please consult with your plan actuary.

The Current Amortization Schedule typically contains both positive and negative bases. Positive bases result from plan changes, assumption changes, method changes or plan experience that increase unfunded liability. Negative bases result from plan changes, assumption changes, method changes, or plan experience that decrease unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years, such as:

- When a negative payment would be required on a positive unfunded actuarial liability; or
- When the payment would completely amortize the total unfunded liability in a very short time period, and results in a large change in the employer contribution requirement.

In any year when one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy.

Amortization Schedule and Alternatives (continued)

Date	<u>Current Amortization Schedule</u>		<u>Alternate Schedules</u>			
	Balance	Payment	0 Year Amortization		0 Year Amortization	
			Balance	Payment	Balance	Payment
6/30/2022	285	67	N/A	N/A	N/A	N/A
6/30/2023	236	67				
6/30/2024	183	67				
6/30/2025	127	68				
6/30/2026	66	68				
6/30/2027						
6/30/2028						
6/30/2029						
6/30/2030						
6/30/2031						
6/30/2032						
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6/30/2042						
6/30/2043						
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		337		N/A		N/A
Interest Paid		52		N/A		N/A
Estimated Savings				N/A		N/A

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan. The amounts are based on the actuarial valuation from two years prior and does not account for prepayments or benefit changes made during a fiscal year. Additional discretionary payments before July 1, 2019 or after June 30, 2020 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment (\$)	Additional Discretionary Payments
2022 - 23	7.47%	\$67	

Funding History

The table below shows the recent history of the actuarial accrued liability, share of the pool's market value of assets, unfunded accrued liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Unfunded Accrued Liability (UAL)	Funded Ratio	Annual Covered Payroll
06/30/2020	\$9,514	\$9,265	\$249	97.4%	\$86,807

Risk Analysis

- **Future Investment Return Scenarios**
- **Discount Rate Sensitivity**
- **Mortality Rate Sensitivity**
- **Maturity Measures**
- **Maturity Measures History**
- **Hypothetical Termination Liability**

Future Investment Return Scenarios

Analysis was performed to determine the effects of various future investment returns on required employer contributions. The projections below provide a range of results based on five investment return scenarios assumed to occur during the next four fiscal years (2020-21, 2021-22, 2022-23 and 2023-24). The projections also assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

For fiscal years 2020-21, 2021-22, 2022-23, and 2023-24, each scenario assumes an alternate fixed annual return. The fixed return assumptions for the five scenarios are 1.0%, 4.0%, 7.0%, 9.0% and 12.0%.

These alternate investment returns were chosen based on stochastic analysis of possible future investment returns over the four-year period ending June 30, 2024. Using the expected returns and volatility of the asset classes in which the funds are invested, we produced five thousand stochastic outcomes for this period based on the most recently completed Asset Liability Management process. We then selected annual returns that approximate the 5th, 25th, 50th, 75th, and 95th percentiles for these outcomes. For example, of all the 4-year outcomes generated in the stochastic analysis, approximately 25% had an average annual return of 4.0% or less.

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 1.0% or greater than 12.0% over this four-year period, the likelihood of a single investment return less than 1.0% or greater than 12.0% in any given year is much greater.

Assumed Annual Return From 2020-21 through 2023-24	Projected Employer Contributions			
	2023-24	2024-25	2025-26	2026-27
1.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	\$81	\$110	\$150	\$210
4.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	\$74	\$88	\$110	\$140
7.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	\$67	\$67	\$68	\$68
9.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	\$120	\$0	\$0	\$0
12.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	\$0	\$0	\$0	\$0

Discount Rate Sensitivity

The discount rate assumption is calculated as the sum of the assumed real rate of return and the assumed annual price inflation, currently 4.50% and 2.50%, respectively. Changing either the price inflation assumption or the real rate of return assumption will change the discount rate. The sensitivity of the valuation results to the discount rate assumption depends on which component of the discount rate is changed. Shown below are various valuation results as of June 30, 2020 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 7.0% as well as alternate discount rates of 6.0% and 8.0%. The rates of 6.0% and 8.0% were selected since they illustrate the impact of a 1.0% increase or decrease to the 7.0% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	6.0%	7.0%	8.0%
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	3.5%	4.5%	5.5%
a) Total Normal Cost	17.65%	14.22%	11.59%
b) Accrued Liability	\$12,424	\$9,514	\$7,267
c) Market Value of Assets	\$9,265	\$9,265	\$9,265
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$3,159	\$249	(\$1,998)
e) Funded Status	74.6%	97.4%	127.5%

Sensitivity to the Price Inflation Assumption

As of June 30, 2020	1% Lower Inflation Rate	Current Assumptions	1% Higher Inflation Rate
Discount Rate	6.0%	7.0%	8.0%
Inflation	1.5%	2.5%	3.5%
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	15.20%	14.22%	13.05%
b) Accrued Liability	\$10,251	\$9,514	\$8,629
c) Market Value of Assets	\$9,265	\$9,265	\$9,265
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$986	\$249	(\$636)
e) Funded Status	90.4%	97.4%	107.4%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2020 plan costs and funded status under two different longevity scenarios, namely assuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2017. This type of analysis highlights the impact on the plan of improving or worsening mortality over the long-term.

As of June 30, 2020	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	14.49%	14.22%	13.97%
b) Accrued Liability	\$9,697	\$9,514	\$9,341
c) Market Value of Assets	\$9,265	\$9,265	\$9,265
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$432	\$249	\$76
e) Funded Status	95.5%	97.4%	99.2%

Maturity Measures

As pension plans mature they become more sensitive to risks. Understanding plan maturity and how it affects the ability of a pension plan sponsor to tolerate risk is important in understanding how the pension plan is impacted by investment return volatility, other economic variables and changes in longevity or other demographic assumptions. Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only.

One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	June 30, 2019	June 30, 2020
1. Retired Accrued Liability	N/A	0
2. Total Accrued Liability	N/A	9,514
3. Ratio of Retiree AL to Total AL [(1) / (2)]	N/A	0.00

Another measure of maturity level of CalPERS and its plans is to look at the ratio of actives to retirees, also called the Support Ratio. A pension plan in its infancy will have a very high ratio of active to retired members. As the plan matures, and members retire, the ratio starts declining. A mature plan will often have a ratio near or below one. The average support ratio for CalPERS public agency plans is 1.25.

Support Ratio	June 30, 2019	June 30, 2020
1. Number of Actives	N/A	1
2. Number of Retirees	N/A	0
3. Support Ratio [(1) / (2)]	N/A	N/A

Maturity Measures (Continued)

The actuarial calculations supplied in this communication are based on various assumptions about long-term demographic and economic behavior. Unless these assumptions (e.g., terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Shown in the table below is the asset volatility ratio (AVR), which is the ratio of market value of assets to payroll. Plans that have higher AVR experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 4. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Also shown in the table below is the liability volatility ratio (LVR), which is the ratio of accrued liability to payroll. Plans that have a higher LVR experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with LVR ratio of 8 is expected to have twice the contribution volatility of a plan with LVR of 4. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The AVR, described above, will tend to move closer to the LVR as a plan matures.

Contribution Volatility	June 30, 2019	June 30, 2020
1. Market Value of Assets	N/A	\$9,265
2. Payroll	N/A	86,807
3. Asset Volatility Ratio (AVR) [(1) / (2)]	N/A	0.1
4. Accrued Liability	N/A	\$9,514
5. Liability Volatility Ratio (LVR) [(4) / (2)]	N/A	0.1

Maturity Measures History

Valuation Date	Ratio of Retiree Accrued Liability to Total Accrued Liability	Support Ratio	Asset Volatility Ratio	Liability Volatility Ratio
06/30/2017	N/A	N/A	N/A	N/A
06/30/2018	N/A	N/A	N/A	N/A
06/30/2019	N/A	N/A	N/A	N/A
06/30/2020	0.00	N/A	0.1	0.1

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2020. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed. This measure of funded status is not appropriate for assessing the need for future employer contributions in the case of an ongoing plan, that is, for an employer that continues to provide CalPERS retirement benefits to active employees.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while limiting the funding risk. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 19-month period from 12 months before the valuation date to 7 months after.

Market Value of Assets (MVA)	Hypothetical Termination Liability^{1,2} at 0.75%	Funded Status	Unfunded Termination Liability at 0.75%	Hypothetical Termination Liability^{1,2} at 2.50%	Funded Status	Unfunded Termination Liability at 2.50%
\$9,265	\$28,010	33.1%	\$18,745	\$14,386	64.4%	\$5,121

¹ The hypothetical liabilities calculated above include a 5% mortality contingency load in accordance with Board policy. Other actuarial assumptions can be found in Appendix A of the Section 2 report.

² The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 1.18% on June 30, 2020, and was 1.68% on January 31, 2021.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2019	June 30, 2020
Active Members		
Counts	N/A	1
Average Attained Age	N/A	33.9
Average Entry Age to Rate Plan	N/A	33.3
Average Years of Credited Service	N/A	0.7
Average Annual Covered Pay	N/A	\$86,807
Annual Covered Payroll	N/A	\$86,807
Projected Annual Payroll for Contribution Year	N/A	\$94,167
Present Value of Future Payroll	N/A	\$974,506
Transferred Members	N/A	0
Separated Members	N/A	0
Retired Members and Beneficiaries		
Counts*	N/A	0
Average Annual Benefits*	N/A	\$0

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

	Benefit Group	
Member Category	Misc	
Demographics		
Actives	Yes	
Transfers/Separated	No	
Receiving	No	
Benefit Provision		
Benefit Formula	2% @ 62	
Social Security Coverage	No	
Full/Modified	Full	
Employee Contribution Rate	6.75%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits		
Optional Settlement 2	Yes	
1959 Survivor Benefit Level	No	
Special	No	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	\$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

PEPRA Member Contribution Rates

The California Public Employees' Pension Reform Act of 2013 (PEPRA) established new benefit formulas, final compensation period, and contribution requirements for "new" employees (generally those first hired into a CalPERS-covered position on or after January 1, 2013). In accordance with Government Code Section 7522.30(b), "new members ... shall have an initial contribution rate of at least 50% of the normal cost rate." The normal cost rate is dependent on the plan of retirement benefits, actuarial assumptions and demographics of the risk pool, particularly members' entry age. Should the total normal cost rate change by more than 1% from the base total normal cost rate, the new member rate shall be 50% of the new normal cost rate rounded to the nearest quarter percent.

The table below shows the determination of the PEPRA member contribution rates effective July 1, 2022, based on 50% of the total normal cost rate as of the June 30, 2020 valuation.

Rate Plan Identifier	Benefit Group Name	Basis for Current Rate		Rates Effective July 1, 2022			
		Total Normal Cost	Member Rate	Total Normal Cost	Change	Change Needed	Member Rate
26753	Miscellaneous PEPRA Level	13.735%	6.75%	14.22%	0.485%	No	6.75%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

**Section 2 may be found on the CalPERS website
(calpers.ca.gov) in the Forms and
Publications section**

ITEM NO. FM8 MOTION TO RESCIND ADDITIONAL DISCRETIONARY PAYMENT OF \$65,861 TO REDUCE THE UNFUNDED ACCRUED LIABILITY OF THE AUTHORITY'S PENSION PLAN

Recommendation

Approve a motion to rescind approval for an Additional Discretionary Payment to the Authority's Pension Plan of \$65,861.

Background

As discussed in Item No. FM7, the Authority participates in the California Public Employees' Retirement System (CalPERS) for its pension benefits. In 2019, the Authority adopted Other Post-Employment Benefit (OPEB) and Pension Funding Policies, including target funding levels of 80% and 95%, respectively. The Authority made lump sum pre-payments to both funds in 2020, prior to the effective date of the Amended and Restated Joint Powers Agreement (JPA), with the intention of reaching these targets. The Additional Discretionary Payment (ADP) made to the Authority's pension fund in 2020 was \$645,000.

Discussion

At its April 2021 meeting, the Committee recommended allocating the CERBT disbursement discussed in Item No. FM7 to the pension fund as an ADP. A motion to approve this ADP of \$65,861 was adopted at the Commission's July 2021 meeting. This decision was based on the latest actuarial information, which at the time projected a June 2021 funded ratio of 92.3%, shy of the Authority's 95% target.

In August, staff requested and received updated information from the Authority's CalPERS actuary. Thanks to an approximate FY 2020/2021 return of 21.3%, the Authority's projected funded ratio at June 30, 2021 is 101.5%. Based on this new information, staff is no longer recommending that the Authority make an ADP at this time. Staff therefore recommends that the Commission rescind the July 2021 motion to approve the ADP. The \$65,861 that was received as a disbursement from CERBT would be credited to the Member Agencies as part of the fiscal year end close. Staff will continue to work with the Authority's actuary to assess whether an ADP is warranted in the future, as discount rates and returns fluctuate.

ITEM NO. FM9 DRAFT BUDGET POLICY

Recommendation

Review Draft Budget Policy and provide direction to staff.

Background

Over the past several years, the Authority has been going through a process of updating its financial policies. The Authority historically had a comprehensive Financial Management System Policy and Procedures Manual. Each chapter is now being split into policies for consideration and adoption by the Commission, and procedures to be implemented by staff.

Discussion

Attached is a draft Budget Policy for the Committee's review and feedback. This Policy would replace the Financial Planning and Budgeting section of the existing manual, which was last updated in 2013, and was highly procedural.

POLICY NUMBER: 1.8

NAME OF POLICY: Finance – Budget

LAST REVISED: TBD

PREVIOUSLY REVISED: 05/16/13

PURPOSE: The budgeting function establishes control and accountability for Authority resources.

POLICY: It is the policy of the Authority to prepare and adopt a budget for the fiscal year to ensure that revenues are sufficient to meet operating and capital expenditures.

The draft budget shall be reviewed by the Managers Advisory Committee (MAC) and Financial Management Committee and approved by the Commission. Adoption of the annual Budget constitutes authority to bill Member Agencies for contributions. It also constitutes approval for expenditures for programs and authorizes the General Manager to make payment for them.

Major budgetary items include:

- Operations – salaries, benefits, chemicals, supplies, maintenance, professional services
- Renewal and Replacement Fund (Capital) Projects – those included on the Commission-approved Project List
- Special Projects – Studies and projects outside of normal operations
- Revenues from recycled water, brine, and grants
- Assessment for the Renewal and Replacement Fund

The Annual Budget must be completed and adopted by June 1, in accordance with the Joint Powers Agreement. The annual budget may be amended only upon approval of the Commission. The General Manager, however, has discretion of budget changes by account number. The General Manager shall report budget-to-actual results to the Commission on at least a quarterly basis.



EAST BAY DISCHARGERS AUTHORITY
2651 Grant Avenue
San Lorenzo, CA 94580-1841
(510) 278-5910
FAX (510) 278-6547

A Joint Powers Public Agency

NOTICE: Pursuant to the Governor's Executive Orders N-25-20 and N-29-20, the Operations & Maintenance Committee meeting scheduled below will be accessible via Zoom video conferencing. Members of the public may participate in the meeting through the Zoom platform or phone number below.

- Zoom link: <https://us02web.zoom.us/j/84250769407>
- Telephone dial-in: 1(669) 900-6833, meeting ID #842 5076 9407

ITEM NO. 14

OPERATIONS & MAINTENANCE COMMITTEE AGENDA

Tuesday, September 21, 2021

9:00 A.M.

**East Bay Dischargers Authority
2651 Grant Avenue, San Lorenzo, CA 94580**

Committee Members: Toy (Chair); Cutter

OM1. Call to Order

OM2. Roll Call

OM3. Public Forum

OM4. EBDA Permit Compliance

(The Committee will be updated on EBDA's NPDES compliance.)

OM5. Status Report

(The Committee will be updated on EBDA's O&M activities.)

OM6. Adjournment

Any member of the public may address the Commission at the commencement of the meeting on any matter within the jurisdiction of the Commission. This should not relate to any item on the agenda. It is the policy of the Authority that each person addressing the Commission limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Commission on an agenda item should do so at the time the item is considered. It is the policy of the Authority that oral comments be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available in the Boardroom and are to be completed prior to speaking.

In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, contact Juanita Villaseñor at juanita@ebda.org or (510) 278-5910. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

Agenda Explanation
East Bay Dischargers Authority
O&M Agenda
September 21, 2021

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>.

**The next O&M Committee meeting will be held
Tuesday, October 19, 2021, at 9:00 a.m.**

ITEM NO. OM4 EBDA PERMIT COMPLIANCE

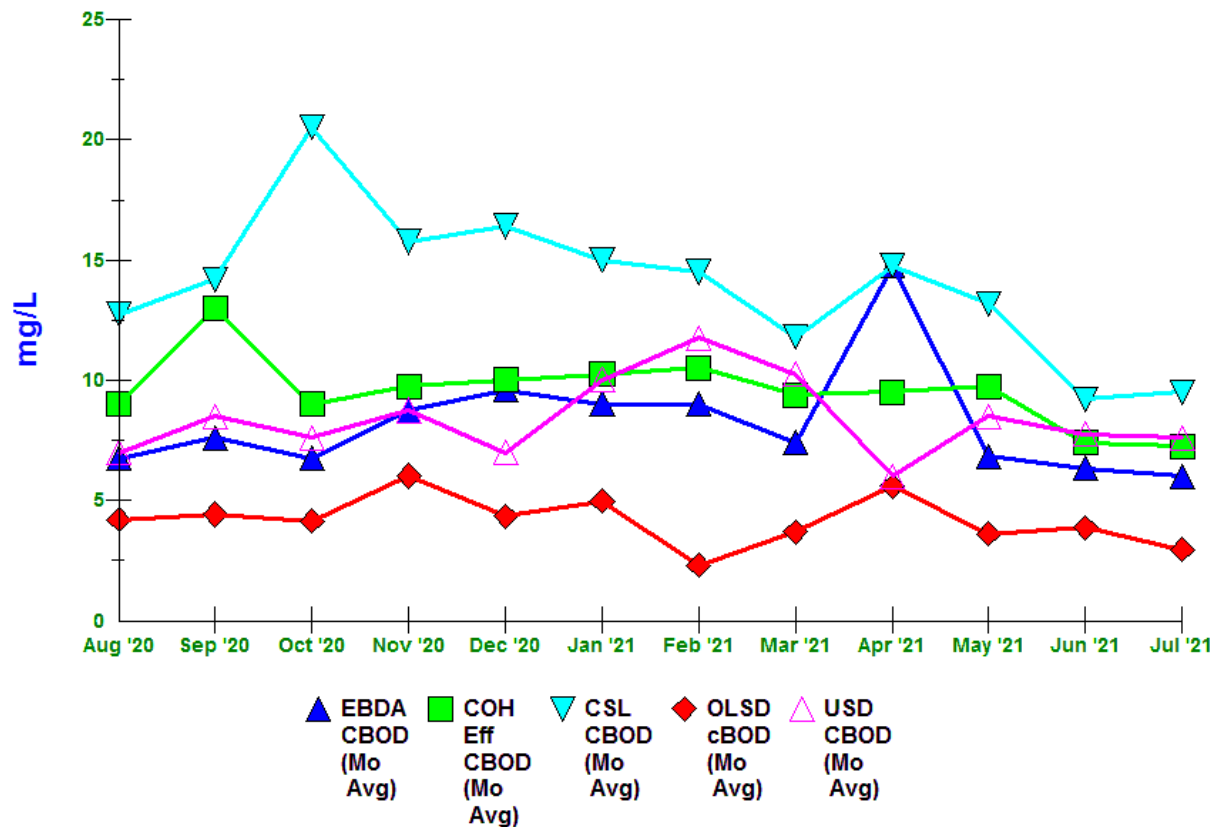
Recommendation

For the Committee's information only; no action is required.

Permit Compliance Issues

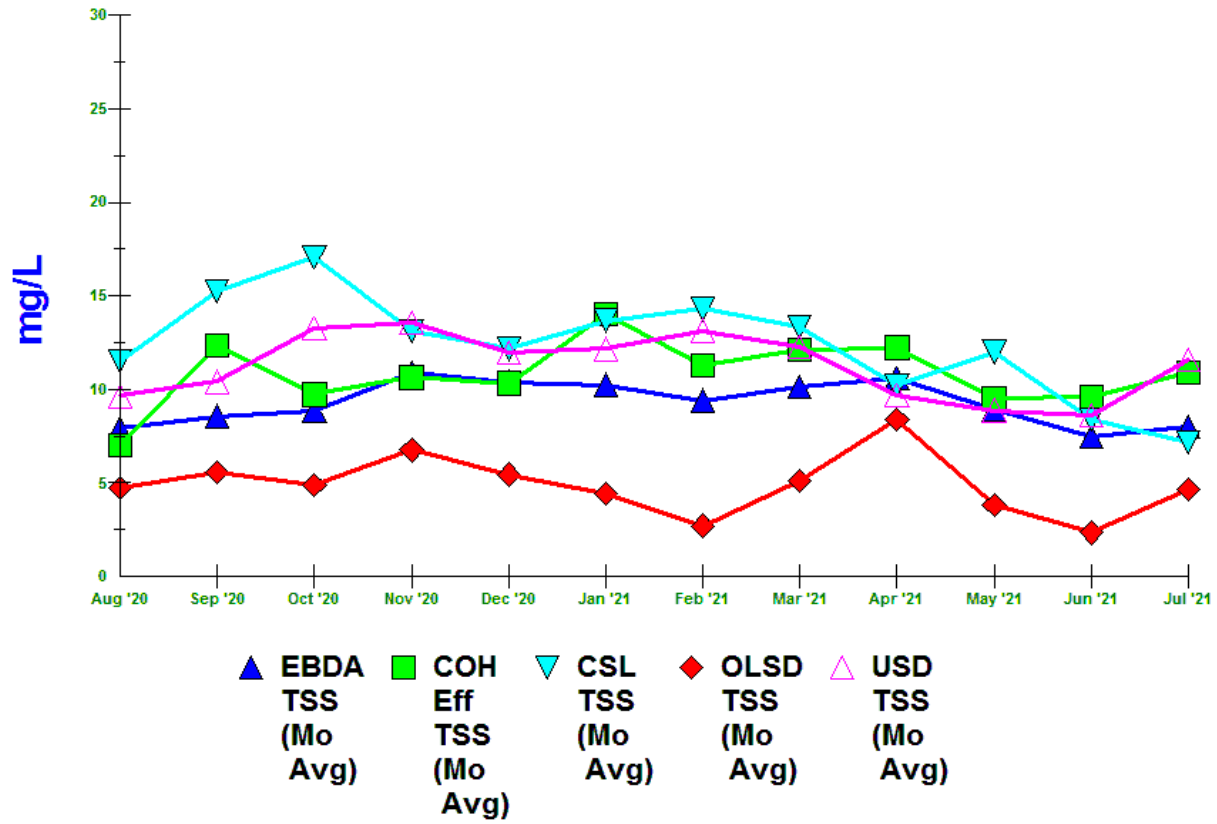
There were no NPDES permit violations in June or July, and preliminary data from August are also free of permit exceedances. Member Agency CBOD and TSS performance are shown below. A table with bacterial indicators is also included. While values for bacterial indicators did increase as expected during the warm summer conditions, EBDA was never in compliance jeopardy in August.

EBDA CBOD (Limit=25 ppm)



EBDA CBOD

EBDA TSS (Limit 30 ppm)



EBDA EFF TSS

EBDA Bacterial Indicators

Date	FECAL	ENTERO
	MPN/ 100mL	MPN/ 100mL
Limit (90th Percentile)	1100	
Limit (Geomean)	500	240
September 2020 Geomean	41	5
October 2020 Geomean	30	9
November 2020 Geomean	11	4
December 2020 Geomean	9	2
January 2021 Geomean	5	3
February 2021 Geomean	6	3
March 2021 Geomean	5	3
April 2021 Geomean	13	3
May 2021 Geomean	10	6
June 2021 Geomean	13	4
7/5/2021	4	13
7/6/2021	11	4
7/7/2021	29	13
7/12/2021	2	< 3
7/13/2021	8	8
7/14/2021	3	2
7/19/2021	33	< 2
7/20/2021	51	< 2
7/21/2021	700	10
7/26/2021	6	< 2
7/27/2021	4	2
July 2021 Geomean	11	2
8/2/2021	435	6
8/3/2021	38	14
8/4/2021	540	17
8/9/2021	4	2
8/10/2021	130	25
8/16/2021	68	582
8/17/2021	33	141
8/23/2021	273	345
8/24/2021	17	51
8/30/2021	12	15
8/31/2021	14	25
August 2021 Geomean	52	32

ITEM NO. OM5 STATUS REPORT

Union Effluent Pump Station (UEPS)

No change; all equipment is operational.

Hayward Effluent Pump Station (HEPS)

Effluent Pump Replacement Project

On August 19, 2021, a kickoff meeting for the HEPS Effluent Pump Replacement Project was attended by EBDA Staff, COH Engineering, and Currie Engineers, EBDA's contract project/construction manager. Items discussed during the meeting included preparation of the bid documents and the bid approach, structural engineering calculations, and the removal of HEPS Effluent Pump No. 4. The objective of removing Pump No. 4 was to visually inspect the condition of the interface between the pump base and other pump station infrastructure.

On September 7, 2021, HEPS Effluent Pump No. 4 was removed. The pump and motor will be saved for spare parts until the new pumps are installed, and at that time they will be disposed of as part of the project.



HEPS Effluent Pump No. 4

Oro Loma Effluent Pump Station (OLEPS)

Effluent Pump No. 4 Right Angle Gear Drive & Motor Refurbishment

On August 23, 2021, OLSD maintenance staff completed a refurbishment of the Effluent Pump No. 4 right angle gear drive. The input and output shaft seals had become brittle and started leaking oil. This refurbishment was complex and required the disassembly of the gear drive from the pump shaft and motor. The gear drive was then moved to the maintenance shop where the seals, gaskets, and part of the output shaft coupling were replaced. The pump's motor was removed and sent to Vincent Electric for refurbishment. The right angle gear drive and motor refurbishment was completed in six working days.



OLEPS Effluent Pump No. 4 Right Angle Gear Drive & Motor

Main Electrical Switchboard Upgrade

Schneider Electric is in the process of manufacturing the new Main Electrical Switchboard breakers. The tentative ship date for the new breakers is the last week of September, but EBDA is still awaiting confirmation of the date. As with a lot of newly manufactured equipment, the pandemic has extended lead times. Once the ship date is confirmed, another OLEPS PG&E electrical shutdown will be scheduled to install the new breakers, the new Main Electrical Switchboard front panels, and upgraded power monitoring equipment, which will allow OLEPS instantaneous power usage to be displayed on EBDA's SCADA system.

San Leandro Effluent Pump Station (SLEPS)

No change; all equipment is operational.

Skywest Pump Station

Recycled Water Production

During the month of July 2021, the Skywest Recycled Water System operated every Tuesday, for a total of four days, and produced 2.10 million gallons of recycled water.

In August 2021, the Skywest Recycled Water System operated four out of the five Tuesdays and produced 2.16 million gallons of recycled water.

Marina Dechlorination Facility (MDF)

Meter Vault Air Vent Piping & Manway Cover Painting

On September 8, 2021, the CSL Force Main Crew pressure washed and painted the MDF meter vault air vent piping and manway cover. Whereas most of the protective coating work (painting) completed by the Force Main Crew is at the bottom of a manhole and never seen except by EBDA Staff, the piping and cover are on the SF Bay Trail in front of MDF. These structures are painted on an as-needed basis to remove graffiti and address corrosion. Below are before and after photos of the recent work at MDF.



Before



After

Replacement Automatic Transfer Switch (ATS)

EBDA contacted ASCO Power Technologies regarding the replacement of the MDF ATS electronic controls and the addition of an ethernet module to provide additional ATS status information to EBDA's SCADA system. It was determined that a PG&E electrical shutdown was required to complete the ATS project. Replacement of the MDF main electrical breaker has been added to the project since it also requires a PG&E shutdown. The project will most likely be delayed until after wet weather and after the new chlorine residual limit becomes effective. This delay will greatly reduce the possibility of a permit violation during the electrical shutdown.

Force Main

No change; all equipment is operational.

Operations Center

No change; all equipment is operational.

Miscellaneous Items

Underground Service Alerts

EBDA received ten (10) Underground Service Alert (USA) tickets during the month of July 2021. Seven required an Electronic Positive Response (EPR), and of the seven, five required calls/emails to the excavators, and three required field verification.

EBDA received thirteen (13) Underground Service Alert (USA) tickets during the month of August 2021. Ten required an Electronic Positive Response (EPR), and of the ten, eight required calls/emails to the excavators, and two required field verification.

COVID-19 Response

All EBDA staff members are fully vaccinated. Staff will work with the Commission to determine, on a month-to-month basis whether Commission and Committee meetings will continue to be conducted via Zoom or whether to resume in-person meetings. The current Executive Order modifying the Brown Act to allow for fully remote meetings is set to expire at the end of September. Staff will notify the Commission of any Governor or Legislative action to extend or modify the current rules.

Special Projects

Disinfection Master Plan

Staff is continuing to work with Carollo Engineers on a Disinfection Master Plan, per the Work Order approved in February 2021. The goal of the Master Plan is to develop a strategy for sodium hypochlorite (hypo) dosing and monitoring to prevent bacteria outbreaks and ensure consistent permit compliance while optimizing chemical dosage – both for disinfection and for dechlorination. To date, the Member Agencies have provided data and information on current hypo dosing practices, and site visits were conducted at each facility in May 2021. Carollo has been reviewing the information collected, conducting hydraulic modeling and analysis, and developing preliminary recommendations. Meetings were held with each Member Agency to review and discuss findings. The next step will be MAC discussion of a Draft Report, which Carollo expects to deliver in October.

Cargill Brine Project Due Diligence

EBDA staff is continuing to work with Cargill to develop strategies to address the risks of adding brine to the EBDA transport system. In the Corrosion Protection Evaluation Project, Brown & Caldwell screened a multitude of potential mitigation options for protecting vulnerable sections of the force main from corrosion associated with brine addition. They narrowed the list to three in-pipe options, which are being evaluated for cost, constructability, and other factors. Preliminary indications are that segmental sliplining of the vulnerable sections of the transport pipe is the most robust and lowest cost approach. Sliplining will also be compared with the option to extend Cargill's pipe to a connection point further downstream in EBDA's system where there is greater dilution and less open channel flow.

In parallel, staff is working with the Authority's legal team at Meyers Nave to evaluate options for project ownership and execution. The current favored approach is for Cargill to own the pipeline and to enter into Franchise Agreements with the cities through which the pipeline will traverse. Staff and legal counsel believe this is the lowest risk approach for EBDA.

EBDA and Cargill staff are also continuing to work with the City of Union City to facilitate the incorporation of the pipeline into Union City's upcoming Union City Boulevard bike lane project. Funding for the bike lane project was set to expire in 2022; however, city staff has requested an extension through 2023 from Alameda County Transportation Commission. In addition to accommodating time constraints on the City's part, this extension will allow EBDA and Cargill additional time to complete the environmental review process for the project under the California Environmental Quality Act (CEQA).

The CEQA review process is currently underway and will be expanded to include not only the original pipeline from Cargill's facility to EBDA's southernmost point in Union City, but also the two leading alternatives for addressing corrosion – sliplining EBDA's pipe or extending Cargill's pipe to Oro Loma. EBDA staff, consultants, and legal counsel are currently evaluating whether a mitigated negative declaration is appropriate or whether an Environmental Impact Report may be needed to address the expanded scope.

Advanced Quantitative Precipitation Information (AQPI) Project

The regional AQPI project continues to move forward with a goal of improving prediction of rainfall events in the Bay Area. On April 20, 2021, Sonoma Water's Board of Directors approved the agreements for the East Bay radar deployment and for the lease with American Tower. Installation of the radar at Rocky Ridge has faced some delays, but is on track for installation Fall 2021.

ITEM NO. 15 RESOLUTION TO CONTRIBUTE \$1000 PER YEAR FOR FIVE YEARS TO THE CALIFORNIA ASSOCIATION OF SANITATION AGENCIES EDUCATION FOUNDATION TOWARD THE CREATION OF A BRUCE WOLFE MEMORIAL SCHOLARSHIP

Recommendation

Approve the resolution dedicating funds to the creation of a Bruce Wolfe Memorial Scholarship.

Background

Bruce Wolfe worked at the San Francisco Bay Regional Water Quality Control Board from 1977 to 2018, serving most recently as its Executive Officer. As a permit engineer early in his career, Bruce was instrumental in the creation of EBDA. Bruce was an inspirational figure, and his leadership was foundational to the positive collaboration that has been fostered between regulators and regulated community for the health of the Bay. Bruce passed away in February 2020.

At the April 2021 Commission Meeting, the Commission expressed interest in honoring Bruce's legacy in some way and directed staff to reach out to Bruce's widow to understand what the family would find to be a meaningful tribute. At the May Commission Meeting, staff reported that Bruce's widow expressed an interest in supporting the advancement of women in science, technology, engineering, and math (STEM), as this had been a passion of Bruce's. The Commission supported the concept of a scholarship for a woman on a STEM and/or water/wastewater career path. Staff began discussions with the [California Association of Sanitation Agencies \(CASA\) Education Foundation \(CEF\)](#), which grants scholarships to students pursuing higher education in engineering, environmental science, public administration, or other related fields, who show an interest in serving the clean water community.

At the July 2021 Commission Meeting, the Commission took an informal vote and unanimously supported dedication of \$1000 per year for five years to be provided to the CEF for the purpose of creating a Bruce Wolfe Memorial Scholarship. The intent of this item is to formalize that vote.

Discussion

Following the July Commission discussions, staff met with the CEF Board regarding the scholarship. As previously discussed, the CEF supports creation of a scholarship funded by EBDA and potential partners for a woman from EBDA's service area and integrating that scholarship into their offerings. Their request is that EBDA assist in outreach to ensure that sufficient applications are received from students that meet the criteria, and that a representative from EBDA (staff or Commission) serve on the application review panel. Because the other scholarships offered by the CEF are in the amount of \$5000 each, the CEF Board requested that \$5000 per year for five years be dedicated to the Bruce Wolfe Memorial Scholarship.

Staff then approached the Bay Area Clean Water Agencies (BACWA) Executive Board regarding participating in the creation of the Bruce Wolfe Memorial Scholarship through the CEF. While the BACWA Board has not yet taken formal action, there was consensus among the Board to dedicate \$4000 per year for five years to the scholarship, which would be added to EBDA's \$1000 per year. Given that BACWA represents the whole Bay Area, the criteria for the award would be that it be given to a student from the Bay Area, not specifically the EBDA service area as previously requested by the Commission. That said, EBDA and its member agencies could encourage applications from within our service area to increase the likelihood that the awardee be from within the area. The BACWA Board also expressed interest in potentially broadening the award criteria to include other groups that are underrepresented in the clean water profession. EBDA staff will work with BACWA, CEF, and Bruce's family to refine the criteria while maintaining the intention of honoring Bruce's memory.

EAST BAY DISCHARGERS COMMISSION
EAST BAY DISCHARGERS AUTHORITY
ALAMEDA COUNTY, CALIFORNIA

RESOLUTION NO. 21-08

INTRODUCED BY _____

**RESOLUTION TO CONTRIBUTE \$1000 PER YEAR FOR FIVE YEARS TO THE CALIFORNIA
ASSOCIATION OF SANITATION AGENCIES EDUCATION FOUNDATION TOWARD THE
CREATION OF A BRUCE WOLFE MEMORIAL SCHOLARSHIP**

WHEREAS, Bruce Wolfe began working at the San Francisco Bay Regional Water Quality Control Board (RWQCB) in 1977 and worked there until his retirement in 2019; and

WHEREAS, as a RWQCB permit engineer for East Bay Dischargers Authority (EBDA) and its Member Agencies, Mr. Wolfe was instrumental in the creation of EBDA; and

WHEREAS, as Executive Officer of the RWQCB, Mr. Wolfe exhibited unparalleled leadership in working collaboratively to further stewardship of San Francisco Bay, including through the Regional Monitoring Program and the Nutrient Management Strategy; and

WHEREAS, the EBDA Commission wishes to honor the life and legacy of Mr. Wolfe; and

WHEREAS, Mr. Wolfe was dedicated to fostering the advancement of women and other underrepresented groups in science, engineering, and other clean water career paths; and

WHEREAS, the California Association of Sanitation Agencies Education Foundation (CEF) is a 501(c)3 organization that helps ensure clean water for Californians by awarding scholarships to promising students on a path to serving the environmental community; and

WHEREAS, CEF has agreed to create a Bruce Wolfe Memorial Scholarship for a student meeting criteria developed by EBDA and other contributors.

NOW, THEREFORE, BE IT RESOLVED, the Commission of the East Bay Dischargers Authority hereby pledges to contribute \$1000 per year for fiscal years 2022/2023 through 2026/2027 to the California Association of Sanitation Agencies Education Foundation toward creation of a scholarship in memory of Bruce Wolf.

SAN LORENZO, CALIFORNIA, SEPTEMBER 23, 2021, ADOPTED BY THE FOLLOWING VOTE:

AYES:
NOES:
ABSENT:
ABSTAIN:

CHAIR
EAST BAY DISCHARGERS COMMISSION

ATTEST: _____
GENERAL MANAGER
EAST BAY DISCHARGERS AUTHORITY
EX OFFICIO SECRETARY

ITEM NO. 16 ITEMS FROM THE COMMISSION AND STAFF

The Commission and staff may comment on items of general interest.

ITEM NO. 17 ADJOURNMENT