



## KEY REGULATORY ISSUE SUMMARY

### Updated February 28, 2025

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

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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.</li> <li>In the early 2000s, monitoring data of the Bay suggested that this historic resilience could be weakening. In 2012, stakeholders in the region formed the Nutrient Management Strategy (NMS) to prioritize scientific studies and ensure that all science to be used for policy decisions is conducted under one umbrella.</li> <li>Program management of the NMS is led by the San Francisco Estuary Institute (SFEI).</li> <li>In summer 2022, a harmful algae bloom in San Francisco Bay brought increased public attention to this topic.</li> </ul>	<ul style="list-style-type: none"> <li>For FY25, BACWA is contributing \$2.2M to fund scientific research by the NMS science team, fulfilling a requirement of the <a href="#">2024 Watershed Permit</a>.</li> <li>In recent years, the NMS has also been successful in attracting funding from other sources, such as NOAA and EPA, complementing BACWA's contributions.</li> <li>The focus of current scientific efforts is improving model representation of biogeochemistry, light attenuation, dissolved oxygen, and harmful algal bloom dynamics.</li> <li>The science team is currently working with stakeholders to develop a multi-year work plan for 2025-2029.</li> <li>The science team is preparing to release a summary of recently completed and ongoing studies of nutrients in San Francisco Bay. The summary will be suitable for wide distribution.</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 via the Nutrient Surcharge.</b></li> <li>Continue to work with NMS scientists to obtain summaries of scientific accomplishments 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>	<ul style="list-style-type: none"> <li><a href="#">BACWA Nutrients Page</a></li> <li><a href="#">SFEI Nutrient Management Strategy Page</a></li> <li><a href="#">NMS FY25 Science Program Plan Materials</a></li> <li><a href="#">NMS Steering Committee Meeting Materials</a></li> <li><a href="#">NMS Work Products</a></li> <li><a href="#">Real-Time Satellite Data on Harmful Algae Blooms</a></li> <li><a href="#">Baywise Website</a></li> </ul>

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<b>SF BAY NUTRIENT WATERSHED PERMIT</b>			
<ul style="list-style-type: none"> <li>The Nutrient Watershed Permit was first adopted in 2014. It required effluent monitoring and a regional study on Nutrient Treatment by Optimization and Upgrades, completed in 2018.</li> <li>The 2019 Nutrient Watershed Permit required continued monitoring and reporting of nutrient loads, significantly increased funding for scientific studies, and completion of a regional assessment of nutrient diversions through nature-based systems and recycled water, completed in 2023.</li> <li>The Nutrient Watershed Permit was reissued in 2024 and requires: <ul style="list-style-type: none"> <li>Continued individual POTW nutrient monitoring and reporting;</li> <li>Continued funding for science;</li> <li>Effective in the 2025 dry season, interim performance-based effluent limits for Total Inorganic Nitrogen (TIN);</li> <li>Effective in the 2035 dry season, final water quality-based effluent limits for TIN;</li> <li>Continued group annual reporting for each water year (Oct. 1 – Sep. 30), with additional reporting related to the permit’s 10-year compliance schedule;</li> <li>Recognition of “early actors” that began implementing nutrient removal projects before October 1, 2024; and</li> <li>Completion of a regional planning study.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The final effluent limits in the 2024 Nutrient Watershed Permit are 40% lower than actual loads from the 2022 dry season, when San Francisco Bay experienced a harmful algae bloom.</li> <li>The permit contains a 10-year compliance schedule for complying with the final effluent limits. Some agencies will have difficulty meeting this deadline due to the magnitude and complexity of anticipated projects.</li> <li>To address this challenge, the Regional Water Board is working to identify a regulatory mechanism to extend the compliance schedule beyond 10 years where necessary. This commitment is outlined in a Board <a href="#">resolution</a> and will likely require a change in the State Water Board compliance schedule policy.</li> <li>Through the nutrient surcharge levied on permittees, BACWA will fund compliance with the following provisions of the 2024 Nutrient Watershed Permit behalf of its members: <ul style="list-style-type: none"> <li>Funding for scientific studies</li> <li>Group Annual Reporting, including compliance milestone reporting</li> <li>Completion of a regional planning study</li> </ul> </li> <li>BACWA has hired the consulting firm HDR to assist with the completion of Group Annual Reports and the Regional Planning study.</li> <li>In August 2024, BACWA assisted with hosting a <a href="#">technical seminar</a> on nutrient removal technology at Bay Area wastewater treatment plants.</li> </ul>	<ul style="list-style-type: none"> <li><b>By early 2024, POTWs must identify their preliminary alternatives for meeting final effluent limits, per Table 5 of the Nutrient Watershed Permit.</b> “Early actors” will instead submit status updates. BACWA has circulated a <a href="#">Request for Information</a> for agencies to provide this information for inclusion in the Group Annual Report due April 1<sup>st</sup>.</li> <li><b>Review the Draft Scoping Plan, which will be circulated in Spring 2025.</b> The scoping plan is due by July 1<sup>st</sup>, and will outline the approach BACWA intends to take on regional planning to reduce TIN loads. The Regional Planning study, due in March 2029, will address elements such as schedule, cost, cross-media impacts to air and biosolids, opportunities for multi-benefit projects, nutrient trading, and more.</li> <li>Work with Regional Water Board staff and other stakeholders to identify a regulatory mechanism for extending compliance schedules beyond 10 years. Preliminary work is focusing on possible edits to the State’s 2008 Compliance Schedule Policy.</li> <li>Agencies will continue to report nutrient monitoring data directly to CIWQS, which HDR will compile for Group Annual Reports. For the 2025 Group Annual Report and beyond, separate submittal of nutrient monitoring data to BACWA is no longer needed.</li> </ul>	<p><a href="#">2024 Nutrient Watershed Permit</a></p> <p><a href="#">2024 Regional Water Board Resolution on Extending Compliance Schedule</a></p> <p><a href="#">BACWA Nutrients Page</a></p> <p><a href="#">Resources from Dr. David Jenkins Technical Series Nutrient Seminar (August 2024)</a></p>

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<b>OCEAN ACIDIFICATION &amp; HYPOXIA</b>			
<ul style="list-style-type: none"> <li>• Ocean acidification (low pH) is one of the potentially harmful effects of climate change in water bodies. It is caused by the uptake of carbon dioxide from the atmosphere and other sources. Ocean acidification threatens the survival of many marine organisms, especially those with carbonate shells which can dissolve under low-pH conditions.</li> <li>• Nutrients from wastewater and other sources can cause algae blooms which can lead to hypoxia (low dissolved oxygen) when the algae decays and exerts biological oxygen demand. This process can also lead to acidification when the carbon from the algae is released into the ocean as carbon dioxide. Because nutrient inputs and algal production can contribute to both problems, they are grouped together under the umbrella term “Ocean Acidification &amp; Hypoxia.”</li> <li>• State Water Board policy regarding discharges to the Ocean are contained in the <a href="#">California Ocean Plan</a>. Currently, no regulations in the Ocean Plan directly address Ocean Acidification &amp; Hypoxia caused by wastewater discharges. However, future regulations could limit coastal discharges of nutrients in order to reduce the potential for Ocean Acidification &amp; Hypoxia.</li> </ul>	<ul style="list-style-type: none"> <li>• The <a href="#">Ocean Protection Council</a> is the main State agency supporting scientific efforts related to Ocean Acidification &amp; Hypoxia along the California coast.</li> <li>• The Ocean Protection Council has funded the Southern California Coastal Water Research Project (<a href="#">SCCWRP</a>) to conduct research and modeling on Ocean Acidification &amp; Hypoxia due to nutrient pollution in southern California and along the San Francisco and Monterey coasts.</li> <li>• In 2023-2024, the National Water Research Institute convened an expert review panel to review the modeling efforts led by SCCWRP. Because of the work’s relevance to northern California wastewater agencies that discharge to coastal waters, BACWA’s Executive Director is assisting with the Project Steering Committee. In 2024, the expert panel provided a <a href="#">final report</a> with recommendations for improving the model to make it suitable for application in a regulatory context.</li> <li>• The State Water Board is scoping an amendment to the California Ocean Plan amendment to address ocean acidification, hypoxia, and the effects of anthropogenic sources of nutrients in ocean waters.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to track refinement of SCCWRP’s modeling tools, which could be used to establish State Water Board policy on nutrient discharges to the coastal ocean. The wastewater community is advocating for model improvements to accurately capture the impacts of wastewater discharges, and to inform monitoring work that will support our understanding of ocean impacts of nutrients.</li> <li>• Continue to participate in the San Francisco Bay Nutrient Management Strategy, which is already addressing many related issues.</li> </ul>	<p>State Water Resources Control Board’s <a href="#">California Ocean Plan</a></p> <p><a href="#">Timelines for Planning, Policy, and Permitting Efforts at the State and Regional Water Boards</a></p> <p><a href="#">Ocean Acidification and Hypoxia - California Ocean Protection Council</a></p> <p><a href="#">National Water Research Institute - Expert Review Panel</a></p>

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<b>PESTICIDES</b>			
<ul style="list-style-type: none"> <li>• Pesticides are regulated via the Federal Insecticide, Fungicide, and Rodenticide Act (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>• EPA reviews all registered pesticides at least once every 15 years. Each review allows an opportunity for public comment.</li> <li>• Through BAPPG’s Pesticides Committee, 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> <li>• Based on the most (2024) <a href="#">BAPPG/BACWA Pesticide Watch List</a>, the pesticides of highest concern in wastewater are: <ul style="list-style-type: none"> <li>○ Pyrethroids (21 chemicals)</li> <li>○ Fipronil</li> <li>○ Imidacloprid</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <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 FY25 is \$72k.</li> <li>• The Regional Water Board leverages BACWA’s efforts to provide their own comment letters.</li> <li>• The BAPPG Pesticides Committee has developed a workplan for outreach on pet pesticides (see <a href="#">January 2025 meeting presentation</a>).</li> <li>• Additions to the <a href="#">BAPPG/BACWA Pesticides Watch List</a> “moderate concern” tier in 2024 included: <ul style="list-style-type: none"> <li>○ Carbendazim, a preservative found in paints and other products</li> <li>○ Quaternary Ammonium Compounds (see CECs, pg. 7).</li> </ul> </li> </ul> <p>In December 2024, EPA released a proposal to use aquatic life benchmarks from the Office of Pesticide Programs in the Clean Water Act program, where they could be used as recommended water quality criteria. If adopted, the Clean Water Act program would have new recommended water quality criteria for more than 750 pesticides. Comments on the proposal are due February 26th, 2025.</p>	<ul style="list-style-type: none"> <li>• <b>BACWA members are encouraged to conduct public and veterinary office outreach using flea and tick outreach toolkits.</b> Baywise.org has flea and tick control messaging for <a href="#">pet owners</a> and <a href="#">veterinarians</a>. In addition, the BACWA website offers member agencies <a href="#">toolkits</a> for conducting outreach to pet owners and veterinary offices.</li> <li>• Advocate for implementation of specific actions from the CalDPR Sustainable Pesticide Management Roadmap.</li> <li>• Continue to comment on EPA pesticide re-registrations and CalDPR actions.</li> <li>• Engage with EPA on proposed changes to the regulatory approval process for pesticides.</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 CASQA, to collaborate on funding pesticide regulatory outreach.</li> </ul>	<p><a href="#">BACWA Pesticide Regulatory Support Page</a></p> <p><a href="#">Toolkits for Member Outreach on Flea and Tick Pest Control</a></p> <p><a href="#">Baywise flea and tick pages</a></p> <p><a href="#">CalDPR Sustainable Pest Management Roadmap</a></p> <p><a href="#">BAPPG/BACWA Pesticides Watch List (2024)</a></p> <p><a href="#">EPA Proposal: Common Effects Approach for Aquatic Life Protective Values for Pesticides</a></p> <p><a href="#">January 2025 Presentation from S. Hughes to BAPPG on Pesticides</a></p>

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<b>MERCURY AND PCBs</b>			
<ul style="list-style-type: none"> <li>• The Mercury &amp; PCBs Watershed Permit is based on Total Maximum Daily Loads (TMDLs) for San Francisco Bay for each of these pollutants.</li> <li>• The Mercury &amp; PCBs Watershed Permit was most recently reissued in December 2022, and it continues to require discharger support for risk reduction activities. BACWA is funding risk reduction activities on behalf of its members to comply with this permit provision. For FY25, BACWA has budgeted \$12,500 to support risk reduction activities related to fish consumption.</li> <li>• Aggregate mercury and PCBs loads have been well below waste load allocations through 2023, the last year for which data have been compiled.</li> <li>• EPA Method 1668C for measuring PCB Congeners has not been promulgated by EPA. Effluent limitations are based on PCB Aroclors quantified using EPA Methods 625.1 or 608.3.</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 in 2020.</li> </ul>	<ul style="list-style-type: none"> <li>• The Regional Water Board plans to designate three new beneficial uses for Bay Area water bodies: Tribal Tradition and Culture (CUL), Tribal Subsistence Fishing (T-SUB) and Subsistence Fishing (SUB). Water bodies with these beneficial uses could also be assigned lower mercury objectives.</li> <li>• The Triennial Review determines the prioritization of <a href="#">Basin Plan</a> amendments, including designation of new beneficial uses. The February 2025 revised draft <a href="#">Triennial Review staff report</a> identified this effort as a high priority.</li> <li>• BACWA intends to support risk reduction activities related to the new subsistence fishing beneficial use. In 2024, SFEI worked with stakeholders to develop a <a href="#">fish consumption survey for subsistence fishers</a>. BACWA is funding a small pilot project in 2025 related to this fish consumption survey.</li> <li>• Recent consolidations among contract laboratory providers of PCB analysis via EPA Method 1668C has led to difficulties with electronic reporting. BACWA prepared a <a href="#">guidance document</a> to assist members with reporting, which Water Board staff endorsed.</li> <li>• In late 2024, EPA proposed a <a href="#">Methods Update Rule</a> that would withdraw the existing analytical methods for Aroclors (PCB mixtures). The Mercury &amp; PCBs permit uses Aroclors for compliance monitoring. However, even if the proposed rule is finalized, there will be no change to monitoring until the Permit is reissued (2027 or beyond).</li> </ul>	<ul style="list-style-type: none"> <li>• Work with members and contract laboratories to implement new guidance on sampling and reporting for PCB congeners analyzed via EPA Method 1668C.</li> <li>• Work with Regional Water Board staff to understand the potential impact of a withdrawal of the EPA analytical method for PCBs Aroclors.</li> <li>• Providing funding for one or more community-based organizations to test the <a href="#">fish consumption survey for subsistence fishers</a>. This effort will inform a future large-scale survey effort.</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>• Continue to track the outcome of the <a href="#">2024 Triennial Review of the Basin Plan</a>. It is currently scheduled to be considered for adoption in May 2025.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">2022 Mercury &amp; PCBs Watershed Permit</a> (Effective Feb. 1, 2023)</li> <li><a href="#">BACWA Risk Reduction Materials</a></li> <li><a href="#">Mercury and PCB Load Trends 2013- 2023</a> Updated June 2024</li> <li><a href="#">2024 Triennial Review of the Basin Plan</a></li> <li><a href="#">Planning for Fish Consumption Survey of Subsistence Fishers</a></li> <li><a href="#">BACWA Guidance on PCB Congeners Sampling, Analysis, and Reporting Protocols</a> (October 2024)</li> <li><a href="#">EPA Methods Update Rules</a></li> </ul>

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<b>STATE WATER BOARD TOXICITY PROVISIONS</b>			
<ul style="list-style-type: none"> <li>The State Water Board adopted the Statewide Toxicity Provisions in 2021 as state policy for water quality control for all inland surface waters and estuaries. 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;</li> <li>Numeric limits for chronic toxicity for POTWs &gt;5 MGD and with a pretreatment program; smaller POTWs will 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 Ceriodaphnia dubia as most sensitive species, numeric targets rather than limits were initially in effect until completion of a statewide quality assurance study in December 2023.</li> </ul> </li> <li>EPA approved the Statewide Toxicity Provisions in May 2023, and they became effective in June 2023. Individual NPDES permits reissued in the San Francisco Bay Region are implementing the Toxicity Provisions and requiring use of the TST for chronic toxicity testing. Reissued permits no longer require acute toxicity monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>EPA has not yet approved the Alternate Test Procedure for whole effluent toxicity testing. Until the Alternate Test Procedures are approved, the Regional Water Board has advised that dischargers should use the full five-concentration series for all tests, including routine monitoring and Species Sensitivity Screening Studies.</li> <li>From 2016 to 2023, agencies 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 are now required by the provisions to do sensitive species screening once every 15 years.</li> <li>The State Water Board collaborated with stakeholders on a special study to improve the quality of Ceriodaphnia dubia testing. Upon completion of the study, the State Water Board compiled <a href="#">resources</a> related to the study for dischargers that plan to use Ceriodaphnia dubia for chronic toxicity monitoring.</li> <li>In November 2024, the State Water Board received a report from staff on implementation of the provisions. The <a href="#">report</a> stressed the importance of laboratories being ready to complete 3 chronic toxicity tests within a calendar month, as required when there is a “fail” result.</li> <li>In February 2025, the BACWA Permits Committee provided <a href="#">member training</a> on using the TST to interpret test results.</li> </ul>	<ul style="list-style-type: none"> <li><b>Conduct toxicity testing using the Statewide Toxicity Provisions.</b> All member agencies with individual NPDES permits reissued after August 2022 have transitioned to the new toxicity testing requirements.</li> <li><b>Plan to conduct a species sensitivity screening</b> to comply with the Toxicity Provisions, which require a study no more than 10 years old be used to determine a “Tier I” species for use in compliance monitoring. The BACWA laboratory committee has compiled some tips related to sensitivity screening studies for member agencies’ use.</li> <li>Members hiring a contract laboratory to perform testing using Ceriodaphnia dubia should utilize the <a href="#">Ceriodaphnia dubia Quality Assurance Guidance Recommendations</a> from the multi-laboratory study, including the performance metrics listed in Appendix E of the report.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">State Water Board Toxicity Page</a></li> <li><a href="#">EPA Approval of Statewide Toxicity Provisions</a></li> <li><a href="#">Ceriodaphnia dubia Study Resources</a>, including link to Quality Assurance Guidance Recommendations</li> <li><a href="#">CASA Webinar on Lessons from Ceriodaphnia Study</a></li> <li><a href="#">Lab Committee Tips on Sensitive Species Screening</a></li> <li><a href="#">State Water Board November 2024 Status Report on Implementation of Toxicity Provisions</a></li> <li><a href="#">February 2025 Permits Committee Training on Using the Test of Significant Toxicity (McCampbell Analytical)</a></li> </ul>

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<b>CONTAMINANTS OF EMERGING CONCERN (CECS)</b>			
<ul style="list-style-type: none"> <li>Pharmaceuticals and other trace contaminants of emerging concern (CECs) are ubiquitous in wastewater at low concentrations and have unknown effects on aquatic organisms.</li> <li>The San Francisco Bay region has a CECs strategy focusing on monitoring/tracking concentrations of constituents with high occurrence and high potential toxicity. The State Water Board’s Pretreatment and CECs Unit is also developing a similar monitoring strategy for use around the state.</li> <li>The Regional Water Board has stated that wastewater agencies’ 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 support facility selection for these studies.</li> </ul>	<ul style="list-style-type: none"> <li>Bay dischargers are continuing to provide supplemental funding for RMP CECs studies through the NPDES Permit Amendment adopted in 2021 by the Regional Water Board (<a href="#">R2-2021-0028</a>).</li> <li>The State Water Board has recently increased its focus on CECs. In April 2023, a State Water Board Science Advisory Panel released a report identifying risk-based and occurrence-based monitoring strategies in aquatic ecosystems. Similar approaches are already in use in the Bay Area by the RMP.</li> <li>In the Bay Area, the RMP has designated organophosphate esters (OPEs) and PFAS as CECs of “high” concern.</li> <li>CECs of “moderate” concern include alkylphenols and alkylphenol ethoxylates, bisphenols, fipronil and its degradates, imidacloprid, and microplastics. Carbendazim, a preservative used in paints and other products, was added to the “moderate” concern tier in 2024.</li> <li>Quaternary Ammonium Compounds (QACs) are one of several classes of chemicals categorized as a “potential concern” due to lack of data. Monitoring studies of Bay water and stormwater are planned in coming years. A report on QACs in wastewater was published by SFEI in 2024.</li> <li>In Fall 2024, both the RMP Annual Meeting and the RMP’s annual publication, The Pulse of the Bay, focused on CECs in San Francisco Bay.</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. For 2025, the Emerging Contaminants Workgroup plans to support studies of plastic additives in Bay water and sediment (OPEs, bisphenols, and other plastic additives); QACs in Bay water and sediment; synthetic dyes in Bay sediment, water, wastewater, and stormwater; and several other stormwater-related studies.</li> <li>Work with RMP staff to assist with study design for any new studies of CECs in wastewater. In 2024, BACWA updated the <a href="#">white paper</a> on POTW participation in CECs studies. It now includes a summary of recent CECs studies, in addition to updated statistical information about POTWs to assist with future CECs study design.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">RMP Emerging Contaminant Workgroup</a></li> <li><a href="#">BACWA CECs White Paper (2024 version)</a></li> <li><a href="#">2021 NPDES Permit Amendment for Monitoring and Reporting</a></li> <li><a href="#">State Water Board CECs webpage</a></li> <li><a href="#">SFEI Report on QACs in Wastewater</a></li> <li><a href="#">The Pulse of the Bay 2024 – Contaminants of Emerging Concern</a></li> <li><a href="#">RMP 2024 Annual Meeting Materials</a></li> <li><a href="#">RMP Report: Contaminants of Emerging Concern in San Francisco Bay – A Strategy for Future Investigations (2024 version)</a></li> </ul>

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<b>MICROPLASTICS</b>			
<ul style="list-style-type: none"> <li>• Microplastic pollution is an 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> <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>• Ongoing microplastics investigations by the RMP are focused on tire particles in stormwater.</li> </ul>	<ul style="list-style-type: none"> <li>• OPC funded a study of microplastic removal through wastewater treatment processes. The study commenced in 2021 with a pilot study involving BACWA member agency participation. Full-scale sampling and analysis of influent, effluent, and biosolids was completed in 2023, and three BACWA members participated. The study was completed in August 2024 and found overall removal efficiencies between influent and effluent averaged 95% 99%, and 99.9% for primary, secondary, and tertiary treatment, respectively.</li> <li>• The 2024 California Integrated Report (303(d) List) was adopted by the State Water Board, and the majority of the report was approved by EPA in 2024. The Integrated Report notes that San Francisco Bay is “potentially threatened” by microplastics. Due to data limitations, the Bay was <u>not</u> listed as an impaired water body during this listing cycle.</li> <li>• Unlike the 2024 Integrated Report, the 2026 Draft California Integrated Report (303(d) List) did not include an assessment of impairment due to microplastics.</li> <li>• Additional research to improve scientific understanding of microplastics in aquatic ecosystems will be needed to support a future impairment determination for the Bay. The Water Boards and OPC are supporting allocation of funding towards these research efforts.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to participate in the RMP Microplastics Workgroup.</li> <li>• Review and share the results of CASA-funded work being completed at the Southern California Coastal Water Research Project (SCCWRP) that is an add-on component to the recently completed OPC microplastics study. The add-on study will assess how well autosampling equipment, typically used by POTWs to collect wastewater samples for monitoring and compliance purposes, may provide representative samples for microplastics.</li> <li>• Continue tracking State Water Board and Ocean Protection Council actions via the CASA Microplastics Workgroup.</li> </ul>	<p><a href="#">BACWA Microplastics Fact Sheet</a></p> <p><a href="#">RMP Microplastics Workgroup</a></p> <p><a href="#">Ocean Protection Council Microplastics Strategy</a></p> <p><a href="#">SCCWRP Report on Microplastics in California Wastewater Treatment Plants (2024)</a></p> <p><a href="#">2024 California Integrated Report / 303(d) List</a></p> <p><a href="#">2026 Draft California Integrated Report / 303(d) List</a></p>



Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)</b>			
<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 are 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. PFAS in consumer products are a major source of PFAS to POTWs.</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 through food, especially fish.</li> <li>In 2020, the State Water Board issued an investigative order for POTWs. At that time, BACWA obtained approval to fund and conduct a Regional PFAS Study in lieu of the investigative order.</li> <li>In 2021, EPA released a <a href="#">PFAS Strategic Roadmap</a>.</li> </ul>	<ul style="list-style-type: none"> <li>In 2024, EPA finalized Maximum Contaminant Levels for several PFAS compounds in drinking water. California has not yet adopted the EPA's drinking water limits, although this issue is a <a href="#">2025 priority of the Division of Drinking Water</a>. Drinking water limits will not be applicable to wastewater discharges to the Bay, but they could be used in NPDES permits for inland dischargers.</li> <li>In December 2025, EPA released draft national recommended human health water quality criteria for PFOS, PFOA, and perfluorobutanesulfonic acid (PFBS). If finalized, local regulators could apply these criteria to San Francisco Bay and other inland water bodies for use in NPDES permitting. The draft criteria for PFOS and PFOA are several orders of magnitude lower than measured concentrations in wastewater effluent, measured concentrations in San Francisco Bay, and method detection limits.</li> <li>In January 2025, a new EPA administrator was appointed, and EPA has already announced modifications to some portions of the PFAS Strategic Roadmap. The status of previous EPA efforts on source control is now uncertain.</li> <li>For example, EPA had previously planned to develop pretreatment standards for industrial users (Metal Finishing, Organic Chemicals, Plastics and Synthetic Fibers, and landfills) and to conduct a nationwide POTW Influent PFAS Study to collect nationwide data on industrial and domestic sources of PFAS.</li> </ul>	<ul style="list-style-type: none"> <li>BAPPG is developing materials for a public outreach campaign and website content related to PFAS. Materials will be shared with members prior to the April 2025 outreach campaign. BACWA will host a forum to strategize PFAS messaging to regulators pertaining to practical PFAS management.</li> <li><b>Members should use Clean Water Act methods (EPA Method 1633 or 1621) for monitoring effluent, biosolids, or industrial wastewater.</b></li> <li>Develop a sampling plan for the next phase of BACWA's regional PFAS study to support the "PFAS Sources to Solutions" project being led by SFEI and the California Department of Toxic Substances Control. In FY26, BACWA plans to sponsor additional wastewater sampling focusing on sewershed sources of PFAS.</li> <li>Review EPA's January 2025 draft risk assessment for PFOA and PFOS in biosolids (see Biosolids page).</li> <li><b>Member agencies are encouraged to support legislative efforts to limit the use of PFAS in consumer products.</b> <a href="#">SB 682 (Allen)</a>, recently introduced for the 2025 California legislative session, would "phase out the sale of products with avoidable PFAS use."</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">BACWA PFAS Study Summary</a></li> <li><a href="#">State Water Board PFAS Resources</a></li> <li><a href="#">EPA PFAS Resources</a></li> <li><a href="#">EPA Drinking Water Limits</a></li> <li><a href="#">EPA POTW Influent Study</a></li> <li><a href="#">EPA NPDES Permitting Guidance (Dec. 2022)</a></li> <li><a href="#">Presentation on BACWA's Regional PFAS Study at RMP 2023 Annual Meeting</a></li> <li><a href="#">UC Irvine Report on PFAS in Residential Wastewater</a></li> <li><a href="#">"PFAS Sources to Solutions" Project Overview</a></li> <li><a href="#">Senate Bill 682 (Allen) – Environmental health: Product Safety: PFAS</a></li> </ul>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>SANITARY SEWER SYSTEMS GENERAL ORDER</b>			
<ul style="list-style-type: none"> <li>• In 2022, the State Water Board reissued the statewide Sanitary Sewer Systems General Order (SSS-WDR). The reissued order replaced the 2006 Order and the 2013 Monitoring and Reporting Program.</li> <li>• The 2022 SSS-WDR became effective in June 2023 and contains numerous new and modified requirements, such as: <ul style="list-style-type: none"> <li>○ A prohibition on discharges to groundwater</li> <li>○ Reduced spill reporting requirements for small spills (spills from laterals or &lt;50 gallons)</li> <li>○ New spill monitoring requirements such as photo documentation and faster water quality sampling</li> <li>○ New requirements for preparation of Sewer System Management Plans (SSMPs), including a focus on system resiliency, prioritizing corrective actions, and coordinating with stormwater agencies</li> <li>○ Modified annual reporting requirements</li> <li>○ New mapping requirements</li> <li>○ Modified timelines for preparation of audits and SSMPs.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The first annual reports under the reissued SSS-WDR were due April 1, 2024.</li> <li>• Due dates for the first audits and SSMPs under the reissued SSS-WDR vary by agency. Audit due dates begin later in 2024, and SSMP due dates begin in 2025. The State Water Board has prepared an <a href="#">online tool</a> to assist agencies in determining compliance dates.</li> <li>• Maintaining an updated SSMP continues to be a core requirement of the SSS-WDR. SSMP updates are now required every six years (instead of five) and must contain the 11 updated elements described in the reissued SSS-WDR. BACWA has assisted members by preparing a <a href="#">Guide for Developing and Updating SSMPs</a>, now available through the BACWA and State Water Board websites.</li> <li>• In May 2024, BACWA completed a member survey of sewer lateral ordinances in the region. Agencies are using sewer lateral replacement ordinances and incentive programs to address ongoing concerns about infiltration and inflow (I&amp;I).</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to use the Collections System Committee as a forum for discussing best practices for completing audits and SSMPs.</li> <li>• Continue to coordinate with CASA and CWEA on training opportunities for members to address compliance with new requirements in the 2022 SSS-WDR. The Summit Partners are tentatively planning to host the next virtual workshop on SSS-WDR compliance in Spring 2025.</li> </ul>	<p><a href="#">State Water Board SSS-WDR page</a></p> <p><a href="#">Reissued SSS-WDR (General Order 2022-0103-DWQ)</a>, Effective June 5, 2023</p> <p><a href="#">Materials from Clean Water Summit Partners Webinars on Reissued SSS-WDR</a></p> <p><a href="#">SSMP and Audit Due Dates Lookup Tool from State Water Board</a></p> <p><a href="#">Guide for Developing and Updating Sewer System Management Plans (2024)</a></p> <p><a href="#">BACWA Private Sewer Lateral Survey Results (2024)</a></p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>LABORATORY ACCREDITATION</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 replaced the previous state-specific accreditation standards with a national laboratory standard established by The NELAC Institute (TNI).</li> <li>• Compliance with TNI standards was required beginning <b>January 1, 2024</b>.</li> <li>• The TNI standards pose a particular challenge to small laboratories, many of which have closed because they cannot economically meet the new standards. This reduction has contributed to significant ELAP fee increases for the remaining laboratories.</li> <li>• From 2021 to 2024, the BACWA Lab Committee hosted 30 virtual sessions on the TNI standards. Diane Lawver of Quality Assurance Solutions, LLC, provided the training. The training sessions were recorded, and are available to download with a password (available upon request).</li> </ul>	<ul style="list-style-type: none"> <li>• The TNI standards apply to every ELAP-certified laboratory, regardless of certificate expiration date and regardless of location. Some laboratories have not yet been assessed to the TNI standard. Starting January 1, 2024, ELAP will be sending laboratories a written request asking for information about assessment plans and requesting a TNI-compliant Quality Assurance manual.</li> <li>• For FY25, ELAP restructured its fees to increase fees for large laboratories with more than 500 fields of accreditation. Smaller laboratories had no fee increase. In March 2025, the State Water Board will begin stakeholder outreach related to FY26 ELAP fees.</li> <li>• ELAP is now implementing EPA’s 2021 Method Update Rule, and advised labs to update any outdated methods by February 2024.</li> <li>• In April 2024, EPA finalized a routine Methods Update Rule. The BACWA Laboratory Committee has provided member training on changes to Standard Methods affected by this Methods Update Rule, and will provide additional training later in 2025. This Methods Update Rule will be implemented by ELAP at a later date.</li> <li>• In December 2024, EPA proposed a Methods Update Rule to promulgate EPA Method 1633A for 40 PFAS compounds, EPA Method 1621 for adsorbable organic fluorine, and Method 1628 for 209 PCB Congeners. The action also proposes to withdraw the existing methods for PCB Aroclors.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to provide member training on the Methods Update Rule finalized in April 2024.</li> <li>• Review the EPA’s December 2024 proposed Methods Update Rule to help members understand its potential impact on monitoring for PCBs and PFAS.</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> </ul>	<p><a href="#">State Water Board’s ELAP regulations page</a>, including links to timeline and relocation guidance tools</p> <p><a href="#">ELAP Implementation of 2021 Method Update Rule</a></p> <p><a href="#">EPA Methods Update Rules</a></p> <p><a href="#">ELAP Fees – Stakeholder Meeting Information</a></p> <p><a href="#">Materials from BACWA TNI Training Sessions 2021-2024</a> - request password from BACWA staff</p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>BIOSOLIDS</b>			
<ul style="list-style-type: none"> <li>Regulatory drivers are leading to the phase-out of biosolids used as alternative daily cover (ADC) or disposed in landfills. SB 1383, requiring reductions in the amount of organic material deposited in landfills, went into effect in 2022. CalRecycle is the state agency responsible for implementation.</li> <li>Local enforcement of SB 1383 began in 2024, and compliance was required by January 1, 2025. Requirements include: <ul style="list-style-type: none"> <li>Diverted biosolids must be anaerobically digested and/or composted to qualify as landfill reduction.</li> <li>CalRecycle is accepting applications to qualify other specific treatment technologies as landfill reduction (per Article 2 of SB 1383).</li> <li>Local ordinances restricting land application are disallowed.</li> </ul> </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>Jurisdictions that divert organic waste must also procure the end products of diversion, such as biogas, biomethane, and compost (but not biosolids). Procurement rules are being phased in over three years (2023 to 2025) and there are interim rules regarding procurement of biogas from POTWs.</li> <li>CalRecycle and biosolids stakeholders are continuing to conduct outreach to counties with ordinances that restrict land application of biosolids.</li> <li>CalRecycle reviews technologies that may be equivalent to landfill diversion/reduction per Article 2 of SB 1383. CalRecycle has also provided clarification on technologies that already comply with SB 1383, and need not apply under Article 2 (e.g., land application of biosolids that have not been anaerobically digested).</li> <li>In 2024, BACWA prepared an updated <a href="#">Biosolids Trends Survey Report</a> for calendar years 2021-2023.</li> <li>In early 2025, USEPA released a draft risk assessment for PFOA and PFOS in biosolids. The draft risk assessment estimates human health risks arising from biosolids land application and surface disposal. The assessment considers risks via surface water, ground water, fish consumption, and milk consumption pathways, among others. If EPA determines that regulation of biosolids disposal is needed to reduce risk, this will occur in a future phase.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to review the draft risk assessment for PFOA and PFOS in biosolids, and consider submitting comments.</li> <li><b>If requested, respond to EPA's Influent Study of POTWs</b>, which will also function as a nationwide sewage sludge survey. Facilities larger than 10 MGD may be required to participate in the survey and conduct sampling. EPA had planned to conduct the survey in 2025, but the current status is uncertain due to the change in EPA administration.</li> <li>Continue to follow emerging science and regulatory developments regarding PFAS in biosolids, particularly related to EPA's draft risk assessment and CERCLA hazardous waste designations for PFOA and PFOS.</li> <li>Engage through CASA and BABC to follow new legislation affecting biosolids processing and disposal.</li> <li>Actively work through CASA with State agencies to develop sustainable long-term options for biosolids beneficial use.</li> <li>Meet with Air District staff regularly to discuss alignment of state and local regulations that affect biosolids treatment and end uses.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">BACWA Biosolids Trends Surveys</a></li> <li><a href="#">Bay Area Biosolids Coalition</a></li> <li><a href="#">CASA White Paper on SB 1383 Implementation</a></li> <li><a href="#">CalRecycle - Short-Lived Climate Pollutant Reduction Strategy</a></li> <li><a href="#">CalRecycle Procurement FAQ</a> (Updated by AB 1985)</li> <li><a href="#">SB1383 Article 2 Determination</a></li> <li><a href="#">EPA National Sewage Sludge Survey</a></li> </ul>

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 strategic priorities of both the State Water Board and Regional Water Board.</li> <li>In 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, the Bay Area Climate Adaptation Network (BayCAN), and other venues. BACWA has signed a letter of support for the Bay Adapt Joint Platform.</li> <li>In 2022, the State released a Climate Adaptation Strategy, including an updated climate change assessment for the Bay Area region.</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>Shallow groundwater response to SLR is a concern in low-lying Bay Area communities. Information about current and future depth-to-groundwater maps is summarized in a <a href="#">January 2023 report</a> now available from Pathways Climate Institute and SFEI.</li> </ul>	<ul style="list-style-type: none"> <li>In June 2024, the Regional Water Board adopted a <a href="#">Climate Change Basin Plan amendment</a> addressing dredge and fill procedures near the region’s shorelines, especially for climate adaptation projects. The amendment is awaiting Office of Administrative Law approval.</li> <li>In 2024, the Ocean Protection Council (OPC) adopted updated SLR guidance. Compared to the 2018 version, projections for extreme SLR (i.e., H++ scenario) were removed, and the range of projections has narrowed considerably, especially for 2050.</li> <li>In December 2024, the Bay Conservation and Development Commission (BCDC) adopted Sea Level Rise planning guidelines for the Bay Area as part of the Regional Shoreline Adaptation Plan. To comply with SB 272, the Plan requires cities and counties to develop subregional sea level rise adaptation plans by 2034.</li> <li>In late 2024, the California Coastal Commission updated its <a href="#">sea level rise policy guidance</a> to conform to OPC’s new guidance. The guidance document also contains specific recommendations related to wastewater infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Understand and begin planning to participate in the development of Subregional Shoreline Adaptation Plans. These adaptation plans are required for cities and counties per BCDC’s 2024 <a href="#">Regional Shoreline Adaptation Plan</a>; special districts should also participate in their development. Plans are due by 2034.</li> <li><b>Begin using the OPC’s updated Sea Level Rise Guidance.</b> Updates to the Coastal Commission’s “Critical Infrastructure at Risk” SLR planning guidance are expected to follow.</li> <li>Continue to develop webinars on technical topics related to climate change, such as sea level rise projections and changes in precipitation. The BACWA Climate Change Community of Practice will provide a forum to discuss these topics.</li> <li>Work with Regional Water Board staff to update and revisit the <a href="#">Climate Change Information Request</a> first sent to NPDES permittees in 2021.</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><a href="#">Regional Water Board Basin Plan Amendment on Climate Change and Aquatic Habitat</a></p> <p><a href="#">SFEI Report on Shallow Groundwater Response (2023)</a></p> <p><a href="#">OPC 2024 Sea Level Rise Guidance</a></p> <p><a href="#">California Coastal Commission Sea Level Rise Policy Guidance Update (Nov. 2024)</a></p> <p><a href="#">California Coastal Commission’s Critical Infrastructure at Risk (2021)</a></p> <p><a href="#">BayCAN Funding Tracker</a></p> <p><a href="#">BCDC’s Regional Shoreline Adaptation Plan (2024)</a></p> <p><a href="#">Bay Adapt Joint Platform</a> including information about the Regional Shoreline Adaptation Plan</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>The California Air Resources Board’s (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. The latest Scoping Plan was updated in 2022 targeting carbon neutrality by 2045, including policies addressing: <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>CalRecycle is implementing SB 1383 (Short-Lived Climate Pollutant Reduction) to reduce methane emissions. SB 1383 requires diversion of organic waste from landfills, and re-routing organics from landfills to digesters at POTWs is one way to accomplish this.</li> <li>The Bay Area Air District (Air District, formerly known as the Bay Area Air Quality Management District) developed a <a href="#">Clean Air Plan</a> that outlines local strategies to address climate pollutants.</li> <li>The Air District proposed the development of Regulation 13 (climate pollutants) targeting methane and nitrous oxide reductions related to organics diversion and management. After a pause of several years, the Air District began revisiting Regulation 13 in 2024.</li> </ul>	<ul style="list-style-type: none"> <li>CARB has pursued rapid fleet conversion to zero-emission vehicles (ZEVs), including medium and heavy-duty vehicles, through the Advanced Clean Fleet rule.</li> <li>In 2024, CARB re-opened the Advanced Clean Fleet regulations to incorporate requirements of AB 1594 by expanding ZEV purchase and daily usage exemptions for public agency utilities. Rulemaking is expected to be complete by early 2025.</li> <li>In January 2025, <a href="#">CARB withdrew its waiver requests to EPA</a> for key portions of the Advanced Clean Fleet rule. CARB plans to continue to enforce the State and Local Government Agency Fleets portion of the regulation, pointing to a <a href="#">9th Circuit federal court decision</a> from 2007 as the basis of their legal authority.</li> <li>In early 2025, CARB released a streamlined <a href="#">ZEV purchase exemption list</a> identifying vehicles that are not currently available as ZEVs, so no exemption request would be required.</li> <li>In addition to pushing for ZEVs, CARB is revising the Low Carbon Fuel Standard to emphasize hydrogen rather than biomethane as a transportation fuel. CARB adopted amendments to the Low Carbon Fuel Standard in November 2024, and they are awaiting review by the Office of Administrative Law.</li> <li>In fall 2024, as a first step in revisiting Regulation 13, Air District staff are developing a white paper on anaerobic digesters and potentially associated emissions.</li> </ul>	<ul style="list-style-type: none"> <li>Support the Air District’s development of a white paper on anaerobic digestion by providing applicable information on digestion and associated energy generation infrastructure.</li> <li>Continue to track implementation of the Advanced Clean Fleet rule. This includes modifications to the rule that will exempt some traditional utility-specialized vehicles used by public agency utilities, per AB 1594. CARB plans to release draft regulatory revisions addressing AB1594 later in 2025. Although CARB plans to enforce the State and Local Government Agency Fleets portion of the regulation, regulatory uncertainty for other portions of the rule could impact ZEV availability.</li> <li>Work with PG&amp;E and the Air District to explore options for POTWs to inject biogas into PG&amp;E pipelines under the utility’s state-mandated biomethane procurement program.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">CARB Climate Change Scoping Plan</a></li> <li><a href="#">CARB Low Carbon Fuel Standard Rulemaking</a> (Updated Jan. 2025)</li> <li><a href="#">CARB Advanced Clean Fleet Rule</a> (Updated Jan. 2025)</li> <li><a href="#">CARB’s ZEV Purchase Exemption List</a></li> <li><a href="#">CARB AB 1594 Information</a></li> <li><a href="#">CalRecycle and SB 1383</a></li> <li><a href="#">Bay Area Clean Air Plan</a></li> <li><a href="#">Bay Area Air District’s Regulation 13 for Climate Pollutants</a></li> <li><a href="#">EPA Renewable Fuel Standards</a></li> <li><a href="#">PG&amp;E Procurement</a></li> </ul>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>TOXIC AIR CONTAMINANTS</b>			
<ul style="list-style-type: none"> <li>● Regulation 11, Rule 18 (Rule 11-18), adopted in 2017, is the Air District’s local effort to protect public health from toxic air pollution from existing facilities, including POTWs.</li> <li>● Per the Rule, the Air District will conduct site-specific Health Risk Screening Analyses and determine each facility’s prioritization score (PS). Health Risk Assessments (HRAs) will be conducted for all facilities with a cancer PS&gt;10 or non-cancer PS&gt;1. Facilities verified to be above the threshold will have 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;1,700.</li> </ul>	<ul style="list-style-type: none"> <li>● In April 2024, the Air District finalized updated Implementation Procedures for Rule 11-18 describing how the Air District will conduct HRAs. It also establishes rules for vendors or contractors to conduct HRAs, if allowed by the Air District. The Air District plans to update the regulation again in 2025.</li> <li>● To comply with provisions of AB 617 and AB 2588, the wastewater sector has until 2028 to perform a Pooled Emissions Study to update outdated default emission factors for toxic air contaminants. CASA is directing the Pooled Emissions Study with consultant support from Yorke Engineering. 27 BACWA member agencies are participating in the study by providing financial contributions. In FY25, BACWA collected approximately \$500,000 from participating BACWA member agencies to fund the effort. In early 2025, the project team is meeting with CARB and staff from Air Districts across the State to discuss concepts for sampling locations, analytes, and analytical methods. Regulator approval of the study plan is required before sampling can begin.</li> <li>● Since 2022, Air District staff and BACWA representatives have been meeting about 3-4 times per year to address concerns related to toxic air contaminants and associated rule-making. Workgroup materials are available on the <a href="#">AIR Committee website</a>.</li> <li>● CARB maintains a <a href="#">list of approved independent contractors</a> for source testing. Using the list may be helpful, but is not required.</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Review and understand the updated Rule 11-18 Implementation Procedures.</b> For most POTWs with a relatively low prioritization score, the HRAs will not occur right away. These POTWs will likely be able to use updated emissions factors from the statewide pooled emissions study, as described below. Review and provide comment on proposed rule changes expected later in 2025.</li> <li>● <b>Report “business as usual” for air toxics through 2028 (through year 2027 data).</b> The wastewater sector has until 2028 to perform the statewide Pooled Emissions Study.</li> <li>● Continue participating in the BACWA-Air District workgroup to discuss toxic air contaminants, rule development, and related air quality regulatory issues.</li> </ul>	<p><a href="#">Bay Area Air District Facility Risk Reduction Program Updates (Rule 11-18)</a></p> <p><a href="#">Bay Area Air District New Source Review of Toxic Air Contaminants (Rule 2-5)</a></p> <p><a href="#">CARB page on AB 617 and AB 2588</a> and <a href="#">Final Statement of Reasons</a></p> <p><a href="#">CASA Handout on Pooled Emissions Study</a></p> <p><a href="#">CARB List of Approved Independent Contractors for Test Methods</a></p> <p><a href="#">Timing of Rule 11-18 vs. Process for AB 617</a></p> <p><a href="#">July 2024 BACWA Update to Air District Stationary Source Committee</a></p> <p><a href="#">BACWA AIR Committee website</a></p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<b>BEST AVAILABLE CONTROL TECHNOLOGY</b>			
<ul style="list-style-type: none"> <li>• Best Available Control Technology (BACT) is a requirement for major new or modified sources of air pollution.</li> <li>• BACT is defined locally as part of the Air District’s Rule 2-2, “New Source Review.” BACT is established based on the most stringent level of emissions control that is achieved in practice and that is technologically feasible &amp; cost effective.</li> <li>• CARB is working on proposed amendments to the off-road new diesel engine standards, called “Tier 5” rulemaking. The Tier 5 rulemaking aims to reduce oxides of nitrogen (NOx), particulate matter, and may also include first-time carbon dioxide (CO<sub>2</sub>) emissions standards.</li> </ul>	<ul style="list-style-type: none"> <li>• In December 2020, the Air District issued a BACT determination for Tier 4 emissions standards for large standby generators (≥ 1,000 bhp). The determination applied retroactively to applications deemed complete after January 1, 2020. The retroactive BACT designation resulted in cost increases and schedule delays for standby generator installations at some BACWA member agencies.</li> <li>• Based on this experience, BACWA has been working with BAAQMD to provide better notice of future BACT determinations.</li> <li>• In October 2024, the Air District issued a BACT determination for Tier 4 emissions standards for standby generators &gt; 50 bhp and &lt; 1,000 bhp. The BACT determination is effective as of December 2, 2024 and is not retroactive. Options to comply with the new standards include: (a) an EPA-certified Tier 4 engine, (b) a Tier 4-compliant engine that is packaged by the engine manufacturer with abatement equipment, or (c) A lower tier engine that has been retrofitted with after-market abatement equipment to meet Tier 4 standards.</li> <li>• In October 2024, CARB proposed amendments to the off-road diesel engine emissions standards (Tier 5 rulemaking). A workshop was also held in October 2024.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Design new or modified standby generators to meet Tier 4 emissions standards.</b></li> <li>• Continue to coordinate with CASA to participate in review and public comment on CARB’s Tier 5 rulemaking.</li> </ul>	<p><a href="#">Air District BACT/TBACT Workbook</a></p> <p>Air District October 2024 Workshop on BACT Determination <a href="#">Slides</a> and <a href="#">Video</a></p> <p><a href="#">CARB Tier 5 Rulemaking</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 Bay Area POTWs is currently recycled. Expansion of recycled water projects is a goal of many BACWA members, but implementation is slowed by high costs and administrative requirements.</li> <li>In 2018, the State Water Board adopted uniform water recycling criteria for two types of Indirect Potable Reuse: surface water augmentation and groundwater augmentation.</li> <li>In December 2023, the State Water Board adopted uniform water recycling criteria for two types of Direct Potable Reuse: raw water augmentation and treated water augmentation.</li> <li>As of 2020, virtually all recycled water in the Bay Area was produced at centralized facilities using municipal wastewater, and was treated to meet standards for non-potable reuse. There are not yet any Indirect or Direct Potable Reuse projects in the Bay Area, although several are in the planning stage.</li> </ul>	<ul style="list-style-type: none"> <li>The State Water Board is currently developing standards for onsite treatment and reuse of non-potable water in multi-family, mixed use, and commercial buildings. The rulemaking process for Onsite Non-Potable Reuse is slated to begin in April 2025; once rulemaking begins, it must be completed within one year.</li> <li>In June 2023, BACWA completed a Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling, as required by the 2<sup>nd</sup> Nutrient Watershed Permit.</li> <li>In December 2023, the Regional Water Board approved a Basin Plan Amendment that will allow greater flexibility for NPDES permitting of reverse osmosis concentrate discharges to San Francisco Bay. As of August 2024, this Basin Plan Amendment has received all necessary approvals and is now in effect.</li> <li>The Direct Potable Reuse regulations were finalized in August 2024 upon approval from the state’s Office of Administrative Law. The regulations go into effect October 1, 2024.</li> </ul>	<ul style="list-style-type: none"> <li>Review draft regulations for Onsite Non-Potable Reuse when they are released by State Water Board staff, which is expected in April 2025.</li> <li>Continue to provide members with technical resources related to interagency coordination, such as cost-sharing agreements and permitting. These topics are based on feedback from the September 2023 workshop on interagency collaboration in which wastewater and water agency representatives convened to discuss challenges and opportunities for expanding water recycling in the Bay Area.</li> <li>Continue to track the role of recycled water projects in diverting nutrient loads from San Francisco Bay. Significant nutrient load reductions and annual reporting on recycled water nutrient load diversions are required by the 2024 Nutrient Watershed Permit (see page 2). In spring 2025, BACWA plans to co-host workshop with WateReuse’s Northern California chapter that will focus on topics related to nutrient removal and recycled water.</li> <li>Track California legislation with potential impacts on recycled water funding, mandates, or regulations.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Water Boards Recycled Water Policy and Regulations</a></li> <li><a href="#">Direct Potable Reuse Regulations</a></li> <li><a href="#">Onsite Nonpotable Reuse Regulations</a></li> <li><a href="#">BACWA Special Studies of Recycled Water and Nature-Based Systems</a></li> <li><a href="#">California’s Water Supply Strategy (August 2022)</a></li> <li><a href="#">Basin Plan Amendment affecting Water Recycling (now also incorporated into the Basin Plan)</a></li> </ul>

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

## ACRONYMS

ADC	Alternate Daily Cover	PCB	Polychlorinated Biphenyl
BACT	Best Available Control Technology	PFAS	Per- and Polyfluoroalkyl Substances
BCDC	Bay Conservation and Development Commission	PFHxS	Perfluorohexane Sulfonic Acid
bhp	brake horsepower	PFNA	Perfluorononanoic 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
CEC	Compound of Emerging Concern	PS	Prioritization Score
CIWQS	California Integrated Water Quality System	QAC	Quaternary Ammonium Compound
CWEA	California Water Environment Association	RMP	Regional Monitoring Program
EC25/IC25	25% Effect Concentration/25% Inhibition Concentration	RPA	Reasonable Potential Analysis
ELAP	Environmental Laboratory Accreditation Program	SF Bay	San Francisco Bay
ELTAC	Environmental Laboratory Technical Advisory Committee	SFEI	San Francisco Estuary Institute
EPA	United States Environmental Protection Agency	SLR	Sea Level Rise
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act	SSMP	Sewer System Management Plan
FY	Fiscal Year	TMDL	Total Maximum Daily Load
GHG	Greenhouse Gas	TIN	Total Inorganic Nitrogen
HFPA-DA	Hexafluoropropylene Oxide (HFPO) Dimer Acid, also known as GenX	TNI	The NELAC Institute
MCL	Minimum Contaminant Level (Drinking Water)	TST	Test of Significant Toxicity
MGD	Million Gallons per Day	WQO	Water Quality Objective
NELAC	National Environmental Laboratory Accreditation Conference	ZEV	Zero-Emission Vehicle
NMS	Nutrient Management Strategy		
OAH	Ocean Acidification and Hypoxia		
OEHHA	Office of Environmental Health Hazard Assessment		
OPC	Ocean Protection Council		