



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: In compliance with AB 361 (2021), the meeting scheduled below will be conducted virtually via Zoom video conferencing.

- Members of the public may participate in the meeting by clicking on the following Zoom link: <https://us02web.zoom.us/j/83506899576>
- You may also participate via telephone by dialing 1(669) 900-6833 and entering Meeting ID number 835 0689 9576.

### **ITEM NO. 11**

## **REGULATORY AFFAIRS COMMITTEE AGENDA**

**Tuesday, October 18, 2022**

**4:30 P.M.**

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

**Committee Members: Lathi (Chair); Johnson**

- RA1. Call to Order**
- RA2. Roll Call**
- RA3. Public Forum**
- RA4. EBDA NPDES Compliance – See Item No. 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 Issues Matrix**  
(The Committee will review BACWA's issue summary.)
- RA7. Update on San Francisco Bay Nutrient Management**  
(The Committee will receive an update on science and regulatory activities related to nutrients.)
- RA8. 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

Agenda Explanation  
East Bay Dischargers Authority  
Regulatory Affairs Committee  
October 18, 2022

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 Administration Manager at (510) 278-5910 or [juanita@ebda.org](mailto: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 also posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>

**The next Regulatory Affairs Committee meeting is scheduled on  
Wednesday, December 14, 2022 at 11:00 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 July 1 through September 30, 2022; there are no outstanding activities.

<i>Authority</i>	<i>Required Action</i>	<i>Occurrence</i>	<i>Date</i>
▼	▼	▼	<i>Complete</i> ▼
State of California	Annual posting of EE Reimbursements Report to EBDA Website (GC §53065.5)	Annual	7/1/2022
Bay Area Air Quality Management District	Pay renewal fee for <i>Permit to Operate</i> Plant #14531	Annual	7/16/2022
Bay Area Air Quality Management District	Complete <i>Data Update</i> form Plant #14531 - Permit Expiration Date: Aug 1, 2022	Annual	7/27/2022
State Water Resources Control Board	NPDES Quarterly Report (Apr-Jun)	Quarterly	7/29/2022
CalPERS	Out-of-Class Appointment Reporting	Annual	8/2/2022
Department of Toxic Substances Control	EPA ID Number (CAL000072039) Verification Questionnaire and Manifest Fees Assessment	Annual	8/11/2022
Oro Loma Sanitary District	Lease Fees	Annual	8/15/2022
ADP Business Payroll	Print Payroll Quarter-End Tax Returns	Quarterly	8/25/2022
ADP Business Payroll	Print Payroll Quarter-End Tax Returns	Quarterly	8/25/2022
State Water Resources Control Board	NPDES monthly reports	Monthly	8/29/2022
CalPERS	SSSA Annual Information Request	Annual	8/31/2022
Bay Area Air Quality Management District	Complete <i>Data Update</i> form Plant #14528 - Permit Expiration Date: Nov 1	Annual	9/1/2022
Alliant Insurance Services, Inc	CSRMA Pooled Liability Program Renewal Questionnaire	Annual	9/14/2022
East Bay Dischargers Authority	Website review/update	Quarterly	9/24/2022
Regional Water Quality Control Board	Recycled Water monthly reports	Monthly	9/29/2022
Bay Area Air Quality Management District	Pay renewal fee for <i>Permit to Operate</i> Plant #14528	Annual	9/30/2022
Regional Monitoring Program % SFEI	Participant Fee Installment (See: annual invoice)	Semi-Annual	9/30/2022

**ITEM NO. RA6 BACWA Key Regulatory Issues Matrix**

**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. This latest version highlights updates made in purple. Previous versions are available at <https://bacwa.org/regulatory-issues-summaries/>.



## KEY REGULATORY ISSUE SUMMARY

### Updated September 2, 2022

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

#### Contents

Nutrients in San Francisco Bay	<b>Page</b>		
SF Bay Nutrient Watershed Permit	1	SSS WDR Reissuance	9
Chlorine Residual Compliance	2	ELAP Update	10
Pesticides	3	Phase-Out of Biosolids as Alternative Daily Cover	11
Mercury and PCBs	4	Climate Change Mitigation	12
State Water Board Toxicity Provisions	5	Climate Change Adaptation	13
Compounds of Emerging Concern (CECs)	6	Toxic Air Contaminants	14
Microplastics	7	Recycled Water	15
Per- and Polyfluoroalkyl Substances (PFAS)	7	Acronyms	16
	8		

New updates in this version are shown in Purple highlighting

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>NUTRIENTS IN SAN FRANCISCO BAY</b>			
<ul style="list-style-type: none"> <li>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.</li> <li>Because of the complexity of the science behind nutrient impacts in SF Bay, stakeholders in the region are participating in the Nutrient Management Strategy (NMS) steering committee to prioritize scientific studies and ensure that all science to be used for policy decisions is conducted under one umbrella.</li> </ul>	<ul style="list-style-type: none"> <li>For FY23, BACWA is contributing \$1.8M to fund scientific research needed to make management decisions for the 3<sup>rd</sup> Watershed Permit. This funding is required by the 2<sup>nd</sup> Watershed Permit.</li> <li>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.</li> <li>The science team is developing an Assessment Framework for Open Bay habitats and Lower South Bay sloughs.</li> <li>In summer 2022, a harmful algae bloom in San Francisco Bay has brought increased public attention to this topic. The NMS science team is assisting with monitoring and data interpretation.</li> </ul>	<ul style="list-style-type: none"> <li><b>Continue to participate in NMS steering committee, Nutrient Technical Workgroup, and planning subcommittee meetings, and provide funding for scientific studies.</b></li> <li>Continue to assist with preparation of a brief "State of the Science" document summarizing the scientific accomplishments of the NMS team for public use.</li> <li>Continue to engage with Nutrient Technical Team and BACWA's Nutrient Management Strategy technical consultant, Mike Connor, to provide review of recent work products and charge questions for the science team.</li> </ul>	<p>BACWA Nutrients Page: <a href="https://bacwa.org/nutrients/">https://bacwa.org/nutrients/</a></p> <p>NMS FY23 Program Plan <a href="https://drive.google.com/drive/folders/17wLKFEJlkyAyt31lMmgxHhrl8GL5OcJP">https://drive.google.com/drive/folders/17wLKFEJlkyAyt31lMmgxHhrl8GL5OcJP</a></p> <p>NMS Work Products <a href="https://sfbaynutrients.sfei.org/books/reports-and-work-products">https://sfbaynutrients.sfei.org/books/reports-and-work-products</a></p> <p>Summer 2022 Algae Bloom (BACWA; SFEI): <a href="https://bacwa.org/general/ongoing-algal-bloom-in-sf-bay/">https://bacwa.org/general/ongoing-algal-bloom-in-sf-bay/</a></p> <p><a href="https://docs.google.com/presentation/d/1IRa5uHmdKC8zUsJUnXk8xk_Pyq2LiFx7eUz_pWajGlnU/">https://docs.google.com/presentation/d/1IRa5uHmdKC8zUsJUnXk8xk_Pyq2LiFx7eUz_pWajGlnU/</a></p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>SF BAY NUTRIENT WATERSHED PERMIT</b>			
<ul style="list-style-type: none"> <li>• The 1<sup>st</sup> Nutrient Watershed Permit was adopted in 2014, and required a regional study on Nutrient Treatment by Optimization and Upgrades, completed in 2018.</li> <li>• The 2<sup>nd</sup> Nutrient Watershed Permit was adopted in 2019. It includes: <ul style="list-style-type: none"> <li>○ Continued individual POTW nutrient monitoring and reporting;</li> <li>○ Continued group annual reporting;</li> <li>○ Significantly increased funding for science;</li> <li>○ Regional assessment of the feasibility and cost for reducing nutrients through nature-based systems and recycled water;</li> <li>○ 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</li> <li>○ Recognition of “early actors” who are planning projects that will substantially decrease TIN loads.</li> </ul> </li> <li>• 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"> <li>○ Group Annual Reporting</li> <li>○ Regional Studies on Nature-Based Systems and Recycled Water</li> <li>○ Support of scientific studies through the Regional Monitoring Program (RMP) with \$11M over the five-year permit term.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Studies related to Recycled Water and Nature-Based Systems are underway, and will be completed by the due date of July 1, 2023.</li> <li>• 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 2<sup>nd</sup> Watershed Permit is based on a water year (October 1 – September 30th). The 2021 report showed a decline in TIN concentrations compared to the previous year.</li> <li>• Agencies with plans to substantially reduce nutrients are recognized in the Fact Sheet of the 2<sup>nd</sup> watershed permit, and BACWA is continuing to track “early actor” nutrient reduction projects. BACWA has synthesized this information into a projection of Baywide nutrient loading.</li> <li>• BACWA has been working with a consultant team to complete a statistical analysis of historical TIN loading. In July 2022, BACWA met with Regional Water Board staff to propose use of these statistically-based load estimates within the 3<sup>rd</sup> Watershed Permit. Negotiations are ongoing.</li> </ul>	<ul style="list-style-type: none"> <li>• BACWA continues to convene a Nutrient Strategy Team (NST) to develop BACWA’s key tenets for the 3<sup>rd</sup> Watershed Permit. The NST is actively engaging with the Regional Water Board to develop details related to load cap implementation in the 3<sup>rd</sup> Watershed Permit.</li> <li>• <b>Agencies with plans to implement projects that will reduce nutrient loads should keep the Regional Water Board and BACWA apprised, to get credit for “early actions.”</b></li> <li>• Review draft reports by HDR and SFEI for the Nutrient Removal by Recycled Water Evaluation and the Nature-Based Systems study. Draft agency reports for the Recycled Water Evaluation have already begun to be distributed for agency review, and more are expected in early- to mid-2022.</li> <li>• Agencies will continue to report nutrient monitoring data both through CIWQS and directly to BACWA. Submittals for the 2021-2022 water year will be due to HDR in November 2022. The 2021-2022 water year will likely mark the end date of data compiled to inform load cap calculations for the 3<sup>rd</sup> Watershed Permit .</li> </ul>	<p>2nd Nutrient Watershed Permit:  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2019/May/6_ss_r.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2019/May/6_ss_r.pdf</a></p> <p>Special Studies of Recycled Water and Nature-Based Systems:  <a href="https://bacwa.org/document-category/2nd-watershed-permit-studies/">https://bacwa.org/document-category/2nd-watershed-permit-studies/</a></p> <p>Optimization/Upgrade Study Information:  <a href="https://bacwa.org/document-category/optimization-and-upgrade-studies/">https://bacwa.org/document-category/optimization-and-upgrade-studies/</a></p> <p>BACWA Group Nutrient Annual Reports:  <a href="http://bacwa.org/document-category/nutrient-annual-reports/">http://bacwa.org/document-category/nutrient-annual-reports/</a></p>

**CHLORINE RESIDUAL COMPLIANCE**

<ul style="list-style-type: none"> <li>• 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%).</li> <li>• 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.</li> <li>• The Regional Water Board worked with BACWA to develop a Basin Plan Amendment modifying the effluent limit for chlorine residual.</li> </ul>	<ul style="list-style-type: none"> <li>• The Basin Plan Amendment includes: <ul style="list-style-type: none"> <li>○ 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.</li> <li>○ A Minimum Level (ML), or Reporting Limit of 0.05 mg/L for online continuous monitoring system.</li> </ul> </li> <li>• The Basin Plan Amendment was adopted by the Regional Water Board in November 2020, approved by the State Water Board and Office of Administrative Law in 2021, and is now awaiting final review by EPA.</li> <li>• Sections of the Basin Plan Amendment related to removal of Oil &amp; Grease effluent limits are now in effect. This change is being implemented in reissued NPDES permits.</li> <li>• In October 2021, the Regional Water Board adopted a blanket permit amendment (Order R2-2021-0019) implementing the Basin Plan Amendment within each individual NPDES permit. The order will only become effective once the Basin Plan Amendment is approved by the EPA. Prior to approval, EPA needs to update its biological evaluation to address potential toxicity to fish and conduct a formal consultation with US Fish &amp; Wildlife Service. As of August 2022, this process was expected to take at least six additional months.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Prepare for a short turnaround time for implementation of the new chlorine residual limits</b>, as follows: <ul style="list-style-type: none"> <li>○ Ensure compliance with the new minimum required frequency of once every 5 minutes.</li> <li>○ Ensure the monitoring system complies with the new minimum level of 0.05 mg/L.</li> <li>○ Members that plan to discharge detectable residual chlorine may need to adapt sampling and analysis procedures for other constituents for which residual chlorine could interfere, such as whole effluent toxicity and ammonia.</li> <li>○ Use the highest one-hour arithmetic mean as the daily value reported into CIWQS.</li> </ul> </li> </ul>	<p>Background and Status information about Basin Plan Amendment:  <a href="https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa.html">https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa.html</a></p> <p>Final Amendment adopted by Regional Water Board:  <a href="https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa/2_Chlorine_Resolution_R2-2020-0031.pdf">https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/amendments/chlorinebpa/2_Chlorine_Resolution_R2-2020-0031.pdf</a></p> <p>Blanket Permit Amendment for Chlorine and Oil &amp; Grease:  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2021/R2-2021-0019.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2021/R2-2021-0019.pdf</a></p>
---	---	---	--

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>PESTICIDES</b>			
<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• EPA reviews all registered pesticides at least once every 15 years. Each review allows opportunity for public comment.</li> <li>• BACWA continues to fund consultant support to write comment letters advocating for the consideration of POTW and surface water issues by EPA and the California Department of Pesticide Registration (CalDPR). Funding for pesticide regulatory outreach in FY23 is \$60K. The pesticides regulatory team also supports the California Stormwater Quality Association (CASQA), and recently produced a fact sheet on collaboration between BACWA and CASQA related to urban pesticides.</li> <li>• The Regional Water Board leverages BACWA's efforts to provide their own comment letters.</li> <li>• With chronic toxicity limits likely in the near term, POTWs will be in compliance jeopardy if pesticides contribute to toxicity.</li> <li>• Baywise.org has launched webpages on flea and tick control messaging to pet owners and veterinarians.</li> <li>• Pet pesticides were the focus of BAPPG's public outreach campaign in Spring 2022.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to comment on EPA pesticide re-registrations and CalDPR actions.</li> <li>• Work with veterinary associations on messaging with respect to flea and tick control alternatives.</li> <li>• Continue to develop summaries of EPA actions on pesticides.</li> <li>• Look for opportunities to work with CalDPR on pesticides research.</li> <li>• Work with other regional associations, such as the CASQA to collaborate on funding pesticide regulatory outreach.</li> </ul>	<p>BACWA Pesticides Regulatory Update and Call to action:  <a href="https://bacwa.org/wp-content/uploads/2016/02/BACWA-Pesticide-Regulatory-Update-2016-1.pdf">https://bacwa.org/wp-content/uploads/2016/02/BACWA-Pesticide-Regulatory-Update-2016-1.pdf</a></p> <p>BACWA Pesticide Regulatory Support Page:  <a href="https://bacwa.org/bappg-pesticides/">https://bacwa.org/bappg-pesticides/</a></p> <p>Baywise flea and tick pages:  <a href="https://baywise.org/residential/pets/keep-pets-free-of-fleas-and-ticks/">https://baywise.org/residential/pets/keep-pets-free-of-fleas-and-ticks/</a>  <a href="https://baywise.org/residential/pets/">https://baywise.org/residential/pets/</a></p> <p>BACWA-CASQA Urban Pesticides Collaboration Fact Sheet:  <a href="https://bacwa.org/wp-content/uploads/2022/08/CASQA-BACWA-Factsheet-July2022.pdf">https://bacwa.org/wp-content/uploads/2022/08/CASQA-BACWA-Factsheet-July2022.pdf</a></p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>MERCURY AND PCBs</b>			
<ul style="list-style-type: none"> <li>The 2017 Mercury &amp; PCBs Watershed Permit expires at the end of 2022, when it is expected to be reissued. The Watershed Permit is based on the TMDLs for each of these pollutants.</li> <li>Aggregate mercury and PCBs loads have been well below waste load allocations through 2021, the last year for which data have been compiled.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The 2017 Watershed Permit requires continued risk reduction program funding. For FY23, 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..</li> <li>As of January 2022, monitoring requirements for mercury have been reduced for most dischargers per Order R2-2021-0028 (see link at right).</li> <li>As part of the 2021 Triennial Review of the Basin Plan, the Regional Water Board has prioritized designation of 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.</li> <li>In mid-2022, BACWA worked with Regional Water Board staff to compile PCB congener data from the previous two permit terms. BACWA also prepared and submitted a request to reduce the monitoring frequency of PCB congeners.</li> <li>In August 2022, Regional Water Board staff released an administrative draft Mercury &amp; PCBs Watershed Permit for BACWA member review. Comments are due September 12, 2022.</li> </ul>	<ul style="list-style-type: none"> <li><b>Member agencies should review and provide comments on the administrative draft and Tentative Order versions of the Mercury &amp; PCBs Watershed Permit</b>, which is slated for Regional Water Board consideration in December 2022. BACWA will compile member comments for Regional Water Board consideration.</li> <li>Continue outreach to dentists BAPPG and BACWA's pretreatment committee. Per federal rules, all dental facilities were required to submit one-time compliance reports by October 2020.</li> <li>Schedule risk reduction presentations by the grantees to the Regional Water Board in 2022.</li> <li>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.</li> </ul>	<p>2017 Mercury &amp; PCBs Watershed Permit:  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2017/November/5b_final_to.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2017/November/5b_final_to.pdf</a></p> <p>Risk Reduction Materials:  <a href="https://bacwa.org/mercurypcb-risk-reduction-materials/">https://bacwa.org/mercurypcb-risk-reduction-materials/</a></p> <p>Updated BACWA PCBs Protocol:  <a href="https://bacwa.org/wp-content/uploads/2014/02/PCBs-Sampling-Analysis-and-Reporting-Protocols-Dec13.pdf">https://bacwa.org/wp-content/uploads/2014/02/PCBs-Sampling-Analysis-and-Reporting-Protocols-Dec13.pdf</a></p> <p>One-Time Compliance Report for Dental Offices:  <a href="https://www.waterboards.ca.gov/water_issues/programs/npdes/docs/drinkingwater/one-time_compliance_report_for_dental_offices.pdf">https://www.waterboards.ca.gov/water_issues/programs/npdes/docs/drinkingwater/one-time_compliance_report_for_dental_offices.pdf</a></p> <p>NPDES Permit Amendment for Monitoring and Reporting  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2021/R2-2021-0028.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2021/R2-2021-0028.pdf</a></p>

## STATE WATER BOARD TOXICITY PROVISIONS

<ul style="list-style-type: none"> <li>• 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</li> <li>• 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.</li> <li>• 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"> <li>○ 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);</li> <li>○ Numeric limits for chronic toxicity for POTWs &gt;5 MGD and with a pretreatment program; smaller POTWs would receive effluent targets and only receive limits if Reasonable Potential is established;</li> <li>○ Regional Water Board discretion on whether to require RPAs for acute toxicity;</li> <li>○ 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).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The State Water Board first adopted the Statewide Toxicity Provisions in December 2020. In October 2021, the State Water Board affirmed that the Statewide Toxicity Provisions were adopted as state policy for water quality control for all inland surface waters and estuaries. The Toxicity Provisions will go into effect following EPA approval, which is expected sometime between September 2022 and early 2023.</li> <li>• 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. Under the Toxicity Provisions, agencies will be required by the provisions to do sensitive species screening once every 15 years.</li> <li>• BACWA 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. POTWs' only recourse is to challenge individual permits that include the procedure.</li> <li>• The State Water Board is collaborating with stakeholders on a special study to improve the quality of <i>Ceriodaphnia dubia</i> testing. The laboratory analysis portion of the study was approved in August 2022, and laboratory testing will begin shortly.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Review draft NPDES permits implementing the Toxicity Provisions.</b> As of August 2022, NPDES permit language implementing the Toxicity Provisions is being added to draft individual NPDES permits. Regional Water Board staff developed this language with BACWA member input. The permit language only becomes effective after EPA approves the Toxicity Provisions. BACWA is working with member agencies to review and provide comments on these draft permits. The language will ultimately be copied into each newly adopted permit in the region.</li> <li>• Share information on the special study on the <i>Ceriodaphnia dubia</i> test method with agencies who have that species in their permits.</li> </ul>	<p>SWRCB Toxicity Page: <a href="http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/tx_as_s_cntrl.shtml">http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/tx_as_s_cntrl.shtml</a></p> <p>Toxicity Provisions adopted December 2020: <a href="https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/provisions_final.pdf">https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/provisions_final.pdf</a></p> <p>Toxicity Workshop Presentations from 2017 BACWA Workshop: <a href="https://bacwa.org/bacwa-toxicity-workshop-september-18-2017/">https://bacwa.org/bacwa-toxicity-workshop-september-18-2017/</a></p> <p>Regional Water Board presentation on implementation of Statewide Toxicity Provisions from December 2020: <a href="https://bacwa.org/wp-content/uploads/2021/01/Slides-from-RWQCB-Regarding-R2-Tox-Language-in-NPDES-Permits-2020-12-08.pdf">https://bacwa.org/wp-content/uploads/2021/01/Slides-from-RWQCB-Regarding-R2-Tox-Language-in-NPDES-Permits-2020-12-08.pdf</a></p> <p><i>Ceriodaphnia</i> Quality Assurance Study <a href="https://www.sccwrp.org/about/research-areas/additional-research-areas/ceriodaphnia-toxicity-testing-quality-assurance/">https://www.sccwrp.org/about/research-areas/additional-research-areas/ceriodaphnia-toxicity-testing-quality-assurance/</a></p>
--	---	---	---

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>COMPOUNDS OF EMERGING CONCERN (CECS)</b>			
<ul style="list-style-type: none"> <li>Pharmaceuticals and other trace compounds of emerging concern (CECs) are ubiquitous in wastewater at low concentrations and have unknown effects on aquatic organisms.</li> <li>The State Water Board has formed a Pretreatment and CECs Unit.</li> <li>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 monitoring program is already being implemented in Region 2 through the RMP.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Bay dischargers are continuing to provide supplemental funding for RMP CECs studies through the NPDES Permit Amendment for Monitoring and Reporting adopted in December 2021 by the Regional Water Board.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to participate in the RMP Emerging Contaminants Workgroup.</li> <li>Participate in RMP studies by collecting wastewater samples at member facilities. Studies in 2022 will include ethoxylated surfactants in wastewater, in addition to the Regional PFAS Study and OPC-funded microplastic study (see below).</li> <li>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.</li> </ul>	<p>RMP Emerging Contaminant Workgroup:  <a href="http://www.sfei.org/rmp/ecwg#tab-1-4">http://www.sfei.org/rmp/ecwg#tab-1-4</a></p> <p>BACWA CECs White Paper:  <a href="https://bacwa.org/document/bacwa-cec-white-paper-updated-june-2020/">https://bacwa.org/document/bacwa-cec-white-paper-updated-june-2020/</a></p> <p>NPDES Permit Amendment for Monitoring and Reporting  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2021/R2-2021-0028.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2021/R2-2021-0028.pdf</a></p>
<b>MICROPLASTICS</b>			
<ul style="list-style-type: none"> <li>Microplastic pollution is a environmental threat with the potential to impact wastewater disposal and reuse, as well as biosolids end uses.</li> <li>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. As a result, the RMP is focusing future microplastics sampling efforts on stormwater pathways.</li> </ul>	<ul style="list-style-type: none"> <li>In February 2022, the Ocean Protection Council (OPC) adopted a Statewide Microplastics Strategy that calls for increased water recycling, additional monitoring of wastewater, source control in wastewater, and additional scientific research.</li> <li>In 2021, the OPC funded a study investigating microplastic removal through wastewater treatment processes. The study is being carried out by SCCWRP. The study commenced in 2021 with a pilot study involving BACWA member agency participation. Full-scale sampling and analysis of influent, effluent, and biosolids is planned for 2022.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to participate in the RMP Microplastics Workgroup.</li> <li>One or more BACWA member agencies may be selected to participate in the OPC-funded microplastic study.</li> <li>Continue tracking State Water Board and Ocean Protection Council actions via the CASA Microplastics Workgroup. CASA is working with SCCWRP to provide additional funding for testing of new sample collection and/or analysis methods.</li> </ul>	<p>BACWA Microplastics Fact Sheet:  <a href="https://bacwa.org/wp-content/uploads/2019/09/BA-CWA-Microplastics-flyer.pdf">https://bacwa.org/wp-content/uploads/2019/09/BA-CWA-Microplastics-flyer.pdf</a></p> <p>SFEI Microplastics project:  <a href="https://www.sfei.org/projects/microplastics">https://www.sfei.org/projects/microplastics</a></p> <p>Ocean Protection Council Microplastics Strategy:  <a href="https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20220223/Item_6_Exhibit_A_Statewide_Microplastics_Strategy.pdf">https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20220223/Item_6_Exhibit_A_Statewide_Microplastics_Strategy.pdf</a></p>

**PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)**

<ul style="list-style-type: none"> <li>• Per- and polyfluoroalkyl substances (PFAS) are a group of human-made substances that are very resistant to heat, water, and oil. PFAS have been used 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.</li> <li>• Perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) are two types of PFAS no longer manufactured in the US; however, other types of PFAS are still produced and used in the US.</li> <li>• All PFAS are persistent in the environment, can accumulate within the human body, and have demonstrated toxicity at relatively low concentrations.</li> <li>• 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 biosolids.</li> <li>• In July 2020, the SWRCB issued an Investigative order for POTWs. Similar orders have been issued for landfills, airports, chrome platers, and refineries &amp; bulk terminals. The July 2020 SWRCB investigative Order for POTWs is <u>not</u> applicable to Region 2 agencies.</li> <li>• In April 2021, the formation of an “EPA Council on PFAS” was announced.</li> </ul>	<ul style="list-style-type: none"> <li>• The EPA and State of California are developing drinking water standards for PFAS compounds. <ul style="list-style-type: none"> <li>○ DDW has developed drinking water notification levels (NLs) and response levels for PFOA, PFOS, and Perfluorobutane Sulfonic Acid (PFBS), and has proposed a NL for Perfluorohexane Sulfonic Acid (PFHxS) as of July 2022. At DDW’s request, OEHHA is developing NLs for other PFAS compounds.</li> <li>○ In July 2021, OEHHA proposed draft public health goals for PFOA (0.007 ng/L) and PFOS (1 ng/L) as the next step in establishing drinking water MCLs.</li> <li>○ In June 2022, EPA released interim health advisories for PFOA (0.004 ng/L) and PFOS (0.02 ng/L) that are significantly lower than current detection limits in wastewater. EPA also issued health advisories for PFBS and GenX.</li> </ul> </li> <li>• EPA is conducting pretreatment standards rulemaking for two types of industrial users: Metal Finishing, and Organic Chemicals, Plastics and Synthetic Fibers.</li> <li>• In June 2022, EPA released a 2nd Draft Method 1633 for analysis of PFAS in complex matrices like wastewater.</li> <li>• In August 2022, EPA proposed a rule designating PFOA and PFOS as hazardous substances under CERCLA (the Superfund law).</li> </ul>	<ul style="list-style-type: none"> <li>• BACWA worked with RWB staff and obtained State Water Board approval to fund and conduct a Regional PFAS Study in lieu of the statewide investigative order.</li> <li>• SFEI is conducting this study in two phases: <ul style="list-style-type: none"> <li>○ In Phase 1, fourteen representative facilities collected samples in Q4 2020 for influent, effluent, RO concentrate, and biosolids. BACWA has prepared a Fact Sheet regarding Phase 1 results (see link at right).</li> <li>○ Sample collection for Phase 2 of the PFAS Regional Study was completed in mid-2022 and included sampling of influent, effluent, and biosolids; residential sewersheds, commercial and industrial users; hauled organic waste used as digester feed; and groundwater.</li> </ul> </li> <li>• BACWA’s Phase 2 study results will support CASA’s legislative efforts related to PFAS, such as sponsorship of AB 2247, which would initiate a publicly accessible reporting platform for PFAS in products.</li> <li>• BACWA will continue tracking developments at the federal, state and regional level, in particular to understand the impact of the CERCLA designation.</li> </ul>	<p>BACWA PFAS Documents: <a href="https://bacwa.org/pfas-links/">https://bacwa.org/pfas-links/</a></p> <p>SWRCB PFAS Resources: <a href="https://www.waterboards.ca.gov/pfas/">https://www.waterboards.ca.gov/pfas/</a></p> <p>OEHHA Drinking Water: <a href="https://oehha.ca.gov/water">https://oehha.ca.gov/water</a></p> <p>EPA PFAS Resources <a href="https://www.epa.gov/pfas">https://www.epa.gov/pfas</a></p> <p>EPA PFAS Strategic Roadmap (Oct 2021) <a href="https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024">https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024</a></p> <p>AB 2247: <a href="https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB2247">https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB2247</a></p>
---	--	---	---

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>SSS WDR REISSUANCE</b>			
<ul style="list-style-type: none"> <li>• The State Water Board plans to reissue the statewide Sanitary Sewer System General Order (SSS-WDR) in 2022.</li> <li>• State Water Board staff sought out early stakeholder engagement through outreach to CASA and the Regional Associations, and NGOs.</li> <li>• The State Water Board’s goals for the update are: <ul style="list-style-type: none"> <li>○ Updating the 2006 Order</li> <li>○ Clarifying compliance expectations and enhancing enforceability</li> <li>○ Addressing system resiliency, including climate change impacts</li> <li>○ Identifying valuable data and eliminating non-valuable reporting requirements</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• A draft for public review and comment was released on January 31, 2022. This version addressed many of BACWA and CASA’s comments on the previous February 2021 informal staff draft.</li> <li>• BACWA worked with the Collection Systems committee, CASA, CVCWA, SCAP, and other allies to review the public review draft SSS-WDR, provide oral comments for the State Water Board and its staff, and prepare a detailed comment letter. Written comments were submitted in April 2022.</li> <li>• State Water Board staff are reviewing the comments submitted by BACWA and other stakeholders, and plan to bring a revised draft to the State Water Board for consideration in December 2022. A State Water Board workshop is also planned for November 2022.</li> <li>• State Water Board staff plan to prepare a response-to-comments document in addition to the revised draft SSS-WDR.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Review the Revised Draft SSS-WDR when it is released later in Fall 2022.</b> BACWA is continuing to coordinate with State Water Board staff in a limited fashion as the revised draft version of the SSS-WDR is prepared.</li> <li>• Coordinate with CASA, CVCWA, and SCAP on testimony for the adoption hearing in December.</li> <li>• Coordinate with CASA and CWEA on training opportunities for members as they transition to enrollment under the new SSS-WDR.</li> <li>• Discuss response to issues such as exfiltration via BACWA’s Collection Systems Committee.</li> </ul>	<p>State Water Board SSS-WDR page:  <a href="https://www.waterboards.ca.gov/water_issues/programs/sso/">https://www.waterboards.ca.gov/water_issues/programs/sso/</a></p> <p>Public Review Draft of SSS-WDR:  <a href="https://www.waterboards.ca.gov/water_issues/programs/sso/docs/2022-01-draft-sanitary-sewer-systems-general-order.pdf">https://www.waterboards.ca.gov/water_issues/programs/sso/docs/2022-01-draft-sanitary-sewer-systems-general-order.pdf</a></p> <p>BACWA Comment Letter on Public Review Draft:  <a href="https://bacwa.org/wp-content/uploads/2022/04/BACWA-Comments-to-SWRCB-on-Draft-SSS-WDR-2022-04-08.pdf">https://bacwa.org/wp-content/uploads/2022/04/BACWA-Comments-to-SWRCB-on-Draft-SSS-WDR-2022-04-08.pdf</a></p> <p>State Water Board July 2022 presentation to CWEA on Draft SSS-WDR:  <a href="https://bacwa.org/wp-content/uploads/2022/08/SWRCB-Presentation-to-CWEA-on-SSS-WDR-2022-07-23.pdf">https://bacwa.org/wp-content/uploads/2022/08/SWRCB-Presentation-to-CWEA-on-SSS-WDR-2022-07-23.pdf</a></p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>ELAP UPDATE</b>			
<ul style="list-style-type: none"> <li>• In May 2020, the State Water Board adopted new comprehensive regulations for the Environmental Laboratory Accreditation Program.</li> <li>• Adoption of the new regulations was required by AB 1438, legislation that became effective in 2018.</li> <li>• The new ELAP regulations will replace the current state-specific accreditation standards with a national laboratory standard established by The NELAC Institute (TNI).</li> </ul>	<ul style="list-style-type: none"> <li>• The new ELAP regulations became effective as of <b>January 1, 2021</b>. Compliance with TNI standards is required beginning <b>January 1, 2024</b>.</li> <li>• 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"> <li>○ Hiring and/or training staff;</li> <li>○ Hiring consultants to set up the TNI documentation framework;</li> <li>○ Purchasing Laboratory Information Management System (LIMS) software;</li> <li>○ Purchasing documents and training material from TNI, etc.</li> </ul> </li> <li>• The new standards will be a particular burden on small laboratories, which may choose to close if they cannot economically meet the new standards.</li> <li>• 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, April 2021, and June 2022. ELAP has contracted with A2LA Workplace Training to provide training sessions.</li> <li>• The BACWA Lab Committee began providing monthly TNI training sessions beginning in July 2021. BACWA has provided funding for the TNI training sessions to continue through FY23.</li> </ul>	<ul style="list-style-type: none"> <li>• 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 are occurring on the 3<sup>rd</sup> Tuesday of each month throughout 2022. Training is provided by Diane Lawver of Quality Assurance Solutions, LLC, and other subject matter experts.</li> <li>• Communicate with ELAP staff on behalf of BACWA's Laboratory Committee as new guidance and training materials are developed for TNI implementation and methods updates (e.g., new timeline tool linked at right)</li> <li>• Continue to work through BACWA's Laboratory Committee to support members as they navigate laboratory accreditation under the new TNI standards.</li> <li>• Publicize training opportunities offered by consultants, ELAP, and others.</li> <li>• Provide a forum for BACWA laboratories to share experiences and lessons learned from various approaches to TNI implementation.</li> </ul>	<p>State Water Board's 'Roadmap to ELAP Accreditation' page: <a href="https://www.waterboards.ca.gov/drinking_water/certlic/labs/roadmap_to_elap_accreditation.html">https://www.waterboards.ca.gov/drinking_water/certlic/labs/roadmap_to_elap_accreditation.html</a></p> <p>Roadmap to Accreditation Presentation to BACWA Lab Committee: <a href="https://bacwa.org/wp-content/uploads/2020/06/California-ELAP-Regulations-BACWA_06092020.pdf">https://bacwa.org/wp-content/uploads/2020/06/California-ELAP-Regulations-BACWA_06092020.pdf</a></p> <p>State Water Board's ELAP regulations page: <a href="http://www.waterboards.ca.gov/drinking_water/certlic/labs/elap_regulations.shtml">http://www.waterboards.ca.gov/drinking_water/certlic/labs/elap_regulations.shtml</a></p> <p>Monthly Training Session flyer: <a href="https://bacwa.org/wp-content/uploads/2021/07/BACWA-Lab-TNI-Training-Series-Flyer.pdf">https://bacwa.org/wp-content/uploads/2021/07/BACWA-Lab-TNI-Training-Series-Flyer.pdf</a></p> <p>ELAP Timeline Guidance Tool: <a href="https://www.waterboards.ca.gov/drinking_water/certlic/labs/docs/2022/elap-scheduler-1-1.xlsx">https://www.waterboards.ca.gov/drinking_water/certlic/labs/docs/2022/elap-scheduler-1-1.xlsx</a></p>

## PHASE-OUT OF BIOSOLIDS AS ALTERNATIVE DAILY COVER

<ul style="list-style-type: none"> <li>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"> <li>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.</li> <li>SB 1383, adopted in September 2016 requires organics diversion: -50% by 2020 (relative to 2014) -75% by 2025 (relative to 2014)</li> </ul> </li> <li>Regulations implementing SB 1383 went into effect on January 1, 2022, so the State can begin enforcement on jurisdictions. Jurisdictions can begin local enforcement January 1, 2024, and compliance is required by January 1, 2025.</li> <li>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.</li> <li>The Bay Area Biosolids Coalition (BABC) was formed to find sustainable, cost-effective, all-weather options for biosolids management. BABC is a BACWA Project of Special Benefit.</li> </ul>	<ul style="list-style-type: none"> <li>BACWA's 2021 Biosolids Trends Survey Report compiles member agency activities in 2018-2020, as well as survey responses regarding SB 1383 implementation.</li> <li>Requirements for SB 1383 implementation include:             <ul style="list-style-type: none"> <li>Diverted biosolids must be anaerobically digested and/or composted to qualify as landfill reduction.</li> <li>As of January 2022, CalRecycle is accepting applications to consider whether other specific treatment technologies can qualify as landfill reduction (per Article 2 of SB 1383).</li> <li>Local ordinances restricting land application are disallowed.</li> <li>Jurisdictions that divert organic waste must also procure the end products of diversion, such as biogas, biomethane, and compost (but not biosolids).</li> </ul> </li> <li>Currently, some County ordinances restrict the beneficial reuse of biosolids. CalRecycle considers bans on land application to be unenforceable, and Cal Recycle has agreed to approach Counties with restrictive ordinances to conduct outreach and assess compliance.</li> <li>CalRecycle continues to make new training materials available for jurisdictions regarding 1383 compliance, and also recently formed a Jurisdiction and Agency Compliance and Enforcement (JACE) branch to assist with compliance.</li> </ul>	<ul style="list-style-type: none"> <li>Follow efforts of the Regional Water Board to revise biosolids permitting requirements for land application and disposal.</li> <li>The <i>Biosolids in the Baylands</i> white paper was released earlier this year by the San Francisco Bay Joint Venture. The white paper identifies data gaps that need to be filled. Current research by EPA, NRCS, and the University of AZ is being followed and reviewed to understand if the data collected could be used. Studies funded by BACWA and BABC (e.g., PFAS) will be considered to help fill remaining data gaps before identifying new monitoring requirements at land applications sites.</li> <li>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.</li> <li>Participate in BAAQMD's Organics Recovery Technical Working Group to educate their staff on implementation of SB 1383 at the Air District level.</li> <li>Meet with BAAQMD regularly in 2022 to discuss alignment of state and local regulations.</li> </ul>	<p>BACWA 2021 Biosolids Trends Survey Report: <a href="https://bacwa.org/wp-content/uploads/2021/12/BACWA-2021-Biosolids-Trends-Survey-Report.pdf">https://bacwa.org/wp-content/uploads/2021/12/BACWA-2021-Biosolids-Trends-Survey-Report.pdf</a></p> <p>BABC website: <a href="http://www.bayareabiosolids.com/">http://www.bayareabiosolids.com/</a></p> <p>CASA White Paper on SB 1383 Implementation: <a href="https://bacwa.org/document/summary-of-sb-1383-and-its-implementation-casa-2020/">https://bacwa.org/document/summary-of-sb-1383-and-its-implementation-casa-2020/</a></p> <p>CalRecycle website for California Short-Lived Climate Pollutant Reduction Strategy <a href="https://www.calrecycle.ca.gov/organics/slcp">https://www.calrecycle.ca.gov/organics/slcp</a></p> <p><i>Biosolids in the Baylands</i> White Paper <a href="https://bacwa.org/wp-content/uploads/2022/07/Biosolids-in-the-Baylands-White-Paper-March-2022.pdf">https://bacwa.org/wp-content/uploads/2022/07/Biosolids-in-the-Baylands-White-Paper-March-2022.pdf</a></p>
---	---	---	---

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>CLIMATE CHANGE MITIGATION</b>			
<ul style="list-style-type: none"> <li>• 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"> <li>○ Short-lived climate pollutants</li> <li>○ Carbon sequestration on Natural and Working Lands</li> <li>○ Largest emitters (transportation, electricity, and industrial sectors)</li> </ul> </li> <li>• The Scoping Plan is being updated in 2022 targeting carbon neutrality by 2045 and, if possible, 2035.</li> <li>• SB 1383 (Short-Lived Climate Pollutant Reduction) calls for: <ul style="list-style-type: none"> <li>○ 40% methane reduction by 2030</li> <li>○ 75% diversion of organic waste from landfills by 2025</li> <li>○ Policy / regulatory development encouraging production/use of biogas</li> </ul> </li> <li>• BAAQMD developed a Clean Air Plan requiring GHG emissions supporting CARB’s 2050 target.</li> <li>• BAAQMD has proposed the development of Regulation 13 (climate pollutants) targeting GHG reductions related to organics diversion and management.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• CARB is pursuing rapid fleet electrification, including medium and heavy-duty vehicles, through the Advanced Clean Fleet rule. Complete electrification will be difficult for heavy-duty trucks, and will remove a potential market for biogas. CASA is engaging on this issue through the Scoping Plan Update and other avenues to request continued allowance of biogas as a sustainable transportation fuel.</li> <li>• In addition to pushing for electrification, CARB is proposing changes to the Low Carbon Fuel Standard that reflects increasing emphasis on hydrogen as a transportation fuel. Conversion of biogas into hydrogen is currently in research &amp; development stage.</li> <li>• Many POTWs are exploring energy generation, but BAAQMD TAC regulations could make such programs more difficult to implement. Direct injection of biogas to PG&amp;E’s pipelines or use as a transportation fuel may be more efficient.</li> <li>• The EPA is revisiting procedures for allocation of renewable fuel credits (RINs) for food waste-based and sludge-based biogas. CASA has engaged on this issue, and a draft rule for public comment is expected soon.</li> <li>• BAAQMD is developing a suite of Rules under Regulation 13 for climate pollutants methane and nitrous oxide. However, rule development has been deprioritized.</li> </ul>	<ul style="list-style-type: none"> <li>• BACWA is supporting CASA’s enhanced advocacy to CARB to preserve existing pathways that allow biogas to be used for fueling vehicles. The outreach is required so that biogas produced at treatment plants continues to have a permissible and economical end use, and so utilities have reliable power for heavy-duty vehicles. CASA and BACWA members are also providing public comments at CARB’s public workshops.</li> <li>• Review a summary of the AIR committee-led survey regarding current methane management practices at anaerobic digesters and sludge lagoons, to be shared with BAAQMD staff.</li> <li>• Look for ways to inform BAAQMD on opportunities and challenges for climate change mitigation by Bay Area POTWs, including education about anaerobic digesters and POTW operations.</li> <li>• Work with PG&amp;E and BAAQMD to explore options for POTWs to inject biogas into PG&amp;E pipelines. In February 2022, the CPUC approved a mandatory biomethane procurement program for CA’s four large gas IOUs (including PG&amp;E) under SB 1440. CASA has been discussing the barriers to pipeline injection with CPUC staff.</li> </ul>	<p>Climate Change Scoping Plan, including 2022 Update:  <a href="https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan">https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan</a></p> <p>CARB Low Carbon Fuel Standard:  <a href="https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard">https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard</a></p> <p>CARB Advanced Clean Fleet Rule:  <a href="https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets">https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets</a></p> <p>SB 1383:  <a href="https://www.calrecycle.ca.gov/organics/slcp">https://www.calrecycle.ca.gov/organics/slcp</a></p> <p>BAAQMD Clean Air Plan:  <a href="http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans">http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans</a></p> <p>BAAQMD Regulation 13  <a href="http://www.baaqmd.gov/rule-s-and-compliance/rules/regulation-13-climate-pollutants">http://www.baaqmd.gov/rule-s-and-compliance/rules/regulation-13-climate-pollutants</a></p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>CLIMATE CHANGE ADAPTATION</b>			
<ul style="list-style-type: none"> <li>Climate change and water resilience are a strategic priority of both the State Water Board and Regional Water Board.</li> <li>The Regional Water Board is modifying the Basin Plan to address climate change and wetland policy. The changes will occur through multiple Basin Plan amendments.</li> <li>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.</li> <li>Bay Area coordination occurs through Bay Adapt, BayCAN, and other venues. BACWA has signed a letter of support for the Bay Adapt Joint Platform.</li> <li>In April 2022, the State released a California Climate Adaptation Strategy, including an updated climate change assessment for the Bay Area.</li> <li>The California Coastal Commission's November 2021 Sea Level Rise Planning Guidance recommends that agencies "understand and plan" for 2.7 feet of sea level rise by 2050.</li> </ul>	<ul style="list-style-type: none"> <li>The State Water Board is planning to send a survey 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. Survey results would be used to determine the need for funding assistance and/or new permit requirements.</li> <li>The February 2022 Executive Officer's Report included a synthesis of the Regional Water Board's 2021 POTW questionnaire regarding climate change vulnerability and adaptation.</li> <li>In June 2022, the Bay Conservation and Development Commission received a grant to develop "Regional Shoreline Adaptation Guidance" and minimum standards for the Bay Area by 2023.</li> <li>In July 2022, the Regional Water Board adopted a Basin Plan amendment addressing dredge and fill procedures near the region's shorelines, especially for climate adaptation projects. The Amendment also references wastewater discharges to horizontal levee projects. Wastewater discharges are not addressed by the Amendment, but the NDPES division has released information regarding NPDES permitting of nature-based solutions. Changes to NPDES permitting would be incorporated into a future Basin Plan Amendment if the effort were prioritized in a future triennial review.</li> </ul>	<ul style="list-style-type: none"> <li>Follow up with members regarding sea level rise planning, as discussed at a member agency roundtable in August 2022. Prepare for engagement with Regional and State Water Boards on expectations for sea level rise planning.</li> <li>Engage with BCDC during the agency's development of Regional Shoreline Adaptation Guidance, which would likely impact most BACWA member agencies.</li> <li>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 2022.</li> <li>Continue to work with Regional Water Board and other resource agencies to look for regulatory solutions to encourage wetlands projects for shoreline resiliency.</li> </ul>	<p>California Coastal Commission's <i>Critical Infrastructure at Risk</i>  <a href="https://documents.coastal.ca.gov/assets/slr/SLR%20Guidance_Critical%20Infrastructure_12.6.2021.pdf">https://documents.coastal.ca.gov/assets/slr/SLR%20Guidance_Critical%20Infrastructure_12.6.2021.pdf</a></p> <p>OPC Sea Level Rise Action Plan – August 2022  <a href="https://www.opc.ca.gov/webmaster/media_library/2022/08/SLR-Action-Plan-2022-508.pdf">https://www.opc.ca.gov/webmaster/media_library/2022/08/SLR-Action-Plan-2022-508.pdf</a></p> <p>Climate Change Basin Plan Amendment  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2022/July/7_ssr.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2022/July/7_ssr.pdf</a></p> <p>California Climate Adaptation Strategy  <a href="https://climateresilience.ca.gov/">https://climateresilience.ca.gov/</a></p> <p>Bay Adapt Joint Platform  <a href="https://www.bayadapt.org/">https://www.bayadapt.org/</a></p> <p>Bay Area Climate Adaptation Network (BayCAN)  <a href="http://www.baycanadapt.org/">http://www.baycanadapt.org/</a></p> <p>NPDES Permitting for Nature-Based Solutions  <a href="https://bacwa.org/wp-content/uploads/2022/08/NPDES-Permitting-for-Nature-Based-Solutions-5.pdf">https://bacwa.org/wp-content/uploads/2022/08/NPDES-Permitting-for-Nature-Based-Solutions-5.pdf</a></p>

**TOXIC AIR CONTAMINANTS**

<ul style="list-style-type: none"> <li>• Regulation 11, Rule 18 (Rule 11-18), adopted in 2017, is BAAQMD's effort to protect public health from toxic air pollution from existing facilities, including POTWs.</li> <li>• 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&gt;10 or non-cancer PS&gt;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).</li> <li>• AB 617 (Community Air Protection Program) – requires CARB to harmonize community air monitoring, reporting, &amp; 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.</li> <li>• 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 risk assessment and public notification of potential health risks. 2020 updates expanded compound list from &gt;500 to &gt;1,000.</li> </ul>	<ul style="list-style-type: none"> <li>• BACWA developed a White Paper on BAAQMD Rule 11-18 to describe its potential impacts on the POTW community.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• In the <i>Final Statement of Reasons</i> for rulemaking on AB 617 and AB 2588, CARB 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).</li> <li>• In December 2021, BAAQMD amended Rule 2-5 to reduce allowable levels of toxic air contaminants in new source permitting. In March 2022, BAAQMD and BACWA convened a working group to address concerns related to toxic air contaminants and rule-making, which is meeting quarterly.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue participating in the BAAQMD working group to discuss toxic air contaminants, rule development, and related issues. BACWA is coordinating with BAAQMD about implementation of the two-step process and its timing relative to BAAQMD Rule 11-18 and 2-5.</li> <li>• Participate in CASA Subgroup meetings to develop Step 1 of the two-step process and understand funding needs.</li> <li>• For Rule 11-18, members will need to respond to BAAQMD data requests, which will have a 60-day turn-around. Following data collection and verification, BAAQMD will develop HRAs for facilities with a cancer PS&gt;10 or non-cancer PS&gt;1.0.</li> <li>• Use the tool developed by the AIR Committee to address emission contributions from influent flows and update emissions inventory values.</li> <li>• Report "business as usual" for air toxics through 2028. If BAAQMD requests additional monitoring of air toxics, member agencies should refer to the one-page handout on this topic prepared by CASA. The wastewater sector has until 2028 to perform a statewide "two-step process" in collaboration with CARB and air districts to determine a shortlist of compounds relevant to the wastewater sector to report.</li> </ul>	<p>BAAQMD Rule 11-18 page:  <a href="https://www.baaqmd.gov/rules-and-compliance/rules/regulation-11-rule-18-reduction-of-risk-from-air-toxic-emissions-at-existing-facilities">https://www.baaqmd.gov/rules-and-compliance/rules/regulation-11-rule-18-reduction-of-risk-from-air-toxic-emissions-at-existing-facilities</a></p> <p>Rule 11-18 Process Flowchart:  <a href="https://bacwa.org/document/baaqmd-11-18-process-flowchart-08-17-17/">https://bacwa.org/document/baaqmd-11-18-process-flowchart-08-17-17/</a></p> <p>CARB page on AB 617 and AB 2588:  <a href="https://ww2.arb.ca.gov/our-work/programs/criteria-and-toxics-reporting/Final%20Statement%20of%20Reasons">https://ww2.arb.ca.gov/our-work/programs/criteria-and-toxics-reporting</a>  <i>Final Statement of Reasons</i>  <a href="https://ww3.arb.ca.gov/board/15day/ctr/fsor.pdf">https://ww3.arb.ca.gov/board/15day/ctr/fsor.pdf</a></p> <p>CASA One-Page Handout on Air Toxics Reporting (Updated)  <a href="https://bacwa.org/wp-content/uploads/2022/03/CTR-EICG_CASAOnePageIssuue-Approach_March2022.pdf">https://bacwa.org/wp-content/uploads/2022/03/CTR-EICG_CASAOnePageIssuue-Approach_March2022.pdf</a></p> <p>BAAQMD Rule 2-5  <a href="https://www.baaqmd.gov/rules-and-compliance/rules/reg-2-permits?rule_version=2021%20Amendments">https://www.baaqmd.gov/rules-and-compliance/rules/reg-2-permits?rule_version=2021%20Amendments</a></p>
---	---	---	---

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>RECYCLED WATER</b>			
<ul style="list-style-type: none"> <li>Approximately 10 percent of the municipal wastewater of Region 2 POTWs is currently recycled. Expansion of recycled water projects is a goal of many BACWA members, but implementation is slowed by high costs, regulatory uncertainty, and administrative requirements.</li> <li>As of 2018, the State Water Board has adopted uniform water recycling criteria for two types of Indirect Potable Reuse: surface water augmentation and groundwater augmentation.</li> <li>As of 2020, virtually all recycled water in Region 2 was produced at centralized facilities using municipal wastewater, and was treated to meet standards for non-potable reuse.</li> </ul>	<ul style="list-style-type: none"> <li>Beginning in 2020, all agencies have been required to report monthly wastewater and recycled water volumes into the State's Geotracker database. In August 2022, the State Water Board released volumetric use data for 2021. In the Bay Area, usage increased slightly (about 1%) compared to 2020.</li> <li>Regulations for Direct Potable Reuse are under development. The State Water Board is required to adopt criteria for raw water augmentation by December 31, 2023, and is pursuing a regulatory path that also includes treated water augmentation. In June 2022, the DPR Criteria Expert Panel recently a review of the State Water Board's draft criteria, and State Water Board staff issued a response. The State Water Board will issue draft regulations in 2023.</li> <li>By the end of 2022, the State Water Board is required to adopt risk-based water quality standards for onsite treatment and reuse of non-potable water in multi-family, mixed use, and commercial buildings. Draft regulatory concepts for onsite non-potable reuse were released in a State Water Board workshop in August 2022. San Francisco has already begun to implement a similar program for large developments in the city.</li> <li>BACWA is currently completing a Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling, as required by the 2<sup>nd</sup> Nutrient Watershed Permit.</li> </ul>	<ul style="list-style-type: none"> <li><b>BACWA Members with water recycling projects should plan to review forthcoming draft facility reports to be included in the Regional Evaluation of Potential Nutrient Discharge Reduction HDR / Woodard &amp; Curran are preparing the draft reports.</b></li> <li>Review draft regulations for Direct Potable Reuse and Onsite Non-potable Reuse and work through Recycled Water committee to develop comments, as needed.</li> <li>Track California legislation with potential impacts on recycled water funding, mandates, or regulations.</li> <li>For the study of nutrient removal via recycled water, review barriers and challenges to recycled water expansion identified by the study, and strategize next steps.</li> </ul>	<p>Water Boards Recycled Water Policy and Regulations  <a href="https://www.waterboards.ca.gov/water_issues/programs/recycled_water/">https://www.waterboards.ca.gov/water_issues/programs/recycled_water/</a></p> <p>"Purple Book" of Recycled Water Regulations  <a href="https://www.waterboards.ca.gov/drinking_water/certlic/drikingwater/documents/lawbook/rwregulations.pdf">https://www.waterboards.ca.gov/drinking_water/certlic/drikingwater/documents/lawbook/rwregulations.pdf</a></p> <p>Direct Potable Reuse framework documents  <a href="https://www.waterboards.ca.gov/drinking_water/certlic/drikingwater/direct_potable_reuse.html">https://www.waterboards.ca.gov/drinking_water/certlic/drikingwater/direct_potable_reuse.html</a></p> <p>Volumetric Annual Reporting Data:  <a href="https://www.waterboards.ca.gov/water_issues/programs/recycled_water/volumetric_annual_reporting.html">https://www.waterboards.ca.gov/water_issues/programs/recycled_water/volumetric_annual_reporting.html</a></p> <p>Special Studies of Recycled Water and Nature-Based Systems:  <a href="https://bacwa.org/document-category/2nd-watershed-permit-studies/">https://bacwa.org/document-category/2nd-watershed-permit-studies/</a></p>

Previously covered issues with no updates can be found in previous [BACWA issues summaries](#).

#### ACRONYMS

ADC	Alternate Daily Cover	PCB	Polychlorinated Biphenyl
BAAQMD	Bay Area Air Quality Management District	PFAS	Per- and Polyfluoroalkyl Substances
BACT	Best Available Control Technology	PFBS	Perfluorobutane Sulfonic Acid
BTU/SCF	British thermal units per standard cubic foot	PFHxS	Perfluorohexane Sulfonic Acid
CalDPR	California Department of Pesticide Registration	PFOA	Perfluorooctanoic Acid
CARB	California Air Resources Board	PFOS	Perfluorooctane Sulfonic Acid
CASA	California Association of Sanitation Agencies	POTW	Publicly Owned Treatment Works
CAP	Criteria Air Pollutant	PS	Prioritization Score
CEC	Compound of Emerging Concern	RMP	Regional Monitoring Program
CIWQS	California Integrated Water Quality System	RPA	Reasonable Potential Analysis
CVCWA	Central Valley Clean Water Agencies	SCAP	Southern California Alliance of POTWs
CWEA	California Water Environment Association	SF Bay	San Francisco Bay
DDW	Division of Drinking Water, State Water Resources Control Board	SFEI	San Francisco Estuary Institute
EC25/IC25	25% Effect Concentration/25% Inhibition Concentration	TAC	Toxic Air Contaminant
ELAP	Environmental Laboratory Accreditation Program	TMDL	Total Maximum Daily Load
ELTAC	Environmental Laboratory Technical Advisory Committee	TIN	Total Inorganic Nitrogen
EPA	United States Environmental Protection Agency	TNI	The NELAC Institute
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act	TST	Test of Significant Toxicity
FY	Fiscal Year	WQBEL	Water Quality Based Effluent Limitation
GHG	Greenhouse Gas	WQO	Water Quality Objective
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		
NMS	Nutrient Management Strategy		
OAL	Office of Administrative Law		
OEHHA	Office of Environmental Health Hazard Assessment		
OPC	Ocean Protection Council		

## **ITEM NO. RA7 UPDATE ON SAN FRANCISCO BAY NUTRIENT MANAGEMENT**

### **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. Scientists believe this resilience to stem at least in part from high turbidity (i.e., the Bay is cloudy); which blocks the light that phytoplankton need to grow; presence of filter-feeding clams, which reduce phytoplankton concentrations; and strong tidal mixing, which reduces nutrient concentrations.

Over the last decade, concerning trends caused the scientific and regulatory community to question whether the Bay's resilience is weakening. Dams in upstream watersheds have decreased the Bay's turbidity by trapping sediments, and clam populations have been on the decline. At the same time, climate conditions are changing.

To begin to proactively address these nutrient-related risks, Bay Area wastewater agencies, through the Bay Area Clean Water Agencies (BACWA), have participated since 2012 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, which 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.
- 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 through water recycling.
- Inclusion of load targets for 2024.
- Recognition of agencies implementing early action projects that will reduce nutrient loads during this permit term.

### **Discussion**

In late July of 2022, public reports started noting discoloration in the Bay, particularly around the Oakland estuary and Lake Merritt, a tidally influenced impoundment. Scientists identified the cause to be a harmful algae bloom, which ultimately spread throughout the deep channels of the Central Bay and into the South Bay. The algae species was identified

as *Heterosigma akashiwo*, which has been observed intermittently in various locations around the Bay over the past 20 years, after first being detected here in 2002. *Heterosigma akashiwo* can be toxic to fish, although the nature of that toxicity is not well understood. In addition, the bloom caused unprecedented decreases in dissolved oxygen in the Bay. These effects combined to cause significant fish kills around the Bay in areas the bloom was observed.

While it is unclear exactly what triggered this bloom, its timing did correspond with a prolonged period of unusually clear skies in the Bay Area, making available more light than usual for photosynthesis. Scientists believe that the bloom was nitrogen limited, meaning that nitrogen loads to the Bay sustained the bloom and likely contributed to its extent and duration. This conclusion, along with the increased media attention garnered by the event, has led to public and political pressure on wastewater agencies and on the regulators, particularly the Regional Water Quality Control Board (Water Board), to act quickly to reduce nutrient loads to the Bay, with a goal of preventing or lessening the impact of future blooms.

The EBDA member agencies have already making significant capital investments to reduce nutrient loads in advance of requirements to do so, including the following efforts:

- Oro Loma and Castro Valley Sanitary Districts implemented the [Nutrient Optimization Project](#) and a solids dewatering sidestream nutrient removal process using [Microvi](#) technology. These two projects have already significantly reduced nitrogen loading to EBDA and the Bay.
- Union Sanitary District has begun construction on its [Enhanced Treatment and Site Upgrade \(ETSU\) Program](#), a major upgrade that will include nutrient reduction from EBDA's largest plant.
- Hayward has begun design for a [project](#) that will reduce nutrient loads by 50% and is evaluating opportunities to integrate multi-benefit nature-based solutions into their strategy.
- San Leandro has plans to build a [treatment wetland](#) that will reduce nutrients by 20%.
- The LAVWMA treatment plants, owned and operated by Dublin San Ramon Services District and the City of Livermore, both have significant water recycling programs that divert flows from EBDA almost entirely during the dry season, when the Bay is most sensitive to wastewater nutrient inputs, with plans to further expand recycling.

Wastewater agencies, including EBDA members, who are investing in nutrient upgrades in advance of load caps or reduction requirements, are referred to as “early actors” in the current Watershed Permit. The permit states,

If the most up-to-date scientific information indicates that nutrient loads must be capped or reduced, the Regional Water Board will recognize early actions (i.e.,

Dischargers' capital or operational improvements or other means that significantly reduce nutrient loads during this Order term) when considering compliance with nutrient load caps or reductions in a subembayment. This will likely result in findings that no further actions by these Dischargers will be necessary for the design life of the associated capital improvements, provided that other Dischargers can implement capital improvements to reduce nutrient loads below the subembayment cap.

Preliminary conversations with Water Board staff indicate that they intend to honor the early actors concept as negotiations continue on the next Watershed Permit, which will be adopted in 2024. Negotiations prior to the algal bloom had focused on the concept of a Bay-wide load cap, limiting nitrogen discharges to treatment plants' current performance, on the assumption that the Bay was resilient to that level of nutrient loading. Now, the focus has shifted to identifying specific actions to reduce nutrients, particularly for those agencies that have not yet begun capital upgrades. Though the wastewater community recognizes the need for action, BACWA will continue to advocate that time should be allowed for implementation of complex, multi-benefit projects such as water recycling and nature-based solutions like horizontal levees, so that agencies are not compelled to pursue simpler traditional plant upgrades due to aggressive deadlines.

BACWA's Nutrient Strategy Team is currently considering actions that the wastewater community can put forward to prevent and reduce future harmful algal blooms. Concepts under discussion include:

- Continued investment in science and modeling to gain a better understanding of the causes of algal blooms in the Bay, their likelihood in the future, and levels of nutrient reductions that would make a difference in their occurrence and trajectory.
- Development of early warning signs for future blooms and "emergency response" actions that could be taken to achieve short-term nutrient reductions or other benefits to the Bay.
- Implementation of low or no capital plant optimization efforts to reduce nutrients where feasible.
- Commitments to capital investments for nutrient reductions by non-early actors.

BACWA and the Water Board are actively discussing next steps on the Watershed Permit, and staff will keep the Commission apprised as developments unfold.