EAST BAY DISCHARGERS AUTHORITY
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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/82732980951
- Telephone dial-in: 1(669) 900-6833, meeting ID #827 3298 0951

ITEM NO. 12

REGULATORY AFFAIRS COMMITTEE AGENDA

Wednesday, March 17, 2021
8:00 a.m.

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

Committee Members: Johnson (Chair); Lamnin

RA1. Call to Order

RA2. Roll Call

RA3. Public Forum

RA4. EBDA NPDES Performance – See Item OM4
(The Committee will review NPDES Permit compliance data.)

RA5. NPDES Annual Report
(The Committee will review the Authority's Annual Report submittal.)

RA6. Nutrients Group Annual Report
(The Committee will the regional annual report published by the Bay Area Clean Water Agencies.)

RA7. BACWA Key Regulatory Issue Summary
(The Committee will review BACWA's issue summary.)

RA8. 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.

Agenda Explanation
East Bay Dischargers Authority
Regulatory Affairs Agenda
March 17, 2021

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 Regulatory Affairs Committee meeting is scheduled for Wednesday, May 19, 2021 at 9:00 a.m.

Agenda Explanation
East Bay Dischargers Authority
Regulatory Affairs Agenda
March 17, 2021

ITEM NO. RA5 NPDES ANNUAL REPORT

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

Background
EBDA is required by its NPDES permit to submit an annual report. The report provides a compendium of the status of EBDA's facilities and discharge quality.

Discussion
EBDA's Annual Self-Monitoring Report is attached for the Commission's information. Upon review of the Report, EBDA's Regional Water Quality Control Board Permit Engineer responded with the following:

> I just wanted to commend you and the other EBDA folks for putting together a well-organized Annual Report. I know you do these every year and it may just seem routine busywork at this point, but I appreciate the time that went into it. I hear about EBDA's projects and plant upgrades in bits and pieces throughout multiple meetings stretched over the year, so it's really nice to have all of that summarized in one report.

2020 NPDES SELF-MONITORING PROGRAM ANNUAL REPORT

NPDES PERMIT NO. CA0037869

East Bay Dischargers Authority
City of San Leandro
Oro Loma Sanitary District
Castro Valley Sanitary District
City of Hayward
Union Sanitary District

January 27, 2021

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Section 1: Comprehensive Discussion of Treatment Plant Performance and Compliance

East Bay Dischargers Authority (EBDA) reached a major milestone in 2020 with implementation of a new Amended and Restated Joint Powers Agreement (JPA), which took effect on July 1, 2020 and runs through June 30, 2040. The JPA outlines the governance and cost-sharing of EBDA's joint transport and outfall system and associated infrastructure. EBDA is continuing to negotiate terms with the Livermore-Amador Valley Water Management Agency (LAVWMA) for a new or amended Master Agreement governing LAVWMA's discharges through the EBDA system.

Major milestones and construction projects completed at the EBDA member treatment plants included the following:

- Oro Loma/Castro Valley Sanitary Districts (OLSD/CVSan)
    - Completed construction of a full-scale nitrification and denitrification process. The $24.7M construction project was completed in Summer 2020 and the plant has operated since. The scope included the construction of a fourth aeration basin, six new blowers and associated building, and retrofit of existing mechanical aeration with fine bubble diffusers. Initial performance is exceeding expectations. The process is removing Total Inorganic Nitrogen levels to below 10 mg/L during dry weather. Staff expects to exceed the target annual TIN removal of 50%. Ammonia reduction is typically to below 2 mg/L.
    - Starting a full scale sidestream nitrification process using Microvi's biocatalyst (January 2021). The full-scale implementation follows three years of pilot work considering both mainstream and sidestream treatment applications. As constructed, approximately 100,000 gpd of belt press filtrate will be treated each day. The stream contains approximately 20% of the total influent nitrogen. The process is designed to reduce Ammonia to nitrite, which is readily available for denitrification in the mainstream process.
- Union Sanitary District (USD)
    - Commenced design of the first phase of the Enhanced Treatment and Site Upgrade Program, which includes nutrient removal options in the future. The design for phase 1a is expected to be complete by late 2021, and the commencement of design for phase 1b, will take place in mid-2021. Phase 1a will modify the existing aeration basins, add an 8th aeration basin, and relocate existing administrative buildings to allow for phase 1b to be built. Phase 1b will construct new secondary clarifiers and new effluent pump station.
    - Design for Digester #7 was completed, and construction is ongoing, with completion anticipated by early 2022.

- Ongoing design for a new Standby Generator system should be completed in 2021.

- City of Hayward
  - Recycled water membrane treatment system has been completed and will be in service as soon as approval is received from the Department of Drinking Water. This will supply 300k gallons of recycled water to neighboring businesses.
  - A 0.6MW solar array was added to the system, bringing total solar array output to 1.6MW.
  - A new drive unit was installed in Final Clarifier #2, along with new ground water relief valves.
  - Contractors have begun work on the bar screen project at headworks. This project includes replacing the grinders with bar screens, major reconstruction to the headworks building, foul air handling system upgrades, replacement of the biofilter bed, and a new ferric chloride dosing station.
- City of San Leandro
  - 1MW solar system is online and currently producing better than expected results.
  - Treatment Wetlands is at 60% design phase, with anticipated design completion in the late spring/summer 2021.
  - Approved and in design phase for a project that allows local industry to place pretreatment byproduct "high strength waste" directly to anaerobic digestion, replaces several pieces of equipment for energy efficiency, and provides a battery backup for peak shaving and diesel-free emergency power.

As part of implementation of the new JPA, EBDA formally transferred ownership and financial responsibility for the San Leandro Effluent Pump Station (SLEPS) to the City of San Leandro. Also, in lieu of implementing capital upgrades at the Union Effluent Pump Station (formerly Alvarado Effluent Pump Station), EBDA began providing annual capital payments to USD, which they will use to relocate the station as part of their Enhanced Treatment and Site Upgrade Program, up to a total of $4.2 million over ten years. Ownership of the station and associated infrastructure will be transferred from EBDA to USD when the station is relocated.

EBDA also continues to implement its Asset Management Plan to ensure appropriate renewal and replacement of infrastructure. The estimated total restoration cost over 20 years is approximately $11.3 million. In 2020, EBDA completed the $3 million motor control center replacement project at the Hayward Effluent Pump Station (HEPS). The project, which also includes a variety of station upgrades described on page 16, improves station reliability. EBDA also completed upgrades to the backup power systems at the

Oro Loma Effluent Pump Station (OLEPS) to improve power reliability, including completing a connection to Oro Loma Sanitary District's backup power system. Improvements to the main switchboard at OLEPS are underway.

EBDA continued its key role in the Transforming Shorelines Project. This project, funded by an EPA Water Quality Improvement Fund grant, includes design of a full-scale horizontal levee south of Oro Loma ("First Mile" project), continued research at Oro Loma's horizontal levee pilot, advancement of pilot wetlands projects at San Leandro and Hayward, and building capacity for nature-based solutions among Bay Area wastewater agencies. In close coordination with East Bay Regional Park District, Hayward Area Shoreline Protection Agency, and San Francisco Estuary Partnership, EBDA facilitated a Request for Proposals and consultant selection process for the First Mile and Hayward projects. The contract was approved in December 2020, and the projects are being kicked off in January 2021.

EBDA's Member Agencies recycled approximately 789 million gallons in 2020. For consistency with recycled water totals submitted through GeoTracker, these totals now include in-plant reuse. The values can therefore not easily be compared with prior year data, but we will endeavor to make them consistent for evaluation of trends going forward. Also of note, there was no discharge to the Hayward Marsh in 2020.

As shown in the table below, including the LAVWMA agencies, water recycling accounted for more than 3.1 billion gallons, about 14% of EBDA's outfall discharge last year of approximately 22.6 billion gallons.

Agency	*2020 Recycled Water Production (MG)*
Hayward	288.04
San Leandro	96.00
EBDA Skywest Project	15.44
Oro Loma Sanitary District	18.00
Union Sanitary District	371.64
EBDA Subtotal	**789.13**
USD Hayward Marsh	0
EBDA Total	**789.13**
Livermore	804.13
Dublin San Ramon Services District (DSRSD)	1570.27
LAVWMA Total	**2374.40**
Grand Total	**3163.53**

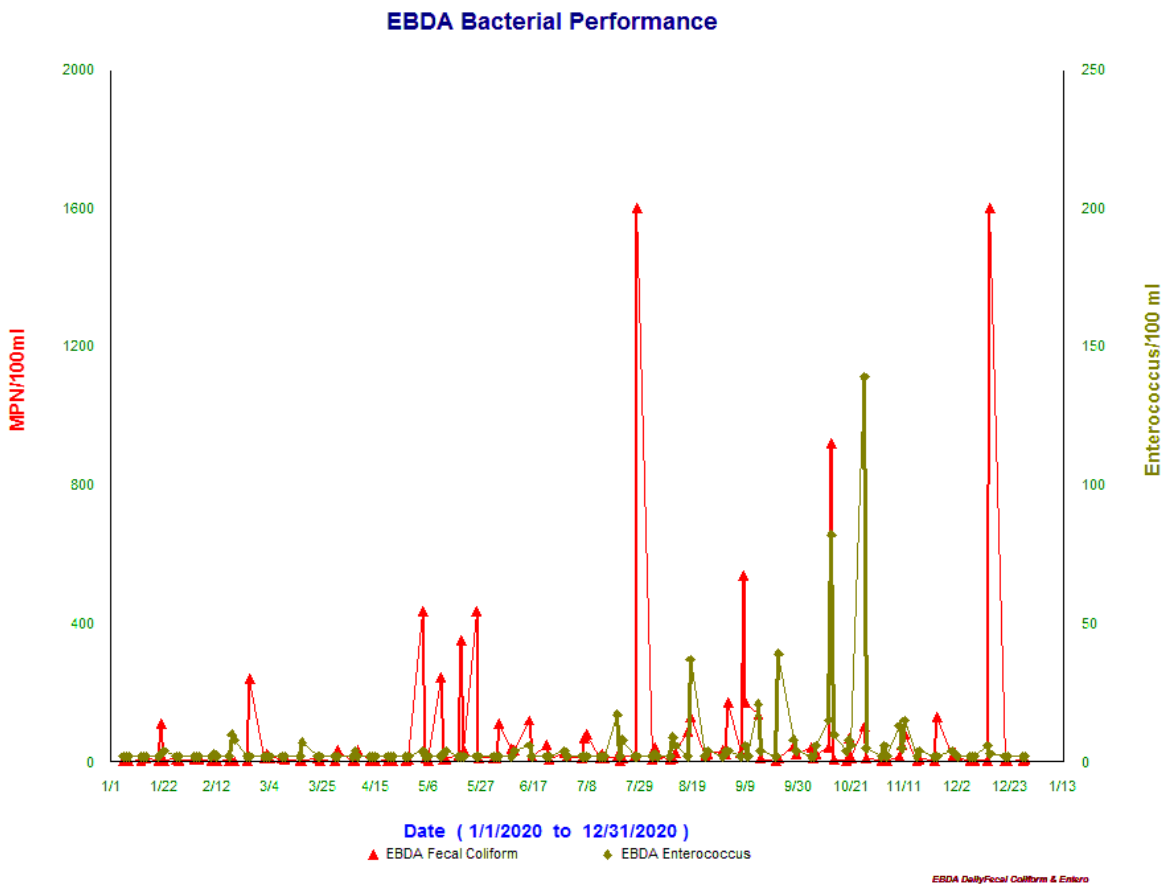
Bacterial Limits

The graphic below presents fecal pathogen data from samples through the year. Note that permit limits are calculated as monthly geometric means or monthly 90%ile samples. Sporadically, at random intervals, a high sample can be detected. This outcome is

probably due to the sloughing of pipe biofilms into the sample line—these events are why permit compliance is determined by geometric means.

EBDA and its member agencies worked hard over the past few years to improve chlorine dosing to prevent outbreaks of bacterial contamination that had occurred in prior years. This has led to consistent compliance with limits. EBDA has issued a Request for Proposals for a consultant to develop a Disinfection Master Plan in 2021. This Master Plan will assist EBDA in further optimizing chlorine dosing to prevent bacterial regrowth.

Figure 1 – EBDA Bacterial Contaminant Performance



Section 2: List of Analyses for Which the Discharger Is Certified

EBDA conducts no analyses of its own. Each member agency is certified by the State Water Resources Control Board for standard water quality tests such as BOD, TSS, pH, DO, enterococcus, and fecal coliform. City of San Leandro staff performs these analyses on the combined effluent.

All metals and organics analyses are performed by the Authority's contract laboratory, Caltest Analytical Laboratory. Caltest's lab is certified for these analyses. Caltest subcontracts for analytical work on some items, including dioxin and furan compounds and PCBs to other certified labs.

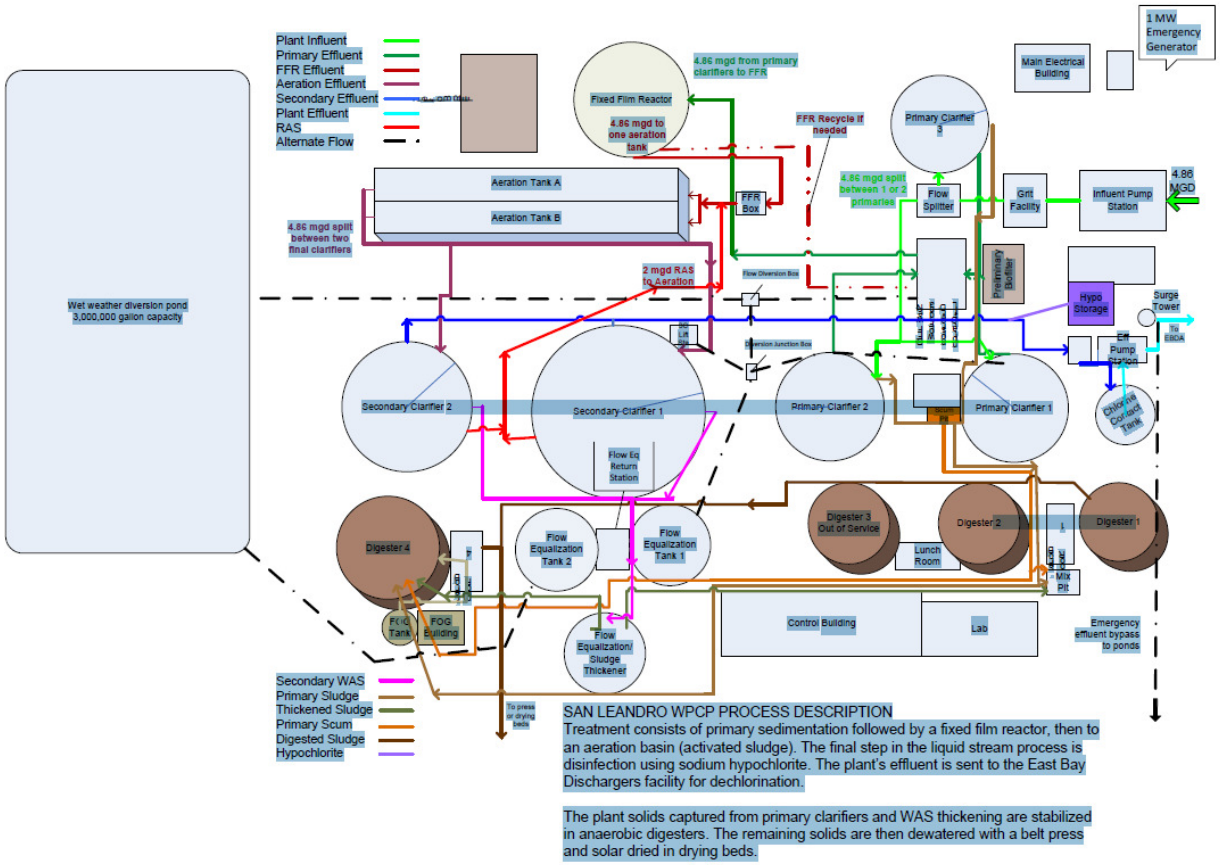
Pacific Eco-Risk Laboratory (PERL), also a certified laboratory, conducts the required acute and chronic toxicity testing for the Authority.

Copies of all laboratory reports are maintained on file at the Authority's office and are available for review upon request. Said reports are not included in this report.

Section 3: Plan View Drawing or Map Showing the Discharger's Facility, Flow Routing, Sampling and Observation Station Locations

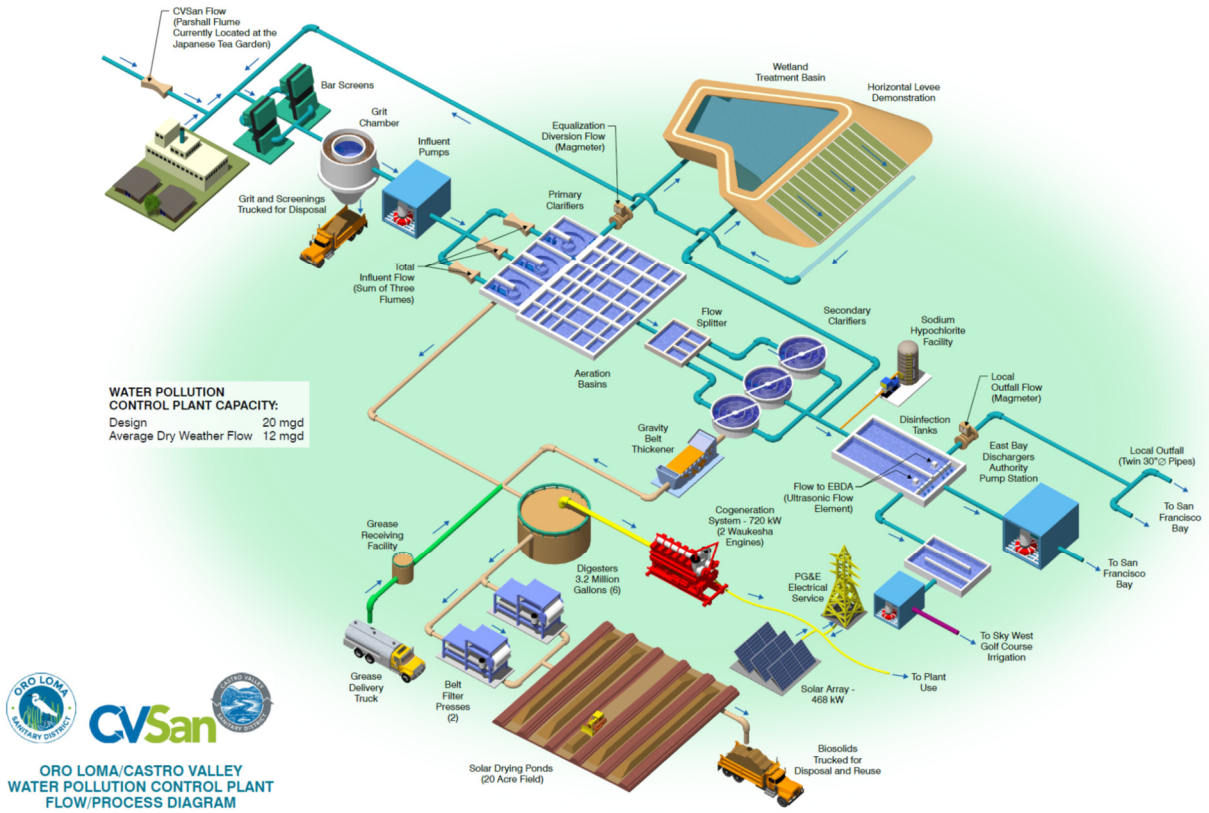
Marina Dechlorination Facility

San Leandro Plant – Process Flow Diagram



San Leandro Plant – Sampling Locations

OLSD Plant – Process Flow Diagram

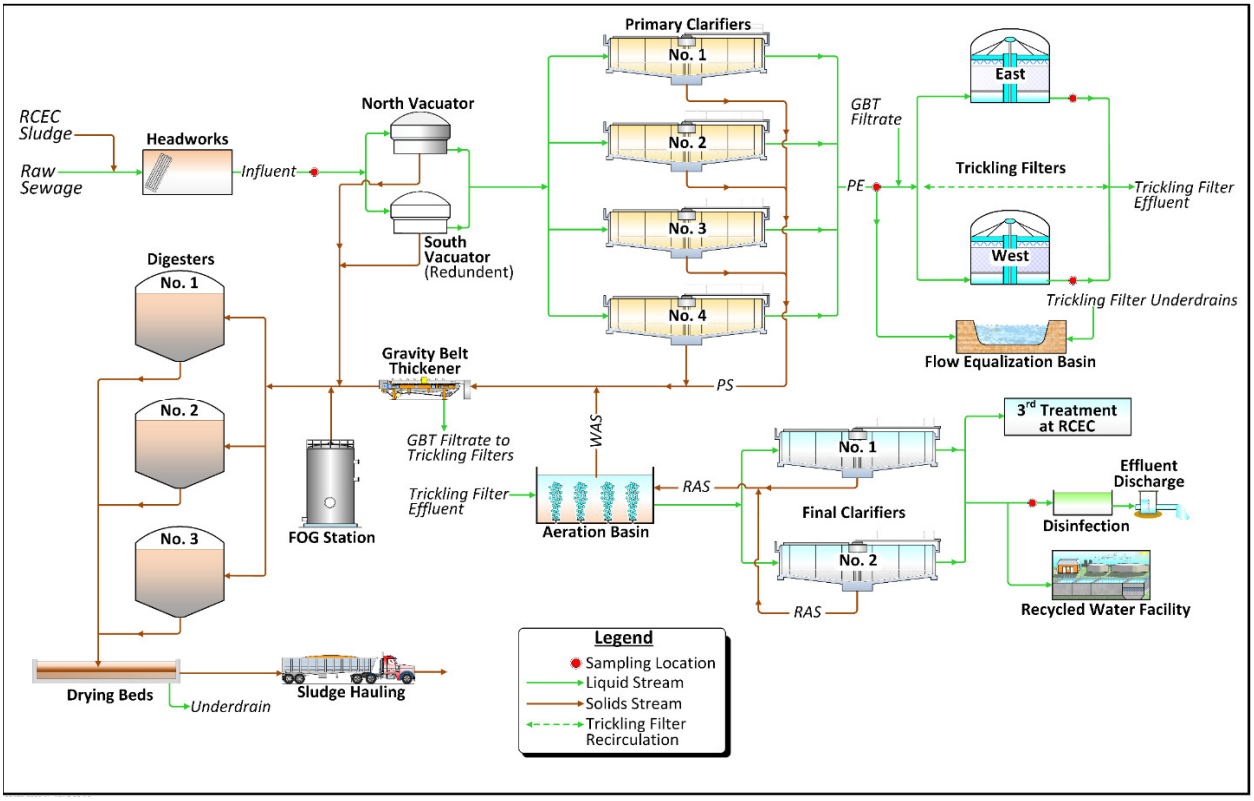


OLSD Plant – Sampling Locations

PLANT INFLUENT SAMPLE POINT

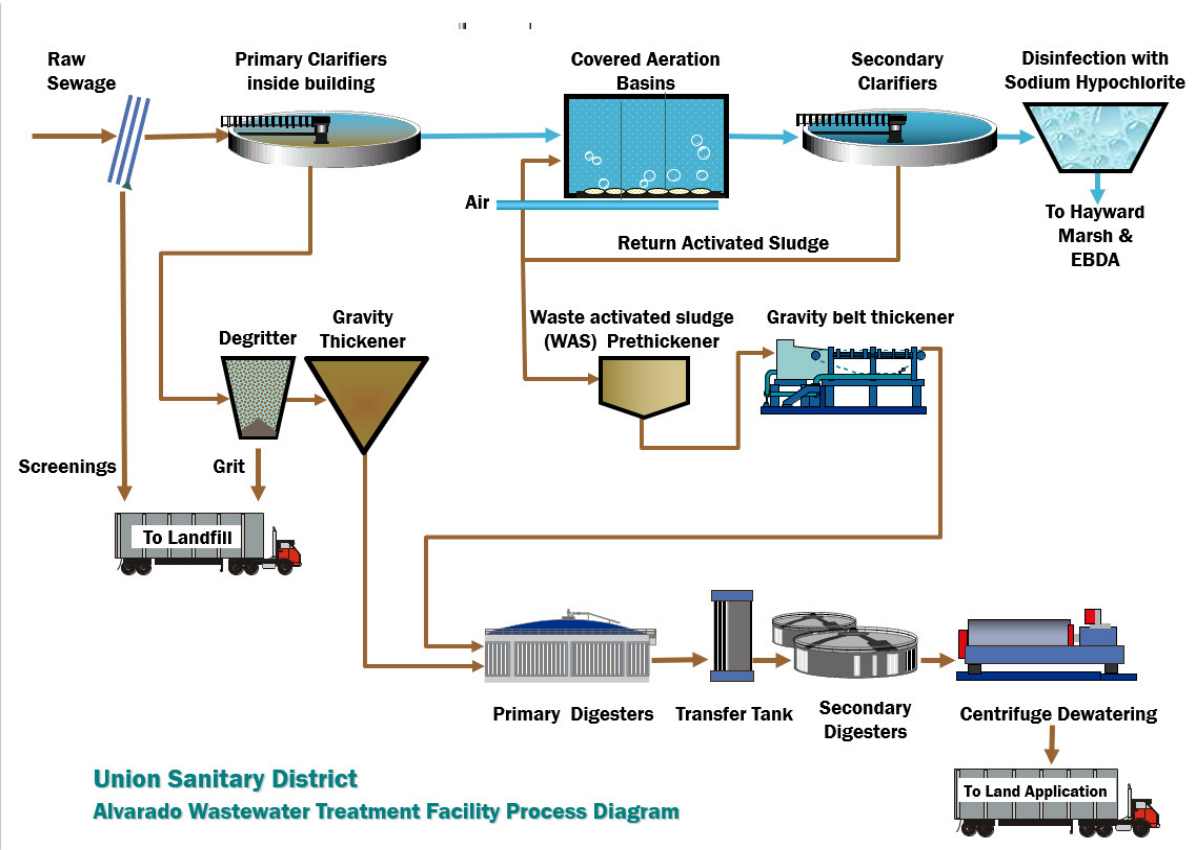
PLANT EFFLUENT SAMPLE POINT

Hayward Plant – Process Flow Diagram



Hayward Plant – Sampling Locations

USD Plant – Process Flow Diagram



USD Plant – Sampling Locations

Section 4: Results of Facility Report Reviews

The tables in this section summarize the status of reviewing and updating the following documents: Operations & Maintenance (O&M) Manual, Contingency Plan, Spill Prevention Plan, and Wastewater Facilities Status Report.

EBDA Facilities

REPORTS	REVIEW DATE	REVIEW PROCEDURES	PLANNED ACTIONS	SCHEDULE
O&M Manual	Jan 2021	Updated on an as-needed basis and reviewed annually by the EBDA O&M Manager.	The Authority maintains a comprehensive O&M Manual for the joint-use facilities. Chapters of the Manual are regularly reviewed and updated. EBDA's Wet Weather SOP is updated annually.	Performed annually
Contingency Plan	Jan 2021	Updated annually by EBDA O&M Manager and EBDA Administrative Assistant. EBDA is included in the Alameda County's Office of Emergency Service's Utility Unit.	The Emergency Operating Contingency Plan is supported by Operations & Maintenance Agreements between Member Agencies, which are compatible with their existing plans and known to all other local and county agencies for emergency purposes. Operation and maintenance activities are contracted with the Member Agencies for routine work. Emergency work is performed sometimes by Member Agencies and sometimes through contracts with private specialty firms.	Performed annually
Spill Prevention Plan	Jan 2021	Updated annually by EBDA O&M Manager	No major changes planned for 2021.	Performed annually

Wastewater Facilities Status Report	Jan 2021	EBDA continues to implement a comprehensive Replacement and Renewal Program. The Authority has an Asset Management Plan that covers all critical equipment. The plan was recently updated and will be reviewed semi-annually by the EBDA General and O&M Managers.	In 2020, EBDA completed the following projects:
			• Replacement of the Motor Control Center at the Hayward Effluent Pump Station (HEPS).
			  ○ Constructed a pond influent flow dissipater structure
			  ○ Installed piping from the pump station to the dissipater structure
			  ○ Installed new valves and motorized valve actuators
			  ○ Installed an access platform around the existing generator
			  ○ Installed stairs into the new MCC Building
			  ○ Upgraded pipe coatings
			  ○ Repaved the existing site
			  ○ Installed new perimeter fencing
			• EBDA Office Repairs
			• Redundant back-up power for the Oro Loma Effluent Pump Station (OLEPS)
			• OLEPS Water System Upgrade
			• OLEPS Paving Improvements
			
			In 2021, the Authority is continuing work on the following upgrades to the EBDA system:
			• Marina Dechlorination Facility (MDF) Automation Upgrades
			• OLEPS Hypo System Automation
			• OLEPS Main Electrical Switchboard Upgrade
			• Radio Communications Upgrades
				Anticipated Completion:
				
				MDF Automation Upgrades, December 2021
				
				OLEPS Hypo System Automation, April 2021
				
				OLEPS Main Electrical Switchboard Upgrade, December 2021
				
				Radio Communications Upgrades, June 2021

San Leandro Treatment Plant

Document	Review Date	Review Procedures	Planned Actions	Schedule
O&M Manual	Sections assigned and updated throughout the year	O&M manuals and SOPs are written and revised as necessary by designated Plant Operators and reviewed by the Operations Supervisor and Plant Manager	Review O&M chapters and SOPs as needed. Continue developing and revising SOPs for plant processes. SOPs reviewed/revised or created are: Inspecting and replacing Hypo pump tubing, Cleaning Filter press belt with chemical, Starting or switching thickening processes, EQ pump oil drip adjustment, Plant genset fuel transfer, Manual transfer to backup generator. O&M is still a mix of electronic and older paper as we transition; we have fewer and fewer paper versions per year.	Performed continuously
Contingency Plan	January 2020	WPCP management reviews, edits and approves	Contingency plan reviewed annually and updated as needed. Update employee list and emergency contacts along with contractor contacts.	Performed annually
Spill Prevention Plan	January 2020	WPCP management reviews, edits and approves	Plan reviewed and updated. Training and review done annually, including: new employee orientation, 8 hour on-site level 1 responder training, and tailgate review on plan and emergency spill kits.	Performed annually

Oro Loma/Castro Valley Sanitary District Treatment Plant

Document	Review Date	Review Procedures	Planned Actions	Schedule
O&M Manual	Ongoing	New sections of the O&M for the Nutrient Optimization facilities were completed as expected in advance of start-up in Summer 2020.	The District has developed a computer-based training program for the 25 unit processes in the treatment plant (including the EBDA pump station). Staff will continue to train on the modules.	Ongoing
Contingency Plan	December 2019	Management team completed its review and updated document to reflect changes in contact information or equipment/facility changes.	Continue to make updates as needed, at least annually.	January 2021
Spill Prevention Plan	July 2018	The District updated its plan in 2018 to reflect changes to the fuel tank at the EBDA Pump Station at Oro Loma.	Continue to make updates as needed.	As needed
Wastewater Facilities Status Report	January 2021		The District continues to execute on its planned 5-Year, $85.5M capital program. The program includes extensive sewer pipe renewal (1.5% of system/year) and Digester Construction in 2025. In 2019, the District applied for $25M in financing from the State Revolving Fund. In 2020, the District applied for a second $25M SRF loan. The District has received a preliminary award of the 2019 application. The District plans to borrow between $30-$40M to replace a minimum of 40 miles of pipe in the next 10 years.	10-Year Capital Plan (Updated December 2020)

Hayward Water Pollution Control Facility

REPORTS	REVIEW DATE	REVIEW PROCEDURES	PLANNED ACTIONS	SCHEDULE
O&M Manual	Ongoing	COH WPCF electronic O&M manuals, including SOP's, are reviewed, and updated annually by staff. Revisions are made to Sections and SOP's	19 SOPs were written or updated in 2020. ETF flush, Derag Grit Classifier, A Brief Guide to SCADA Tags, VA/TA, Cogen Fire Alarm Sensor Cleaning, HEPS Generator PM Procedures, Chlorine Analyzer Sample Pump Backflush, Wrench sizes, Effluent Channel Flush to Ponds, Procedure for Hypo Delivery, Turbidimeter, Troubleshooting HEPS Pumps, Verifying Backup Power for Hypo Station, HEPS Station Checklist, Hypo Station Checklist, Cleaning Wet Pit at South PC, Cleaning New TSS Analyzer, Residual Chlorine Titration and Analyzer Calibration, Transferring Hypo Between Storage Tanks. The review of SOPs and O&M will be done as needed throughout the year of 2021.	SOP's and O&M sections are reviewed periodically and updated no less than on an annual basis. Updates occurred throughout 2020.
Contingency Plan	January 2021	The entire plan is reviewed by the WPCF manager with updates and edits made by the Senior Secretary.	Continue to make updates as needed.	A thorough and comprehensive review is completed annually in January. Emergency contact & Personnel phone lists are kept up-to-date.
Spill Prevention Plan	January 2021	Plan reviewed by WPCF Manager every January. Changes made by Senior Secretary.	Make updates as needed.	Spill Prevention Plan was reviewed in January 2020.

REPORTS	REVIEW DATE	REVIEW PROCEDURES	PLANNED ACTIONS	SCHEDULE
Wastewater Facilities Status Report	Jan 2021	The phase II Facilities Plan was completed in 2020. The City will implement projects as recommended in the 2020 Phase II Facilities Plan.	Planned for 2021: • Construction of the Headworks bar screen project began in 2020 and will be complete in 2021. • The Membrane Recycled Water Treatment system was completed in 2020 and awaiting permit to operate. When it is permitted the treatment system will have a capacity of 5 million gallons per day with an initial service demand of roughly 300K gallons per day • Construction of Effluent Pump Station electrical building, MCC and dissipater structure was completed in 2020. The replacement of the effluent pumps in anticipated in 2021. • Design of the new 12KV switchgear update project will begin in 2020 and be completed and ready for bid in early 2021. • There are several elements of the Phase Two WPCF Improvements that have been incorporated into the Sewer Replacement & Sewer Improvement CIP's which will move forward in year 2020.	10-year Master Plan CIP planning changes are made every year in July with mid-year adjustments made in January/February

Union Sanitary District Treatment Plant

Document	Review Date	Review Procedures	Planned Actions	Schedule
O&M Manual	Ongoing	Plant O&M documents are incorporated into the District's Competency-Based Training Program. USD utilizes Microsoft Sharepoint software to track document review.	Plant management reviews training documents and SOP's as changes occur (i.e., following construction) or as scheduled.	Each individual training module and SOP has a review frequency of 3 years.
Contingency Plan	December 2020	Plant Manager reviews and updates the Contingency Plan annually.	None. Contingency Plan was updated in December 2020.	Complete next review by December 2021.
Spill Prevention Plan	December 2020	Spill Prevention Plan is incorporated into our Contingency Plan and is reviewed at the same time.	None. Spill Prevention Plan was reviewed in December 2020.	Complete next review by December 2021.
Wastewater Facilities Status Report	December 2020	USD's Master Plans address most of the Facilities Evaluation requirements. Our Plant Master Plan is updated every 5 years and Pump Station and Collection System Master Plans are updated as needed. Asset management data is updated on an ongoing basis. CIP and Operating plans and budgets are reviewed and revised annually. 2020 Projects Completed/in-progress: • New Anaerobic Digester #7 (Construction in Process.) • Digester # 2 Rehabilitation (Repair in progress) • Headworks 3rd Bar Screen (Construction Complete) • Alvarado Pump Station (Construction in Process.)	Complete capital improvements in accordance with 20-year CIP plan. Implement annual rate adjustments for Sewer Service Charges and Capacity Fees in accordance with 10-year financial plan. 2021 Projects Planned: • Standby Power Upgrade. (Complete Design) • Digester # 1 Rehabilitation • ETSU: • Aeration Basin Modification (Complete Design) • Campus relocation (Complete Design) • New Secondary Clarifiers. (Commence Design. • New Effluent Pump Station (Commence Design) • Alvarado Pump Station (Construction Ongoing)	20-year CIP annual update in June. Master Plans: • Newark Basin MP 2019 • Irvington Basin 2021 • Pump Station Asset Condition Assessment 2021 • Plant Asset Condition Assessment 2024 • Plant Solids System/Capacity Assessment 2024 • Alvarado Basin 2025

Section 5: BACWA Watershed Permitting and Monitoring

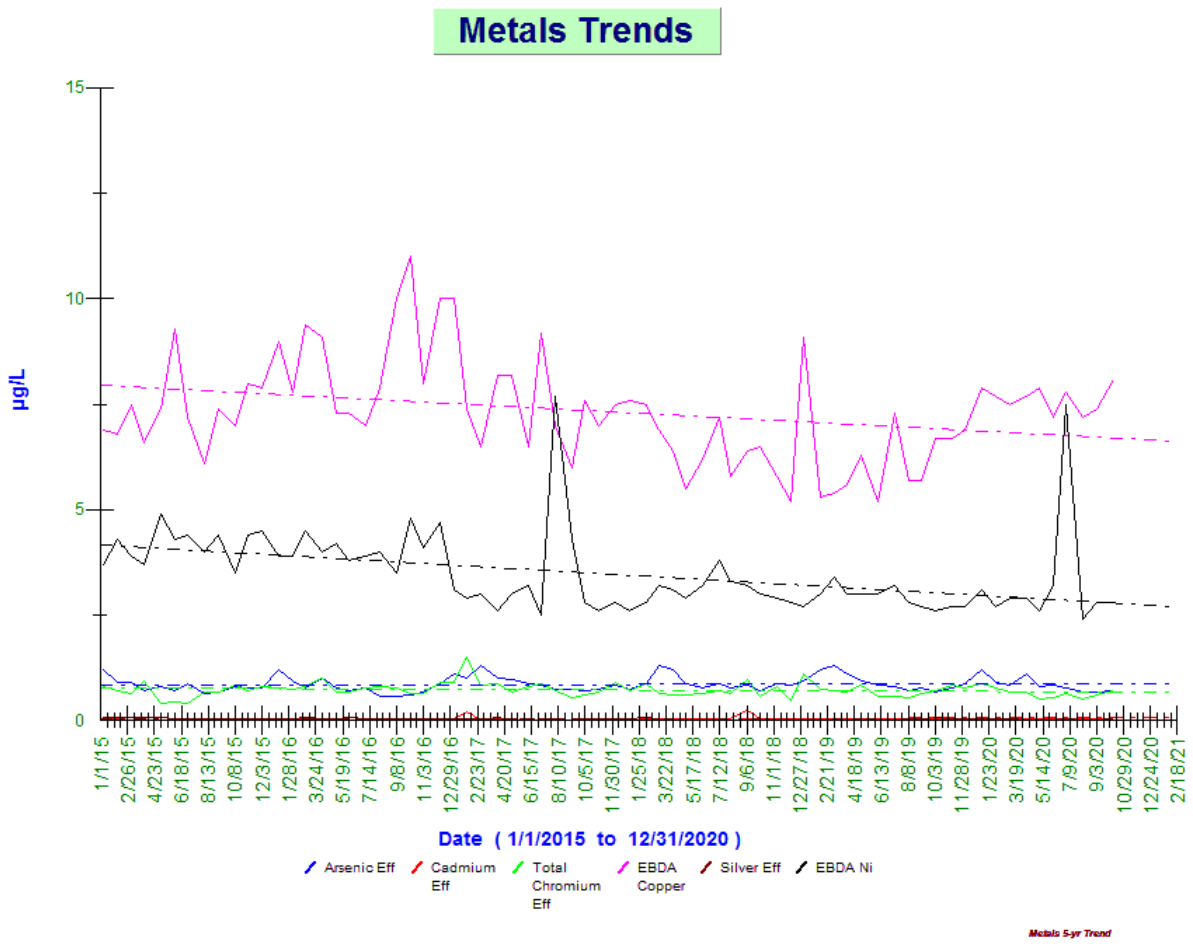
EBDA participates in a number of group processes coordinated by BACWA to fulfill other permit requirements, including Receiving Water Quality Monitoring, TMDL/SSO Support, Mercury and PCBs Watershed Permit Support, Nutrients Watershed Permit Support, and Implementation of Copper Action. Participation in these items is described in an annual BACWA letter to Water Board found here:
https://bacwa.org/wp-content/uploads/2021/01/BACWA-NPDES-Permit-Letter-2021-wSFEI-Attach-2021-01-14.pdf

Section 6: Effluent Characterization Study and Report

EBDA regularly monitors and evaluates discharges from the common outfall and each contributing plant's effluent to identify any concerning trends. No significant increases over past performance were noted in 2020 data.

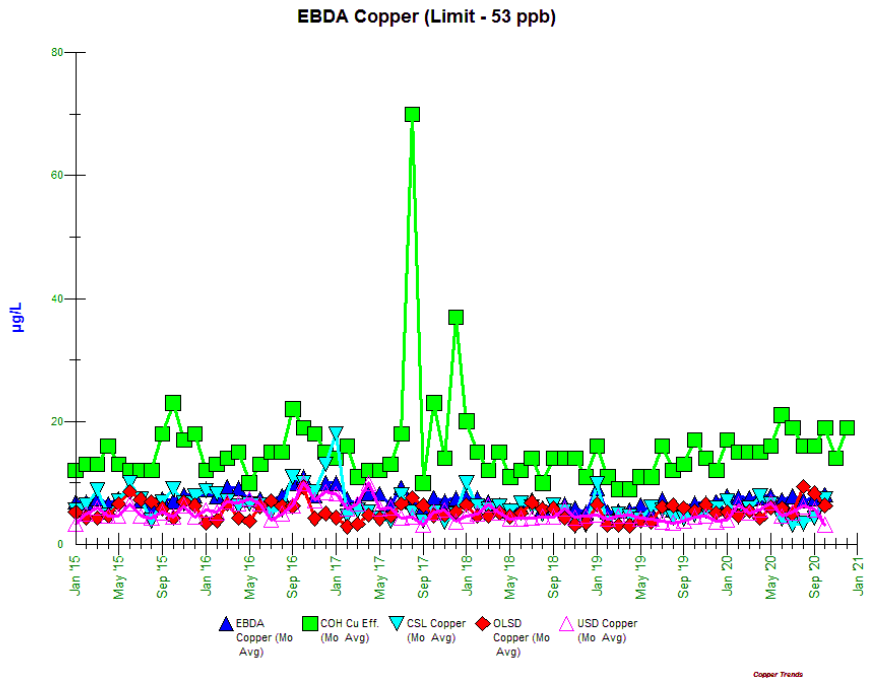
EBDA monitors monthly for metals and cyanide. Cyanide is rarely detected. As shown in Figure 2, five years of metals data continue to show flat or downward trends.

Figure 2 – EBDA Effluent Metals Trends



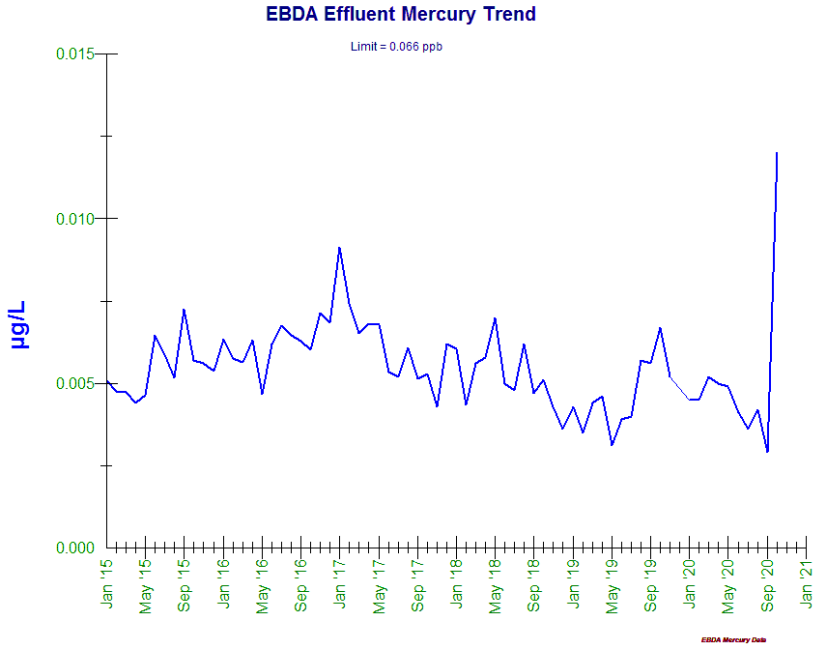
EBDA's five-year trend for copper shows that while individual member agency effluent concentrations have varied, EBDA's common outfall concentration consistently averaged less than 20 ppb, versus a permit limit of 53 ppb (see Figure 3).

Figure 3 – Effluent Copper Trend



EBDA's effluent mercury loads also continue to be well below permit limits, as shown in Figure 4.

Figure 4 – Effluent Mercury Trend



Agenda Explanation
East Bay Dischargers Authority
Regulatory Affairs Agenda
March 17, 2021

ITEM NO. RA6 NUTRIENTS GROUP ANNUAL REPORT

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

Background
While the loads of nutrients such as nitrogen and phosphorus to San Francisco Bay are higher than other estuaries, the Bay has historically been very resilient, and negative impacts of nutrient enrichment such as eutrophication have not occurred. Over the last decade, concerning trends caused the scientific and regulatory community to question whether the Bay's resilience is weakening. Bay Area wastewater agencies, through the Bay Area Clean Water Agencies (BACWA), have participated in a positive collaboration with a wide variety of stakeholders to implement a Nutrient Management Strategy that focuses on conducting scientific research and modeling to determine the effects of nutrients on the Bay ecosystem, and protective levels of nutrient loading going forward.

BACWA worked closely with staff of the San Francisco Bay Regional Water Quality Control Board (Water Board) to negotiate a second Watershed Permit for nutrients. The permit went into effect on July 1, 2019 and includes the following key elements:

- Influent and effluent monitoring and continued annual regional reporting.
- Increased funding for scientific research on the fate and effects of nutrients in the Bay.
- A regional assessment of the feasibility and cost for reducing nutrients through multi-benefit nature-based solutions, including wetlands and horizontal levees.
- A regional assessment of nutrient reductions that will be achieved through water recycling.
- Establishment of a baseline nutrient load based on current nitrogen discharges over the dry season.
- Inclusion of load targets for 2024 that may be used as effluent limits if supported by scientific research.
- Recognition of agencies implementing early action projects that will reduce nutrient loads during this permit term, which includes Oro Loma and Hayward.

This report contains an update on regional reporting, Bay science and modeling, and strategy discussions for the next Watershed Permit.

Discussion
Group Annual Report
As it has every year since 2014, on February 1, 2021 BACWA submitted its Group Annual Report under the Nutrients Watershed Permit. The Report summarizes the nitrogen and phosphorus concentrations and loads from the thirty-seven wastewater treatment plants that discharge to San Francisco Bay. While EBDA's Member Agencies are required to periodically monitor for nutrients, the data contained in this report is only

for the combined effluent discharged through EBDA's common outfall.

The full report can be found at the following link:
https://bacwa.org/wp-content/uploads/2021/02/FINAL-2020-BACWA-GAR_20210201_wAppendices.pdf

The table below summarizes dry season discharges and gives an indication of current trends. The next Watershed Permit is likely to regulate Total Inorganic Nitrogen, or TIN (in kg N/day), which as the report notes do not show any emerging dry season trends. EBDA's TIN loading trend is slightly upward, though it is expected that this will begin to trend down as planned nutrient optimization projects come online.

Table 7-6. Discharge: Summary of Dry Season Flow and Concentrations to the Bay

Constituent	2013 (a)	2014 (a)	2015 (a)	2016 (a)	2017 (a)	2018 (a)	2019 (a)	2020 (a)	Trend (b,c)	8 Year Avg
Flow, mgd	393	380	351	372	396	383	393	363	None	22.7
Ammonia, mg NL	22.9	25.2	27.3	26.5	26.0	26.9	22.9	25.8	Up (0.9%/yr)	18.6
NOx, mg N/L	8.99	8.24	9.42	7.90	7.82	7.57	8.99	7.29	Down (-3.4%/yr)	43.7
TIN, mg N/L (d)	31.8	33.5	36.7	34.4	33.8	34.5	31.8	33.3	None	38.6
TP, mg P/L	2.28	2.31	2.69	2.81	2.44	2.76	2.28	2.76	Up (2.2%/yr)	2.60

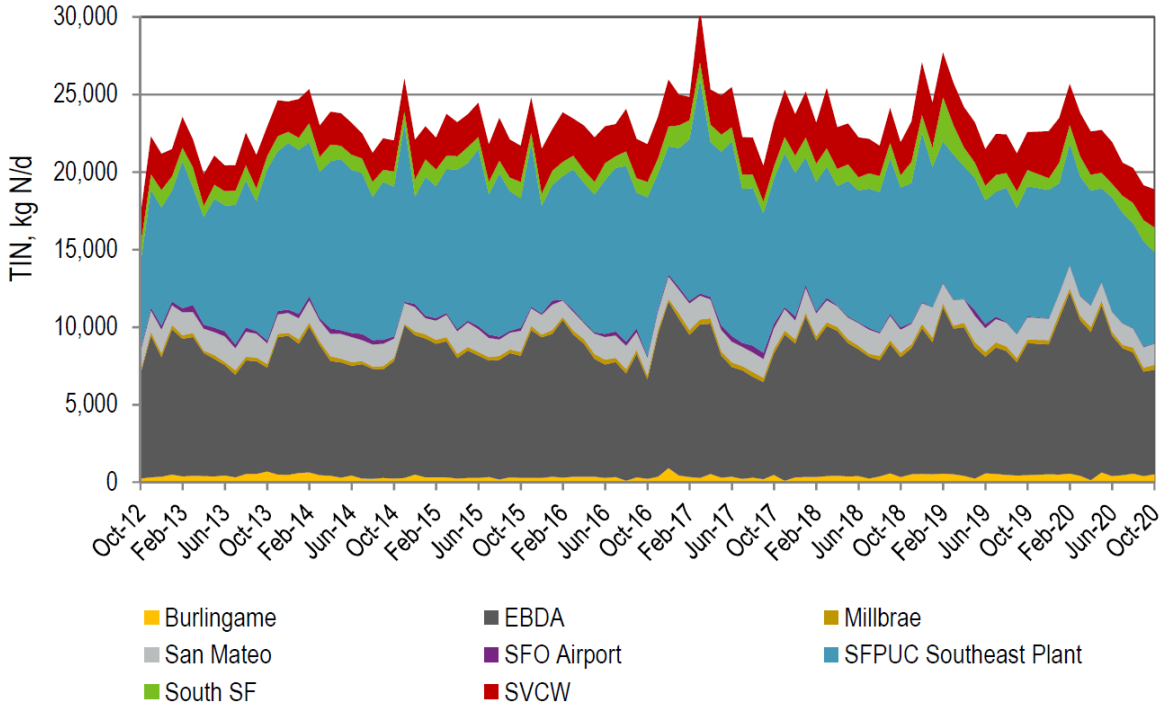
a. The dry season represents May 1 through September 30 for each calendar year.
b. Trend analysis is based on average monthly values. Discernible trends were identified based on the slope of a regression line determined using the method of least squares to fit the data (alpha = 0.05). Sample size is 40. Where "None" is stated, the limited dataset does not indicate a statistically relevant trend.
c. The percent change represents the change per year as a percentage of the average value over the entire dataset (2012-2019) (not considered if trend is "None").
d. The TIN values do not necessarily equal ammonia plus NOx due to instances when ammonia was sampled more frequently than NOx.

This year's loads were also impacted by changing flow and load patterns associated with the COVID-19 pandemic and associated shelter-in-place orders. The report notes that it is unclear when or whether flows and loads will return to their pre-pandemic norms.

New in this year's report was an analysis of influent loading to each wastewater plant. This data is used to examine load reductions across the plant. Because it is more complicated to compare the influent to EBDA's six wastewater plants to the common effluent, this analysis was deferred to next year, when the consultant anticipates working with EBDA and member agency staff on a mass balance.

Compliance with the next Watershed Permit is expected to be based on TIN by subembayment, so EBDA's discharge will be pooled with other South Bay dischargers, including San Francisco, to measure compliance against a target. The South Bay subembayment accounts for nearly half of the load discharged to San Francisco Bay. The graph below shows EBDA's historic contribution of TIN to the South Bay relative to other dischargers. Modeling work is continuing to better define the subembayments and relative contributions of each discharger. This work will be key to understanding how

compliance will be established and to development of any type of nutrient trading program.



Science and Modeling

As we approach the next Watershed Permit, the continued scientific work and modeling being conducted by San Francisco Estuary Institute (SFEI) to better understand the impacts of nutrients in the Bay become ever more important. To ensure that Bay Area wastewater plants are well-represented in scientific discussions and are able to provide meaningful feedback to the SFEI science team, BACWA put out a request for proposals for a technical consultant to assist with review of SFEI Nutrient Management Strategy documents. Based on a competitive process, BACWA selected retired EBDA General Manager, Mike Connor, to serve as BACWA's technical consultant on nutrient issues. Mike has both the scientific background and the policy and technical history to add significant value for BACWA.

Negotiation of Third Watershed Permit

In preparation for negotiation of the next Watershed Permit, BACWA has reconstituted its Nutrient Strategy Team, made up of representatives from wastewater plants around the Bay. One of the key questions facing BACWA is whether to accept the Water Board's concept that nitrogen load caps must be included in the next permit or whether to push back on that need in light of the current scientific understanding. To inform strategy development, BACWA recently conducted a survey of its members to better understand planned nutrient removal projects and timing. The next meeting of BACWA's Nutrient Strategy Team is scheduled for March 15, 2021.

Agenda Explanation
East Bay Dischargers Authority
Regulatory Affairs Agenda
March 17, 2021

ITEM NO. RA7 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 February 3, 2021

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

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Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
NUTRIENTS IN SAN FRANCISCO BAY			
• 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.	• For FY21, BACWA contributed the $2.2M required by the Watershed Permit, as well as “frontloading” an additional $0.4M to accelerate the pace of the science that will be used for management decisions for the third 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.	• 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. • Form a Nutrient Technical Team that will engage a consultant to provide technical review of work products and charge questions for the science team.	BACWA Nutrients Page: https://bacwa.org/nutrients/ SFEI Nutrient Science Plan Documents: http://sfbaynutrients.sfei.org/books/reports-and-work-products

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
SF BAY NUTRIENT WATERSHED PERMIT			
• The first nutrient watershed permit was adopted in April 2014. The first watershed permit required a regional study on Nutrient Treatment by Optimization and Upgrades, completed in 2018. • The 2nd Nutrient Watershed Permit was adopted in May 2019 with an effective date of July 1, 2019. It includes: ○ Continued individual treatment plant 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 2018 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: ○ Group Annual Reporting ○ Regional Studies on Nature-Based Systems and Recycled Water ○ Support of scientific studies through the RMP at $2.2M per year through the five-year permit term.	• In December 2019, BACWA submitted scoping and evaluation plans for the Recycled Water and Nature-Based Systems studies required by the 2nd watershed permit. • Each year, 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) The first group annual report submitted under the 2nd watershed permit was submitted in February 2020. • 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.	• **Agencies respond to a BACWA survey regarding load projections for Total Inorganic Nitrogen.** • **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.** Agencies provided preliminary information in June 2020, and outreach to individual agencies will be conducted in several waves in 2021. • Begin 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.	2nd Nutrient Watershed Permit: https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2019/May/6_ssr.pdf Scoping and Evaluation Plans for Recycled Water and Nature-Based Systems: https://bacwa.org/document-category/2nd-watershed-permit-studies/ Optimization/Upgrade Study Final Report: https://bacwa.org/wp-content/uploads/2018/06/BACWA_Final_Nutrient_Reduction_Report.pdf Optimization/Upgrade Report Brochure: https://bacwa.org/wp-content/uploads/2019/03/BACWA-2019-Nutrient-Brochure_Final_20190301.pdf BACWA Group Nutrient Annual Reports: http://bacwa.org/document-category/nutrient-annual-reports/

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CHLORINE RESIDUAL COMPLIANCE			
• 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.	• 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: ○ 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. It will not go into effect until it is approved by the State Water Board, Office of Administrative Law, and EPA, which is expected by late 2021.	• Work with Regional Water Board staff to develop a regional blanket permit amendment that would implement the new BPA for all Region 2 dischargers at one time. This approach which would accelerate implementation compared to a slower, permit-by-permit rollout.	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 Final BPA Staff Report: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa/3_Chlorine_BPA_Final_staff_report.pdf BACWA Comment Letter on draft BPA: https://bacwa.org/document/chlorine-basin-plan-amendment-bacwa-comment-letter/

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
PESTICIDES			
• 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 scientifically sound pesticide management program that will not impact POTWs' primary functions of collecting and treating wastewater, recycling water, and managing biosolids.	• EPA reviews all registered pesticides at least once every 15 years. Each review allows opportunity for public comment. • BACWA has funded 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 was increased from $30K to $60K in FY20/21. • 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.	• 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 to identify opportunities for collaboration.	BACWA Pesticides Regulatory Update and Call to action: https://bacwa.org/wp-content/uploads/2016/02/BACWA-Pesticide-Regulatory-Update-2016-1.pdf BACWA Pesticide Regulatory Support Page: https://bacwa.org/document-category/pesticides-regulatory-support/ Baywise flea and tick pages: https://baywise.org/
ENTEROCOCCUS LIMITS			
• 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	• 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.	• 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.	SWB Bacterial Objective page: https://www.waterboards.ca.gov/bacterialobjectives/ SFEI Final Report on Enterococci in the SF Bay: https://bacwa.org/wp-content/uploads/2020/08/BACWA-2020_Enterococci-report_final.pdf

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
MERCURY AND PCBS			
• 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.	• 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. In 2020, BACWA continued to fund a 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 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.	• **Conduct 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.	2017 Mercury/PCB Watershed Permit: http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2012/R2-2012-0096.pdf Risk Reduction Materials: https://bacwa.org/mercurypcb-risk-reduction-materials/ Updated BACWA PCBs Protocol: https://bacwa.org/wp-content/uploads/2014/02/PCBs-Sampling-Analysis-and-Reporting-Protocols-Dec13.pdf One-Time Compliance Report for Dental Offices: https://www.waterboards.ca.gov/water_issues/programs/npdes/docs/drinkingwater/one-time_compliance_report_for_dental_offices.pdf

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
STATE WATER BOARD TOXICITY PROVISIONS			
• 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: ○ 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 *Ceriodaphnia dubia* as most sensitive species, numeric targets rather than limits until after completion of state-wide study on lab/ testing issues (Dec. 31, 2023).	• The State Water Board adopted the Statewide Toxicity Provisions at its December 1, 2020 meeting. The Provisions are likely to come into effect in mid-2021 after review by OAL and EPA. • In December 2020, Regional Water Board staff provided BACWA with a copy of draft sample NPDES permit language. 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. • 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. Now that agencies will once again be required by the provisions to do sensitive species screening, this will reduce RMP funds by approximately $100K per year. • 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.	• **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 it is being circulated for BACWA member review. • Collaborate with State Water Board, CASA and POTWs Statewide on the special study on the *Ceriodaphnia dubia* test method. • Develop an alternative funding mechanism for RMP CECs studies by seeking reduced monitoring for items other than chronic toxicity screening. A draft plan is under development.	SWRCB Toxicity Page: http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.shtml Toxicity Workshop Presentations from 2017 BACWA Workshop: https://bacwa.org/bacwa-toxicity-workshop-september-18-2017/ 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

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
COMPOUNDS OF EMERGING CONCERN (CECS)			
• 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.	• 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.	• **Continue to participate in the RMP CEC Workgroup.** • **Participate in studies of sunscreens (**2 facilities planned) **and microplastics** (6 facilities planned) **by collecting wastewater samples at member facilities.** • 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. • Continue efforts to provide a funding stream for RMP CEC studies based on reducing other NPDES permit monitoring and reporting requirements.	RMP CEC Workgroup: http://www.sfei.org/rmp/ecwg#tab-1-4 BACWA CECs White Paper: https://bacwa.org/document/bacwa-cec-white-paper-updated-june-2020/ BACWA Microplastics Fact Sheet: https://bacwa.org/wp-content/uploads/2019/09/BACWA-Microplastics-flyer.pdf SFEI Microplastics Science Strategy: www.sfei.org/documents/microplastic-monitoring-and-science-strategy-san-francisco-bay SWRCB Microplastics in Drinking Water page: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/microplastics.html

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)			
• 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 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: ○ Mar/Apr 2019 - landfills and airports and adjacent public water systems ○ Oct 2019 - chrome-platers ○ July 2020 - POTWs ○ TBD 2021 - refineries & bulk terminals • The Summit Partners held several PFAS Workshops on the SWRCB investigative order for POTWs in late 2020 and early 2021.	• 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: ○ In Phase 1, fourteen representative facilities collected samples in Q4 2020 for influent, effluent, RO concentrate, and biosolids. SFEI will analyze data and prepare report (anticipated May 2021). ○ Phase 2 will be conducted in Summer/ 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.	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 Summit Partners PFAS Workshop presentations: https://casaweb.org/calendar/speaker-presentations/ SWRCB Investigative Order for POTWs: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2020/wqo2020_0015_dwq.pdf OEHHA Notification Levels for Drinking Water: https://oehha.ca.gov/water/notification-levels-chemicals-drinking-water EPA PFAS Resources https://www.epa.gov/pfas EPA PFAS Action Plan (updated Feb 2020) https://www.epa.gov/sites/production/files/2020-01/documents/pfas_action_plan_feb2020.pdf

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
SSS WDR REISSUANCE			
• The State Water Board plans to reissue the SSS WDR in 2021. • They have sought out early stakeholder engagement through outreach to CASA and the Regional Associations, and NGOs. • Goals for the update are: ○ Effective spill response ○ Proactive planning and management ○ Transparent reporting ○ "Feasible and reasonable" regulations - good faith effort to comply - personnel, budget, equipment by governing board	• The State Water Board has identified the following as components to be included: ○ Resiliency assessment ○ Sewershed mapping ○ Reporting of PSL spills ○ Improvement of CIWQS data quality ○ Study of the impact of exfiltration and leakage ○ Updated SSMPs that are more enforceable ○ Potential incentives for well performing systems ○ A new "Category 4" for SSOs less than 50 gallons that do not need to be reported • CASA provided proposed redlines to the SSS WDR on the text of the SSS WDR, as well as the proposed SSMP outline. They have been meeting with the State Water Board regularly during 2019 and 2020.	• Review and comment on draft SSS WDR when available for public comment, expected in Q1 2021. Discuss response to issues such as exfiltration via BACWA's Collection Systems Committee.	SWB SSS WDR page: https://www.waterboards.ca.gov/water_issues/programs/sso/ CASA SSS WDR Redlines: https://bacwa.org/document/sss-wdr-casa-redlines-8-29-18/ CASA SSS WDR MRP Redlines: https://bacwa.org/document/casa-sss-mrp-redlines-08-29-18/

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
ELAP UPDATE			
• 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).	• 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: ○ 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. • In June 2020, ELAP staff presented on the State Water Board's new 'Roadmap to ELAP Accreditation' program at the Lab Committee meeting.	• 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.	State Water Board's 'Roadmap to ELAP Accreditation' page: https://www.waterboards.ca.gov/drinking_water/certlic/labs/roadmap_to_elap_accreditation.html Roadmap to Accreditation Presentation to BACWA Lab Committee: https://bacwa.org/wp-content/uploads/2020/06/California-ELAP-Regulations-BACWA_06092020.pdf State Water Board's ELAP regulations page: http://www.waterboards.ca.gov/drinking_water/certlic/labs/elap_regulations.shtml

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
PHASE-OUT OF BIOSOLIDS AS ALTERNATIVE DAILY COVER			
• Regulatory drivers are indicating that biosolids used as alternative daily cover (ADC) or disposed in landfills will be phased out: ○ 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 don't 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. • 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: ○ 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 biosolids land application are disallowed. ○ Jurisdictions that divert organic waste must also procure the end products of diversion, such as biogas, biomethane, and compost (biosolids are not included at this time).	• Consider ways to build a market for compost and other soil amendment products from biosolids, using lessons learned in the Pacific Northwest and Midwest. • Actively work through CASA with California Air Resource Board, CalRecycle, State Water Resource Control Board, and California Department of Food and Agriculture to mutually develop sustainable long-term options for the beneficial use of biosolids. • Follow efforts of the BABC, investigating all-weather options for biosolids management (including innovative technologies generating energy and other useful bioproducts from biosolids). BABC is a BACWA Project of Special Benefit, beginning in FY20. • 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.	BACWA 2018 Biosolids Trends Survey Report: https://bacwa.org/document/2018-biosolids-trends-survey-report/ 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 BABC website: http://www.bayareabiosolids.com/ CASA White Paper on SB 1383 Implementation: https://bacwa.org/document/summary-of-sb-1383-and-its-implementation-casa-2020/

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CLIMATE CHANGE MITIGATION			
• 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: ○ Short-lived climate pollutants (i.e., methane) ○ Carbon sequestration on Natural and Working Lands ○ Largest emitters (transportation, electricity, and industrial sectors) • SB 1383 (Short-Lived Climate Pollutant Reduction) calls for: ○ 40% methane reduction by 2030 ○ 75% diversion of organic waste from landfills by 2025 ○ Policy and regulatory development encouraging production/use of biogas • BAAQMD developed a Clean Air Plan that requires GHG emissions reduction track with CARB's 2030 and 2050 targets. • BAAQMD has proposed the development of Regulation 13 (climate pollutants) targeting GHG emission 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 wetlands restoration.	• 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 BAAQMD Rule 11-18. • 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 develop information about current best management practices.	• Work with CASA to look for opportunities for POTWs to help the State meet GHG reduction goals. • Look for opportunities to inform BAAQMD on the 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 and they have proposed reducing their standard from 990 Btu/scf to 970 Btu/scf. • Engage in development of Regulation 13 Rules, which are intended to govern climate pollutants, odors, VOCs and TACs from POTWs and anaerobic digesters. • 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. ○ Develop information about current best management practices at anaerobic digesters and lagoons.	Climate Change Scoping Plan: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf CARB Short Lived Climate Pollutant Reduction Strategy: https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf SB 1383: http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_1351-1400/sb_1383_bill_20160919_chaptered.htm BAAQMD Clean Air Plan: http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans BAAQMD Regulation 13 http://www.baaqmd.gov/rules-and-compliance/rules/regulation-13-climate-pollutants BACWA Comments on Regulation 13: https://bacwa.org/wp-content/uploads/2019/07/BACWA-AIR_FINAL_Comment-Letter_Regulation13_Rules_24_071219.pdf

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
CLIMATE CHANGE ADAPTATION			
• In 2017, the State Water Board adopted a Climate Change Resolution addressing mitigation and adaptation. One of the requirements is that Regional Water Boards will make recommendations to the State Water Board on the need to modify permits and other regulatory requirements to reduce vulnerability of water and wastewater infrastructure to flooding, storm surges, and sea level rise. • The Regional Water Board identified Climate Change and Wetland Policy Update as the highest priority Basin Planning project in their 2018 Triennial Review. • Climate change and water resilience continue to be 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. •	• The State Water Board is planning a data request that they will send 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 is planning to distribute a survey to all POTWs in the region in 2021 to collect information about climate vulnerability and adaptation. This survey will be more detailed than the State Water Board's survey. Several BACWA members are test-driving the survey in January and February 2021. • 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. ○ 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.	• **Respond to the Regional Water Board's climate change survey, which is expected to be distributed to all POTWs in approximately March or April 2021.** • 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 in the first half 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. • BACWA to review Governor's Water Resilience Portfolio initiative, released in 2020.	State Water Board 2017 Climate Change Resolution: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/rs2017_0012.pdf Regional Water board Wetlands Policy Page: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/climate_change/wetland_policies.html BACWA Comments on Wetlands Policy: https://bacwa.org/wp-content/uploads/2018/09/BACWA-comments-Wetland-Policy-9-14-18.pdf Governor's Final Water Resilience Portfolio: http://waterresilience.ca.gov/ BACWA Comments on Resilience Portfolio: https://bacwa.org/wp-content/uploads/2019/10/BACWA-Water-Resilience-Portfolio-10-01-19.pdf

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
TOXIC AIR CONTAMINANTS - BAAQMD RULE 11-18, AB 617, AND AB2588			
• 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 use toxic emissions inventories and proximity to the nearest receptor (residents or offsite workers) to conduct site-specific Health Risk Screening Analyses (HRSA). From HRSAs, BAAQMD will 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.	• 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 Q2 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 prioritization score. • 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.	• **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 Q2 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 tentatively agreed to give 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 2026). Final rule-making documents are expected in February 2021. CASA has a subgroup dedicated to this effort. Results could inform Rule 11-18 HRA's.	BAAQMD Rule 11-18 page: http://www.baaqmd.gov/rules-and-compliance/rule-development/rules-under-development/regulation-11-rule-18 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 Rule 11-18 Process Flowchart: https://bacwa.org/document/baaqmd-11-18-process-flowchart-08-17-17/ BAAQMD page on AB 617: http://www.baaqmd.gov/rules-and-compliance/rule-development/barct-implementation-schedule CARB page on AB 617 and AB 2588: https://ww2.arb.ca.gov/our-work/programs/criteria-and-toxics-reporting

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RECYCLED WATER GENERAL ORDER			
• 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 May 2018, the State Water Board released Recycled Water Policy Amendments for Public Comment. The Recycled Water Policy governs the Recycled Water General Order. • The Amendments were adopted in December 2018.	• Key issues in the Recycled Water Policy Amendments are: ○ Introduces goal to increase recycled water where wastewater is otherwise discharged to ocean, bays, and estuaries. ○ Terminates Region 2 96-011 Recycled Water General Order three year after Policy Amendment adoption (April 2020). ○ Adds to the procedural burdens in obtaining Wastewater Change Petition. ○ Removes requirement for priority pollutant monitoring. • On April 8, 2020, SF Regional Water Board transitioned 96-011 permittees to the statewide General Order by issuing a NOA and modified MRP. BACWA had previously provided comments on the draft NOA and MRP documents. All permittees were transitioned with the exception of City 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.	• 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 .	2016 State Recycled Water General Order: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2016/wqo2016_0068_ddw.pdf State Recycled Water Policy Amendment Page: https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/index.html#amendment NOA and MRP for enrollment of Bay Area agencies in statewide General Order: https://bacwa.org/wp-content/uploads/2020/11/2020-04_NOA-Recycled-Water-04-08-20.pdf September 2020 Regional Water Board staff report: https://www.waterboards.ca.gov/rwqcb2/board_info/agendas/2020/September/7_ssr.pdf

"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
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