



EAST BAY DISCHARGERS AUTHORITY  
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*A Joint Powers Public Agency*

**ITEM NO. 12**

**REGULATORY AFFAIRS COMMITTEE AGENDA**

**Tuesday, July 16, 2024**

**9:00 A.M.**

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

**This meeting will be teleconferenced from the following location:  
Library Entry Patio, 5630 N Lincoln Avenue, Chicago, IL**

**Teleconference link: <https://us02web.zoom.us/j/83470324644>  
Call-in: 1(669) 900-6833 and enter Webinar ID number: 834 7032 4644**

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

- 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. BACWA Key Regulatory Issues Summary**  
(The Committee will review BACWA's issues summary.)
- RA6. PFAS Updates**  
(The Committee will receive an update on regulatory and legislative action governing PFAS.)
- RA7. Ocean Protection Council Report on Microplastics Removal**  
(The Committee will hear a summary of the recently published report.)
- 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 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.

Agenda Explanation  
East Bay Dischargers Authority  
Regulatory Affairs Committee  
July 16, 2024

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>

<p><b>Next Scheduled Regulatory Affairs Committee Meeting</b> <b>October 15, 2024 at 9:00 a.m.</b></p>
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## ITEM NO. RA5 BACWA KEY REGULATORY ISSUES SUMMARY

### Recommendation

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

### Strategic Plan Linkage

1. **Regulatory Compliance:** Proactively meet or exceed regulatory requirements for protection of the environment and public health.
  - a. Represent EBDA and the Member Agencies' interests by preemptively engaging in development of emerging regulations and permits and advocating for reasonable, science-based decisions.
  - c. Ensure compliance with non-NPDES permits and regulatory requirements, including air quality and hazardous waste.
  - e. Track and share scientific and regulatory developments related to emerging contaminants, and advocate for source control.

### 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 May 3, 2024

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. 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 FY24, BACWA is contributing \$1.8M to fund scientific research needed to make management decisions for the 3<sup>rd</sup> Watershed Permit. This payment completes the science funding requirement in 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.</li> <li>The science team is also 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 brought increased public attention to this topic. A smaller bloom recurred in summer 2023. In both cases, the NMS science team modified the science plan to conduct monitoring and assist with 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 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>	<p>BACWA Nutrients Page: <a href="https://bacwa.org/nutrients/">https://bacwa.org/nutrients/</a></p> <p>NMS FY24 Science Program Plan Materials <a href="https://drive.google.com/drive/folders/16H_sQ8AuogHv- eo9QZx2A9Ph9MTecg5j?usp=drive_link">https://drive.google.com/drive/folders/16H_sQ8AuogHv- eo9QZx2A9Ph9MTecg5j?usp=drive_link</a></p> <p>NMS Work Products <a href="https://sfbaynutrients.sfei.org/boos/reports-and-work-products">https://sfbaynutrients.sfei.org/boos/reports-and-work-products</a></p> <p>BACWA Nutrient Infographic <a href="https://bacwa.org/wp-content/uploads/2024/03/BACWA-Algal-Blooms-Infographic-March-2024.pdf">https://bacwa.org/wp-content/uploads/2024/03/BACWA-Algal-Blooms-Infographic-March-2024.pdf</a></p> <p>2023 SF Bay Algal Bloom <a href="https://bacwa.org/general/2023-algal-bloom-in-sf-bay-updated-8-3-2023/">https://bacwa.org/general/2023-algal-bloom-in-sf-bay-updated-8-3-2023/</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 Total Inorganic Nitrogen (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 were completed in June 2023, as required by the 2<sup>nd</sup> Nutrient Watershed Permit.</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 (Oct. 1 – Sept. 30).</li> <li>• In response to the summer 2022 algae bloom, Regional Water Board staff plan to include significant TIN load reduction requirements in the 3<sup>rd</sup> Watershed Permit. The NMS modeling team tested several load reduction scenarios to inform the new requirements. Based on this modeling, Regional Water Board staff have proposed dry season load limits that are about 40% lower than actual loads from the 2022 dry season.</li> <li>• The Regional Water Board plans to reissue the Nutrient Watershed Permit in June 2024 and has released a Tentative Order (draft permit). The Tentative Order contains interim limits for dry season TIN loads that are effective immediately and “final limits” that become effective after 10 years. The 10-year clock could be modified in subsequent permits if the “final limits” become more stringent, so the term “final” only applies to this specific permitting action.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Prepare written and oral comments on the Tentative Order versions of the forthcoming 3<sup>rd</sup> Nutrient Watershed Permit. Written comments are due May 8, and the adoption hearing is scheduled for June 12, 2024.</b></li> <li>• Continue to advocate for sufficient time for agencies to implement nutrient load reduction projects, including those with involving innovative technologies, recycled water, and nature-based solutions.</li> <li>• BACWA continues to convene a Nutrient Strategy Team to develop BACWA’s key tenets for the 3<sup>rd</sup> Watershed Permit, and <b>members are encouraged to participate</b>. The Nutrient Strategy Team is actively engaging with the Regional Water Board to expand upon the key tenets and discuss implementation details for the 3<sup>rd</sup> Watershed Permit, including the magnitude and timing of required load reductions.</li> <li>• Agencies will continue to report nutrient monitoring data both through CIWQS and directly to BACWA.</li> </ul>	<p>2nd Nutrient Watershed Permit:  <a href="http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2019/R2-2019-0017.pdf">www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2019/R2-2019-0017.pdf</a></p> <p>Special Studies of Recycled Water and Nature-Based Solutions:  <a href="http://bacwa.org/document-category/2nd-watershed-permit-studies/">bacwa.org/document-category/2nd-watershed-permit-studies/</a></p> <p>BACWA Group Nutrient Annual Reports:  <a href="http://bacwa.org/document-category/nutrient-annual-reports/">bacwa.org/document-category/nutrient-annual-reports/</a></p> <p>Presentations from 2023 BACWA Annual Members Meeting  <a href="http://bacwa.org/document-category/2023-annual-meeting/">bacwa.org/document-category/2023-annual-meeting/</a></p> <p>BACWA Concerns related to Compliance Timelines in the 3<sup>rd</sup> Watershed Permit  <a href="http://bacwa.org/document/bacwa-comments-on-nutrient-removal-timelines-2024-01-29/">bacwa.org/document/bacwa-comments-on-nutrient-removal-timelines-2024-01-29/</a></p> <p>Tentative Order for 3<sup>rd</sup> Nutrient Watershed Permit  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_info/agen-das/2024/June/nutrients/Nutrients%20Tentative%20Order-final.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_info/agen-das/2024/June/nutrients/Nutrients%20Tentative%20Order-final.pdf</a></p>

**CHLORINE RESIDUAL COMPLIANCE**

<ul style="list-style-type: none"> <li>• The Basin Plan effluent limit for residual chlorine is 0.0 mg/L. Prior to 2024, residual chlorine was the most frequent parameter for violations for Bay Area 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>• Prior to 2024, agencies were overdosing their effluent with the dechlorination agent, sodium bisulfite, to prevent chlorine violations, a practice which cost the region approximately \$2 million each year.</li> <li>• Regional Water Board staff and BACWA have worked together for more than decade to modify the effluent limit for chlorine residual.</li> </ul>	<ul style="list-style-type: none"> <li>• In November 2023, the Regional Water Board adopted an NPDES Permit Amendment that modifies effluent limits for residual chlorine for most dischargers. The revised limits are based on a translation of the Basin Plan’s existing narrative toxicity objective. The NPDES Permit Amendment includes: <ul style="list-style-type: none"> <li>○ Limits calculated based on a 0.013 mg/L water quality objective in marine and estuarine waters, and incorporating dilution for deep water dischargers. The limits are applied as a 1-hour average.</li> <li>○ A Minimum Level of 0.05 mg/L for online continuous monitoring systems.</li> </ul> </li> <li>• The NPDES Permit Amendment requires most dischargers to prepare a Chlorine Process Control Plan targeting a chlorine residual of 0.0 mg/L at discharge points. The Chlorine Process Control Plan is part of the Operation and Maintenance Manual; updates are to be summarized with annual self-monitoring reports.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Comply with new effluent limits for residual chlorine, new reporting requirements, and new Chlorine Process Control Plan requirements beginning January 1, 2024.</b></li> <li>• BACWA has prepared a guidance document for agencies to use to meet the new chlorine process control requirement.</li> </ul>	<p>Blanket NPDES Permit Amendment, Effective January 1, 2024:  <a href="http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2023/R2-2023-0023.pdf">www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2023/R2-2023-0023.pdf</a></p> <p>BACWA Guidance on Complying with Amended NPDES Permit Requirements for Residual Chlorine  <a href="http://bacwa.org/document/complying-with-amended-npdes-permit-requirements-for-residual-chlorine-2023-12-20/">bacwa.org/document/complying-with-amended-npdes-permit-requirements-for-residual-chlorine-2023-12-20/</a></p>
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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>• EPA reviews all registered pesticides at least once every 15 years. Each review allows opportunity for public comment.</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>• 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 FY24 is \$69k.</li> <li>• The Regional Water Board leverages BACWA's efforts to provide their own comment letters.</li> <li>• The August 2023 version of the BAPPG/BACWA Pesticide Watch List added indoor uses of Quaternary Ammonia Compounds, whose usage has been increasing in recent years.</li> <li>• In January 2023, CalDPR released a Sustainable Pest Management Roadmap. The Roadmap identifies actions that would enhance understanding of pesticide use in urban areas and enhance outreach to urban pesticide users. CalDPR is also pursuing a significant increase to the "Mill Fee," a tax on pesticide sales, to fund some activities identified in the Roadmap. The proposed tax increase was included with the Governor's State Budget Proposal for FY25 and would be applicable to all pesticides, including sodium hypochlorite.</li> <li>• Baywise.org has flea and tick control messaging for pet owners and veterinarians. In addition, the BACWA website offers toolkits for conducting outreach to pet owners and veterinary offices.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>BACWA members can conduct public and veterinary office outreach using the newly available flea and tick outreach toolkits.</b></li> <li>• Advocate for implementation of specific actions from the 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>BACWA Pesticide Regulatory Support Page: <a href="https://bacwa.org/bappg-pesticides/">bacwa.org/bappg-pesticides/</a></p> <p>Flea and Tick Outreach Toolkits: <a href="https://bacwa.org/bappg-pesticides/flea-and-tick-outreach-toolkits/">bacwa.org/bappg-pesticides/flea-and-tick-outreach-toolkits/</a></p> <p>Baywise flea and tick pages: <a href="https://baywise.org/residential/for_your_pets/">baywise.org/residential/for_your_pets/</a></p> <p>CalDPR Sustainable Pest Management Roadmap <a href="https://www.cdpr.ca.gov/docs/sustainable_pest_management_roadmap/">www.cdpr.ca.gov/docs/sustainable_pest_management_roadmap/</a></p> <p>BACWA coalition letter on modernizing the pesticide approval process <a href="https://bacwa.org/document/bacwa-nacwa-coalition-comments-on-fda-epa-pesticide-modernization-2023-04-25/">bacwa.org/document/bacwa-nacwa-coalition-comments-on-fda-epa-pesticide-modernization-2023-04-25/</a></p> <p>BAPPG/BACWA Pesticides Watch List <a href="https://bacwa.org/wp-content/uploads/2023/08/FINAL-BACWA-Pesticides-Watch-List-Aug-2023.pdf">bacwa.org/wp-content/uploads/2023/08/FINAL-BACWA-Pesticides-Watch-List-Aug-2023.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 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 FY24, 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 2022, 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 July 14, 2020.</li> </ul>	<ul style="list-style-type: none"> <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 with these beneficial uses could also be assigned lower mercury objectives.</li> <li>• BACWA supported risk reduction programming by two grantees to fulfill requirements of the 2017 Mercury &amp; PCBs Watershed Permit. In 2023, BACWA arranged for the grantees to present their work to Regional and State Water Board staff.</li> <li>• Through 2026, State Water Board and Regional Water Board staff are working on a Bioaccumulation Monitoring Program Realignment effort in the San Francisco Bay region. BACWA intends to support risk reduction activities related to this effort, which may include public outreach related to subsistence fishing.</li> <li>• In January 2022, monitoring requirements for mercury were reduced for most dischargers by a blanket NPDES Permit amendment (Order R2-2021-0028). Revised monitoring frequencies are also reflected in the reissued permit.</li> <li>• Recent consolidations among contract laboratory providers of PCB analysis via EPA Method 1668C has led to difficulties with electronic reporting.</li> </ul>	<ul style="list-style-type: none"> <li>• BACWA Lab and Permits Committee members are working to facilitate smoother electronic reporting of PCB congeners via EPA Method 1668C.</li> <li>• Continue to coordinate with local community-based organizations and Water Boards staff to develop concepts for risk reduction activities that BACWA could support during the term of the 2022 permit.</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>• 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> <li>• Participate in the Regional Water Board's 2024 Triennial Review process, which will impact the prioritization of Basin Plan amendments, including designation of new beneficial uses. The Regional Water Board is accepting input on candidate projects through May 24, 2024.</li> </ul>	<p>2022 Mercury &amp; PCBs Watershed Permit (Effective Feb. 1, 2023)  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2022/R2-2022-0038.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2022/R2-2022-0038.pdf</a></p> <p>Risk Reduction Materials (Updated August 2023)  <a href="https://bacwa.org/mercurypcb-risk-reduction-materials/">https://bacwa.org/mercurypcb-risk-reduction-materials/</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> <p>Mercury and PCB Load Trends 2013- 2022 (Updated July 2023)  <a href="https://www.waterboards.ca.gov/sanfranciscobay/board_info/agen das/2023/July/6_ssr.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_info/agen das/2023/July/6_ssr.pdf</a></p> <p>2024 Triennial Review of the Basin Plan  <a href="https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#triennialreview">https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#triennialreview</a></p>



## STATE WATER BOARD TOXICITY PROVISIONS

<ul style="list-style-type: none"> <li>• The State Water Board adopted the Statewide Toxicity Provisions in October 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 <i>Ceriodaphnia dubia</i> 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> </ul>	<ul style="list-style-type: none"> <li>• EPA approved the Statewide Toxicity Provisions in May 2023, and they became effective on June 1, 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> <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>• 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 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 <i>Ceriodaphnia dubia</i> testing. The multi-laboratory study of toxicity testing was completed and presented to the State Water Board in 2023. The State Water Board has compiled resources related to the study for dischargers that plan to use <i>Ceriodaphnia dubia</i> for chronic toxicity monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Begin conducting 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 <i>Ceriodaphnia dubia</i> should utilize the <i>Ceriodaphnia dubia</i> Quality Assurance Guidance Recommendations from the multi-laboratory study, including the performance metrics listed in Appendix E of the report.</li> </ul>	<p>SWRCB Toxicity Page: <a href="http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.shtml">http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.shtml</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>EPA Approval of Statewide Toxicity Provisions <a href="https://bacwa.org/wp-content/uploads/2023/05/05.01.2023-EPA-CWA-303c-Approval-of-California-Toxicity-Provisions.pdf">https://bacwa.org/wp-content/uploads/2023/05/05.01.2023-EPA-CWA-303c-Approval-of-California-Toxicity-Provisions.pdf</a></p> <p><i>Ceriodaphnia dubia</i> Study Resources, including link to Quality Assurance Guidance Recommendations <a href="https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/ceriodaphnia-dubia-study-resources.pdf">https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/ceriodaphnia-dubia-study-resources.pdf</a></p> <p>CASA Webinar on Lessons from Ceriodaphnia Study <a href="https://casaweb.org/resources/spaker-presentations/">https://casaweb.org/resources/spaker-presentations/</a></p>
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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>The San Francisco Bay region'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 the Bay Area 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 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 adopted in 2021 by the Regional Water Board (R2-2021-0028).</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 include. CECs of "moderate" concern include alkylphenols and alkylphenol ethoxylates, bisphenols, fipronil and its degradates, imidacloprid, and microplastics.</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. In 2024, the RMP is funding a study of organophosphate esters (OPEs), bisphenols, and other plastic additives.</li> <li>Update the 2020 White Paper created for use by the RMP or others in selecting representative POTWs for participation in CEC studies. The 2020 White Paper will be updated to note recently completed and ongoing studies of CECs in Bay Area wastewater.</li> </ul>	<p>RMP Emerging Contaminant Workgroup:  <a href="https://www.sfei.org/rmp/">https://www.sfei.org/rmp/</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/R2-2021-0028.pdf">https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2021/R2-2021-0028.pdf</a></p> <p>State Water Board CECs webpage:  <a href="https://www.waterboards.ca.gov/water_issues/programs/cec/index.html">https://www.waterboards.ca.gov/water_issues/programs/cec/index.html</a></p>

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
<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> </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>• OPC is funding 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.</li> <li>• The 2024 California Integrated Report (303(d) List) was adopted by the State Water Board in February 2024 and has been submitted to EPA. 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>• 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> <li>• Ongoing microplastics investigations by the RMP are focused on tire particles in stormwater.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to participate in the RMP Microplastics Workgroup.</li> <li>• Review and share the final report for the OPC-funded microplastics study, which is expected in May 2024. Three BACWA member agencies participated in the OPC-funded microplastic study. CASA has also funded the study team at the Southern California Coastal Water Research Project (SCCWRP) to complete add-on work comparing results between different sampling methods, including use of an autosampler. The add-work will be completed later in 2024.</li> <li>• Continue tracking State Water Board and Ocean Protection Council actions via the CASA Microplastics Workgroup.</li> </ul>	<p>BACWA Microplastics Fact Sheet:  <a href="https://bacwa.org/wp-content/uploads/2019/09/BACWA-Microplastics-flyer.pdf">https://bacwa.org/wp-content/uploads/2019/09/BACWA-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> <p>2024 California Integrated Report / 303(d) List  <a href="https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html">https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html</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 2020, the SWRCB issued an investigative order for POTWs. At that time, BACWA obtained SWRCB approval to fund and conduct a Regional PFAS Study in lieu of the investigative order.</li> <li>In 2021, EPA formed a Council on PFAS, then released a PFAS Strategic Roadmap.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>In April 2024, EPA finalized Maximum Contaminant Levels for PFOA, PFOS, PFHxS, PFNA, and HFPO-DA (commonly referred to as GenX Chemicals), and mixtures containing two or more specific PFAS compounds. By design, these MCLs are very close to the current limits of quantification.</li> <li>California has finalized public health goals for PFOA and PFAS and has adopted notification and response levels for four PFAS compounds in drinking water, but has not yet adopted Maximum Contaminant Levels.</li> <li>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 April 2024, EPA designated PFOA and PFOS as hazardous substances under CERCLA (the Superfund law). EPA simultaneously released a memo stating that it intends to focus enforcement on PFAS manufacturers, not on public agencies.</li> <li>EPA is conducting pretreatment standards rulemaking for three types of industrial users: Metal Finishing, Organic Chemicals, Plastics and Synthetic Fibers, and landfills.</li> <li>EPA is planning to conduct a POTW Influent PFAS Study to collect nationwide data on industrial and domestic sources of PFAS.</li> </ul>	<ul style="list-style-type: none"> <li><b>Continue to share the results of BACWA's Regional PFAS Study</b>, which was conducted by SFEI in two phases in 2020 and 2022. The study found that residential areas and industrial laundries are potential sources of PFAS. BACWA has prepared a PFAS Study Summary for members' use.</li> <li><b>Use Clean Water Act methods (EPA Method 1633 or 1621) for use in pretreatment programs or monitoring effluent.</b></li> <li><b>Review the draft questionnaire for EPA's POTW Influent Study.</b> BACWA plans to provide comments by the May 28<sup>th</sup> due date.</li> <li>Continue tracking developments at the federal, state and regional level, in particular to understand the impact of the CERCLA designation on biosolids reporting.</li> <li>Continue to support PFAS source control efforts by participating in monitoring studies, and by supporting regulatory and legislative efforts to limit the use of PFAS. For example, BACWA has expressed support for SB 903 (Skinner) restricting the sale of PFAS-containing products in California.</li> </ul>	<p>BACWA PFAS Study Summary  <a href="https://bacwa.org/wp-content/uploads/2024/02/BACWA-PFAS-Study-Summary-2024-02-07.pdf">bacwa.org/wp-content/uploads/2024/02/BACWA-PFAS-Study-Summary-2024-02-07.pdf</a></p> <p>SWRCB PFAS Resources:  <a href="http://www.waterboards.ca.gov/pfas/">www.waterboards.ca.gov/pfas/</a></p> <p>EPA PFAS Resources  <a href="http://www.epa.gov/pfas">www.epa.gov/pfas</a></p> <p>EPA Drinking Water Limits  <a href="https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas">https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas</a></p> <p>EPA letter on enforcement discretion for CERCLA  <a href="https://www.epa.gov/system/files/documents/2024-04/pfas-enforcement-discretion-settlement-policy-cercla.pdf">https://www.epa.gov/system/files/documents/2024-04/pfas-enforcement-discretion-settlement-policy-cercla.pdf</a></p> <p>EPA POTW Influent Study  <a href="https://www.epa.gov/eg/study-pfas-influent-potws">https://www.epa.gov/eg/study-pfas-influent-potws</a></p> <p>EPA NPDES Permitting Guidance (Dec. 2022)  <a href="http://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf">www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf</a></p> <p>Presentation on BACWA's Regional PFAS Study at RMP 2023 Annual Meeting  <a href="http://www.sfei.org/projects/rmp-annual-meeting">www.sfei.org/projects/rmp-annual-meeting</a></p>
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**SANITARY SEWER SYSTEMS GENERAL ORDER**

<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 State Water Board’s goals for the update were: <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> <li>• The reissued order became effective on June 5, 2023.</li> <li>• The first annual reports due under the reissued order were due April 1, 2024.</li> </ul>	<ul style="list-style-type: none"> <li>• The reissued SSS-WDR 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; and</li> <li>○ Modified timelines for preparation of audits and SSMPs. The State Water Board has prepared an online tool to assist agencies in determining compliance dates (at right).</li> </ul> </li> <li>• Maintaining an updated SSMP continues to be a core requirement of the SSS-WDR. Beginning in May 2025, SSMP updates will be required every six years (instead of five) and must contain the 11 updated elements described in the reissued SSS-WDR.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuing working through the Collections System Committee to update a guidance document for Sewer System Management Plans (SSMPs). BACWA has hired a consultant to assist with this task, and work is underway. A draft SSMP guidance document was circulated in March 2024 and will be finalized in the coming months.</li> <li>• Complete a member survey of sewer lateral ordinances in the region. Prompted by changes to the reissued SSS-WDR and ongoing concerns about infiltration and inflow (I&amp;I), some agencies are considering changes to their practices regarding sewer lateral maintenance and replacement.</li> <li>• Continue to coordinate with CASA and CWEA on training opportunities for members as they transition to enrollment under the new SSS-WDR.</li> </ul>	<p>State Water Board SSS-WDR page:  <a href="https://www.waterboards.ca.gov/water_issues/programs/ssso/">https://www.waterboards.ca.gov/water_issues/programs/ssso/</a></p> <p>Reissued SSS-WDR (General Order 2022-0103-DWQ), Effective June 5, 2023  <a href="https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2022/wqo_2022-0103-dwq.pdf">https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2022/wqo_2022-0103-dwq.pdf</a></p> <p>Materials from Clean Water Summit Partners Webinars on Reissued SSS-WDR  <a href="https://casaweb.org/ssw-wdr/">https://casaweb.org/ssw-wdr/</a></p> <p>SSMP and Audit Due Dates Lookup Tool from State Water Board  <a href="https://www.waterboards.ca.gov/water_issues/programs/ssso/lookup/">https://www.waterboards.ca.gov/water_issues/programs/ssso/lookup/</a></p>
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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> </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>• The TNI standards pose a particular challenge to small laboratories, many of which are closing because they cannot economically meet the new standards. ELAP has reported a 15% reduction in the number of accredited laboratories in California since 2020, and a 25% reduction since 2015. This reduction is contributing to significantly higher ELAP fees for the remaining laboratories. ELAP fees increased by 30% in FY24. ELAP is investigating fee structure options that would reduce impacts on small laboratories. Fee restructuring may occur as soon as FY25.</li> <li>• ELAP is now implementing EPA's 2021 Method Update Rule, and has advised labs to update any outdated methods by February 2024.</li> <li>• In April 2024, EPA finalized the 2023 Method Update Rule. The 2023 Method Update Rule will be implemented by ELAP at a later date.</li> </ul>	<ul style="list-style-type: none"> <li>• The BACWA Lab Committee will host the last Q&amp;A session on the TNI on June 18, 2024. The free virtual training sessions have been underway since 2021 and are open to BACWA members holding a valid copy of the 2016 TNI Standard. Diane Lawver of Quality Assurance Solutions, LLC, is providing the training. BACWA's TNI training sessions are recorded, and a link is available upon request.</li> <li>• Participate in discussions with ELAP staff and other stakeholders regarding fee restructuring.</li> <li>• Review the 2023 Method Update Rule and share notable changes with BACWA members.</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>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>State Water Board's ELAP regulations page:  <a href="https://www.waterboards.ca.gov/drinking_water/certlic/labs/">https://www.waterboards.ca.gov/drinking_water/certlic/labs/</a></p> <p>ELAP Timeline Guidance Tool:  <a href="https://www.waterboards.ca.gov/drinking_water/certlic/labs/docs/2023/elap-scheduler_002.xlsx">https://www.waterboards.ca.gov/drinking_water/certlic/labs/docs/2023/elap-scheduler_002.xlsx</a></p> <p>ELAP Implementation of 2021 Method Update Rule:  <a href="https://www.waterboards.ca.gov/drinking_water/certlic/labs/mur.html">https://www.waterboards.ca.gov/drinking_water/certlic/labs/mur.html</a></p> <p>2023 Method Update Rule:  <a href="https://www.epa.gov/cwa-methods/methods-update-rules">https://www.epa.gov/cwa-methods/methods-update-rules</a></p>



## BIOSOLIDS

<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, adopted in September 2016 requires organics diversion: <ul style="list-style-type: none"> <li>-50% by 2020 (relative to 2014)</li> <li>-75% by 2025 (relative to 2014)</li> </ul> CalRecycle is the state agency responsible for implementation. </li> <li>Regulations implementing SB 1383 went into effect in 2022. Jurisdictions can begin local enforcement January 1, 2024, and compliance is 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>In 2023, Sutter County revised its ordinance to allow land application of Class A biosolids, reversing its previous ban. The change was made to conform to SB 1383. CalRecycle and biosolids stakeholders continue to conduct outreach to counties with restrictive ordinances.</li> <li>CalRecycle reviewed the first application under Article 2 ("H Cycle"), and determined it conditionally qualifies as equivalent to landfill diversion/reduction. CalRecycle has also been providing clarification on technologies that <i>already</i> 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>AB 1857, signed in 2022, removes a diversion credit for municipal solid waste incinerators. CalRecycle will soon prepare draft regulations implementing the law, which could apply to biosolids treated via pyrolysis.</li> <li>New York and Michigan are imposing restrictions on land application of biosolids with levels of PFAS &gt;20 ppb for PFOA or PFOS. Based on the recently completed regional study of PFAS, few BACWA members are likely to exceed those thresholds for land-applied biosolids.</li> </ul>	<ul style="list-style-type: none"> <li>BACWA's next Biosolids Trends Survey Report is underway, and will cover 2021-2023. The survey has been circulated, and responses will be compiled in summer 2024. This version will replace the previous (2021) version covering 2018-2020.</li> <li><b>Review the draft questionnaire for EPA's POTW Influent Study</b> (see PFAS page), which also functions as a nationwide biosolids survey. BACWA plans to provide comments by the May 28<sup>th</sup> due date.</li> <li>Continue to follow emerging science and regulatory developments regarding PFAS in biosolids (see page 9).</li> <li>Engage through CASA and BABC to follow development of regulations implementing AB 1857, with the goal of avoiding limits on POTWs using pyrolysis for organic waste management.</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>Meet with BAAQMD regularly in 2024 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 - 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>CalRecycle Procurement FAQ (Updated by AB 1857) <a href="https://calrecycle.ca.gov/organics/slcp/faq/recycledproducts/">https://calrecycle.ca.gov/organics/slcp/faq/recycledproducts/</a></p> <p>SB1383 Article 2 Determination <a href="https://calrecycle.ca.gov/organics/slcp/recyclingfacilities/article2/">https://calrecycle.ca.gov/organics/slcp/recyclingfacilities/article2/</a></p> <p>SB 1383 Procurement FAQ (including interim rules for POTWs) <a href="https://calrecycle.ca.gov/organics/slcp/faq/recycledproducts/">https://calrecycle.ca.gov/organics/slcp/faq/recycledproducts/</a></p> <p>EPA POTW Influent Study <a href="https://www.epa.gov/eg/study-pfas-influent-potws">https://www.epa.gov/eg/study-pfas-influent-potws</a></p>
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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. 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>• 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 January 1, 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 (80% below 1990 levels).</li> <li>• BAAQMD 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, BAAQMD may revisit Regulation 13 in 2024.</li> <li>• CARB states POTWs are part of the solution for reducing fugitive methane and encourages diversion of organics to POTWs to use available digester capacity and produce biogas.</li> </ul>	<ul style="list-style-type: none"> <li>• CARB is pursuing rapid fleet conversion to zero-emission vehicles (ZEVs), including medium and heavy-duty vehicles, through the Advanced Clean Fleet rule.</li> <li>• AB 1594, adopted in 2023, authorizes wastewater and other “public agency utilities” to purchase traditional replacements for medium- and heavy-duty vehicles. In March 2024, CARB re-opened the Advanced Clean Fleet regulations to incorporate requirements of AB 1594. The rulemaking process is expected to be complete by early 2025 and is focused on ZEV purchase and daily usage exemptions. CASA is working with CARB on recommended language.</li> <li>• In addition to pushing for ZEVs, CARB is proposing changes to the Low Carbon Fuel Standard to emphasize hydrogen rather than biomethane as a transportation fuel. Proposed changes to the Low Carbon Fuel Standard were released in early 2024, and CARB intends to vote on a final version in early 2025.</li> <li>• Due to a 2022 CPUC mandate for the state’s four largest gas utilities, PG&amp;E now has an active biomethane procurement program.</li> <li>• In 2023, EPA finalized updates to its Renewable Fuel Standard Set Rule allowing apportionment of renewable identification numbers (RINs) or “Credits for food-waste-based (D5) or sludge-based (D3) biogas.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to track implementation of the Advanced Clean Fleet rule. This includes modifications to the rule being developed in 2024 that will exempt some traditional utility-specialized vehicles used by public agency utilities, per AB 1594.</li> <li>• Continue to advocate for changes to the Low Carbon Fuel Standards to maintain a viable pathway for biomethane used as CNG in vehicles. In 2024, CARB will continue to develop proposed changes to the Low Carbon Fuel Standards based on written comments and public workshops.</li> <li>• Closely follow rule development of Proposed Regulation 13 (climate pollutants), which BAAQMD may revisit in 2024.</li> <li>• Look for ways to inform BAAQMD on opportunities and challenges related to 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.</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 Regulation 13: <a href="http://www.baaqmd.gov/rules-and-compliance/rules/regulation-13-climate-pollutants">http://www.baaqmd.gov/rules-and-compliance/rules/regulation-13-climate-pollutants</a></p> <p>EPA Renewable Fuel Standards: <a href="https://www.epa.gov/renewable-fuel-standard-program/final-renewable-fuels-standards-rule-2023-2024-and-2025">https://www.epa.gov/renewable-fuel-standard-program/final-renewable-fuels-standards-rule-2023-2024-and-2025</a></p> <p>PG&amp;E Procurement: <a href="http://www.pge.com/rngro">http://www.pge.com/rngro</a>, &amp; <a href="https://casaweb.org/wp-content/uploads/2023/11/PGE-at-CASA-Webinar.pdf">https://casaweb.org/wp-content/uploads/2023/11/PGE-at-CASA-Webinar.pdf</a></p>

**CLIMATE CHANGE ADAPTATION**

<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 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, 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 April 2022, the State released a Climate Adaptation Strategy, including an updated climate change assessment for the Bay Area region.</li> <li>The California Coastal Commission's November 2021 <i>Sea Level Rise Planning Guidance</i> recommends that agencies "understand and plan" for 2.7 feet of sea level rise (SLR) by 2050.</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> </ul>	<ul style="list-style-type: none"> <li>In 2022, the Regional Water Board adopted a Climate Change Basin Plan amendment addressing dredge and fill procedures near the region's shorelines, especially for climate adaptation projects. In April 2024, the Regional Water Board released a revised version of this Basin Plan amendment for public comment.</li> <li>Separately from the Basin Plan amendment, the NDPES division has released information regarding permitting of nature-based solutions.</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 January 2023 report now available from Pathways Climate Institute and SFEI.</li> <li>The Bay Conservation and Development Commission (BCDC) is developing regional SLR adaptation planning guidelines for the Bay Area as part of the Regional Shoreline Adaptation Plan. The guidelines must be adopted by Dec 31, 2024, to comply with SB 272, signed by the Governor in Oct. 2023. SB 272 requires cities and counties to develop regional sea level rise adaptation plans by 2034.</li> <li>The Ocean Protection Council (OPC) has issued a draft 2024 SLR guidance update reflecting the latest projections. Previous projections for extreme SLR (i.e., H++ scenario) have been removed, and the range of projections has narrowed considerably, especially for 2050.</li> </ul>	<ul style="list-style-type: none"> <li><b>Begin using the OPC's updated Sea Level Rise Guidance when it becomes available later in 2024.</b> BACWA submitted comments on the draft guidance in March 2024. OPC plans to consider adoption of the updated guidance at its meeting on June 4, 2024. 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>Engage with BCDC during the agency's development of Regional Shoreline Adaptation Plan guidance, which will likely impact most BACWA member agencies. BACWA is participating in an advisory group for the Regional Shoreline Adaptation Plan.</li> <li>Prepare for engagement with the Regional Water Board on expectations for SLR planning.</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>Regional Water Board Basin Plan Amendment on Climate Change and Aquatic Habitat  <a href="https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/climate_change/">https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/climate_change/</a></p> <p>OPC 2024 Draft Sea Level Rise Guidance  <a href="https://opc.ca.gov/2024/01/draft-slr-guidance-2024/">https://opc.ca.gov/2024/01/draft-slr-guidance-2024/</a></p> <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>BayCAN Funding Tracker  <a href="https://www.baycanadapt.org/">https://www.baycanadapt.org/</a></p> <p>Bay Adapt Joint Platform (includes Regional Shoreline Adaptation Planning info)  <a href="https://www.bayadapt.org/">https://www.bayadapt.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> <p>2023 Report on Shallow Groundwater Response  <a href="https://www.sfei.org/projects/shallow-groundwater-response-sea-level-rise">https://www.sfei.org/projects/shallow-groundwater-response-sea-level-rise</a></p>
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## TOXIC AIR CONTAMINANTS

<ul style="list-style-type: none"> <li>• Regulation 11, Rule 18 (Rule 11-18), adopted in 2017, is BAAQMD's local 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 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. After verifying the model inputs, if the facility still has PS above that threshold, that facility would need to develop and 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, BAAQMD finalized updated Implementation Procedures for Rule 11-18 describing how BAAQMD will conduct HRAs. It also establishes rules for vendors or contractors to conduct HRAs, if allowed by BAAQMD.</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). CASA is directing the statewide two-step process pooled emissions study with consultant support from Yorke Engineering. Many BACWA members are participating in the study by providing financial contributions. In FY25, BACWA will collect funds from participating BACWA member agencies.</li> <li>• In 2021, BAAQMD amended Rule 2-5 to reduce allowable levels of toxic air contaminants in new source permitting. In 2022, BAAQMD and BACWA convened a working group to address concerns related to toxic air contaminants and rule-making, which is meeting quarterly. 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>• In July 2023, the EPA announced a proposal to revise its Air Emissions Reporting Requirements (AERR). CARB has applied to submit information on behalf of California facilities.</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.</li> <li>• <b>Report “business as usual” for air toxics through 2028 (through year 2027 data).</b> CARB is preparing a message to Air Districts confirming POTWs can delay reporting new compounds until the pooled emissions study is complete. The wastewater sector has until 2028 to perform the statewide “two-step process” pooled emissions study.</li> <li>• Continue participating in the BAAQMD workgroup to discuss toxic air contaminants, rule development, and related air quality regulatory issues.</li> </ul>	<p>BAAQMD Facility Risk Reduction Program Updates (Rule 11-18):  <a href="https://www.baaqmd.gov/community-health/facility-risk-reduction-program">https://www.baaqmd.gov/community-health/facility-risk-reduction-program</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> <p>CARB page on AB 617 and AB 2588:  <a href="https://ww2.arb.ca.gov/our-work/programs/criteria-and-toxics-reporting">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>Timing of Rule 11-18 vs. Process for AB 617  <a href="https://bacwa.org/document/baaqmd-rule-11-18-vs-carb-two-step-process-for-ab-617-feb-2023/">https://bacwa.org/document/baaqmd-rule-11-18-vs-carb-two-step-process-for-ab-617-feb-2023/</a></p> <p>EPA Air Emissions Reporting Requirements  <a href="https://www.epa.gov/air-emissions-inventories/air-emissions-reporting-requirements-aerr">https://www.epa.gov/air-emissions-inventories/air-emissions-reporting-requirements-aerr</a></p>
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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 around June 2024 with a projected Board adoption later in 2024.</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>• The State Water Board has launched a “Strike Team” to assess how California will meet new recycled water goals listed in California’s Water Supply Strategy: 800,000 acre-feet per year of recycled water by 2030 and 1.8 million acre-feet per year by 2040. The Strike Team will also document challenges to meeting these goals, such as funding.</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. In April 2024, the Basin Plan Amendment was approved by the State Water Board. The Basin Plan Amendment must be approved by the Office of Administrative Law and EPA before it goes into effect.</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 as soon as June 2024.</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. Load reductions are expected to be a requirement of the 2024 Nutrient Watershed Permit (see page 2).</li> <li>• Track California legislation with potential impacts on recycled water funding, mandates, or regulations.</li> </ul>	<p>Water Boards Recycled Water Policy and Regulations <a href="http://www.waterboards.ca.gov/water_issues/programs/recycled_water/">www.waterboards.ca.gov/water_issues/programs/recycled_water/</a></p> <p>Direct Potable Reuse Regulations <a href="http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dpr-regs.html">www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/dpr-regs.html</a></p> <p>Onsite Nonpotable Reuse Regulations <a href="http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/onsite_nonpotable_reuse_regulations.html">www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/onsite_nonpotable_reuse_regulations.html</a></p> <p>BACWA Special Studies of Recycled Water and Nature-Based Systems: <a href="http://bacwa.org/document-category/2nd-watershed-permit-studies/">bacwa.org/document-category/2nd-watershed-permit-studies/</a></p> <p>California’s Water Supply Strategy (August 2022) <a href="http://Resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Water-Resilience/CA-Water-Supply-Strategy.pdf">Resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Water-Resilience/CA-Water-Supply-Strategy.pdf</a></p> <p>December 2023 Basin Plan Amendment <a href="http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningmdls/amendments/NPD_ES_corrections.html">www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningmdls/amendments/NPD_ES_corrections.html</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	PFHxS	Perfluorohexane Sulfonic Acid
BCDC	Bay Conservation and Development Commission	PFNA	Perfluorononanoic Acid
BTU/SCF	British thermal units per standard cubic foot	PFOA	Perfluorooctanoic Acid
CalDPR	California Department of Pesticide Registration	PFOS	Perfluorooctane Sulfonic Acid
CARB	California Air Resources Board	POTW	Publicly-Owned Treatment Works
CASA	California Association of Sanitation Agencies	PS	Prioritization Score
CAP	Criteria Air Pollutant	RMP	Regional Monitoring Program
CEC	Compound of Emerging Concern	RPA	Reasonable Potential Analysis
CIWQS	California Integrated Water Quality System	SCAP	Southern California Alliance of POTWs
CVCWA	Central Valley Clean Water Agencies	SF Bay	San Francisco Bay
CWEA	California Water Environment Association	SFEI	San Francisco Estuary Institute
EC25/IC25	25% Effect Concentration/25% Inhibition Concentration	SLR	Sea Level Rise
ELAP	Environmental Laboratory Accreditation Program	SSMP	Sewer System Management Plan
ELTAC	Environmental Laboratory Technical Advisory Committee	TMDL	Total Maximum Daily Load
EPA	United States Environmental Protection Agency	TIN	Total Inorganic Nitrogen
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act	TNI	The NELAC Institute
FY	Fiscal Year	TST	Test of Significant Toxicity
GHG	Greenhouse Gas	WQO	Water Quality Objective
HFPDA-DA	Hexafluoropropylene Oxide (HFPO) Dimer Acid, also known as GenX	ZEV	Zero-Emission Vehicle
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		
OEHHA	Office of Environmental Health Hazard Assessment		
OPC	Ocean Protection Council		



**ITEM NO. RA6 PFAS UPDATES**

**Recommendation**

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

**Strategic Plan Linkage**

2. **Regulatory Compliance:** Proactively meet or exceed regulatory requirements for protection of the environment and public health.
  - a. Represent EBDA and the Member Agencies’ interests by preemptively engaging in development of emerging regulations and permits and advocating for reasonable, science-based decisions.
  - e. Track and share scientific and regulatory developments related to emerging contaminants, and advocate for source control.

**Background**

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

**Discussion**

Drinking Water Regulation

Regulatory efforts to address PFAS have primarily focused on drinking water in order to minimize human ingestion of these chemicals. On April 10, 2024, EPA finalized Primary Drinking Water Standards for six PFAS chemicals, establishing enforceable maximum contaminant levels (MCLs) and unenforceable maximum contaminant level goals (MCLGs):

	<b>MCLG</b>	<b>MCL</b>
Perfluorooctanoic acid (“PFOA”) Perfluorooctane sulfonic acid (“PFOS”)	Zero	4 ppt
GenX Chemicals Perfluorohexane sulfonic acid (“PFHxS”) Perfluorononanoic acid (“PFNA”) Hexafluoropropylene oxide dimer acid (“HFPO-DA”)	10 ppt	10 ppt
Mixtures containing two or more GenX or perfluorobutane sulfonic acid (“PFBS”)	1 (unitless)*	1 (unitless)

\* There is no unit for this this Hazard Index MCL because it is a sum of fractions. EPA is currently developing an online calculator that will add up each fraction that represents average PFAS ratios (e.g., PFHxS/10 ppt + PFNA level/10 ppt) and see if the annual average is greater than the MCL of 1.

In California, however, public water systems will also be required to comply with California MCLs, which will be based on the new OEHHA public health goals (“PHGs”), adopted by California’s Office of Environmental Health Hazard Assessment (“OEHHA”) on April 5, 2024:

	<b>California Public Health Goal</b>
PFOA	0.007 ppt
PFOS	1 ppt

While the proposed MCLs are of obvious concern to drinking water agencies, they are unlikely to directly affect EBDA or our members’ wastewater operations. Where wastewater facilities discharge into waterbodies that have the potential to be drinking water sources, there is a chance that the MCLs could be implemented as effluent limits in wastewater permits. However, because EBDA discharges to the Bay, any limits on EBDA’s effluent would be more likely driven by the potential for impacts to aquatic ecosystems or fish consumption. Levels safe for aquatic health and fish consumption have yet to be defined, but likely will be in the next few years.

Additional information on the drinking water regulations and projected costs of compliance can be found in this [article](#).

Hazardous Waste Regulation

As discussed with the Committee previously, in August 2022, EPA proposed a rule designating PFOA and PFOS as hazardous substances under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – also known as the Superfund law. The rule was recently approved, with an effective date of July 8, 2024. The intent of this approach by EPA is to invoke a “polluter pays” principle, forcing the chemical companies that produce PFAS compounds to take responsibility for cleaning them up. The Superfund law works by triggering cleanups once contamination exceeds EPA thresholds, and another provision allows the agency to sue for cost recovery. However, the wastewater sector and other industries that are passive receivers of PFAS have argued that we should not be subject to these requirements.

There are unlikely to be any immediate ramifications to wastewater agencies from this designation because the default reportable quantity is one pound per day for PFOA and PFOS, a mass which is unlikely to be reached in wastewater agencies’ biosolids or effluent. The rule adoption was also accompanied by an [Enforcement Discretion and Settlement Policy](#) that makes clear that “EPA does not intend to pursue entities where equitable factors do not support seeking response actions or costs under CERCLA, including farmers, municipal landfills, water utilities, municipal airports, and local fire departments.” However, the wastewater sector is continuing to push for an exemption to counter the risk that the reportable quantity could be lowered in the future. Several bills

sponsored by the National Association of Clean Water Agencies (NACWA) are aimed at excluding wastewater agencies from liability.

NACWA put together an informative primer on this topic that is attached to this report.

### Biosolids Regulation

The most significant area of potential vulnerability for wastewater agencies lies with regulation of biosolids. USEPA has indicated to California Association of Sanitation Agencies (CASA) staff that they are performing a risk assessment process that evaluates impacts to human health and the environment based on toxicity and exposure from biosolids. They expect to release draft risk-based values for PFOA and PFOS in biosolids in late October or early November this year, after they go through internal and external scientific review. The risk-based values will be published in the federal register and will be open for public review and comment. The draft values will represent the results of the risk assessment and will not be recommended final regulatory mandates.

Following the development of risk-based numbers, there will be a risk management analysis completed by EPA, which will look at alternatives to mitigate the potential risks. This may include inserting regulatory values inserted into the code that governs biosolids regulation, or it may include alternative management options yet to be identified. The analysis may include an aggregate risk assessment looking at all sources in the absence of biosolids regulations, and then determining the additional risk from biosolids. Working with CASA, staff will continue to track biosolids regulations at the federal level. No state level biosolids regulations are in the works at this time.

### California Legislation

As noted above, because we are receivers of PFAS, the wastewater community is primarily focused on source control rather than treatment as the most effective way to address PFAS in the environment. CASA has been working with a consortium of environmental advocacy partners, including Environmental Working Group, to sponsor and support legislation targeted at companies producing products containing PFAS. Several bills approved by the legislature over the past several years that banned added PFAS in certain classes of products were vetoed by Governor Newsom, citing state agency cost concerns.

CASA and its environmental partners sponsored a new bill this session, [SB 903](#) (Skinner). The bill would have prevented the sale and use of products containing PFAS unless the use of the PFAS in the product is necessary and there is not a safer alternative available. It would have banned the sale of products containing PFAS by 2030, and would have set up a process at the Department of Toxic Substances Control (DTSC) allowing manufacturers to petition for the Department to determine whether the presence of PFAS in their product is a currently unavoidable use. Unfortunately, the Appropriations Committee's fiscal analysis cited \$10 million annually and 44 positions at DTSC to implement the program, effectively killing the bill in this year of budget shortfall.

Public Information

In the absence of regulation, and given that past studies have shown PFAS in influent to come primarily from residential and commercial sources, the best way for agencies to address PFAS today is through public education. Several agencies and organizations have collaborated to create <https://pfas411.org/>. This public-facing website contains resources and also a newsletter. CASA has also developed a [Fact Sheet](#) along with other resources posted on its PFAS website at <https://casaweb.org/renewable-resources/pfas-1/>.

## EPA's PFOA and PFOS CERCLA Hazardous Substance Designations: A Primer for Clean Water Utilities

The U.S. Environmental Protection Agency (EPA) recently utilized its authority under Section 102(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for the first time ever to [designate](#) two per- and polyfluoroalkyl substances (PFAS) – perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) – as CERCLA “hazardous substances.”

At the same time, EPA issued a memorandum, [PFAS Enforcement Discretion and Settlement Policy Under CERCLA](#), clarifying EPA's position that “equitable factors do not support seeking [PFAS] response actions or costs under CERCLA” from publicly owned treatment works (POTWs), municipal separate storm sewer systems (MS4s), publicly owned or operated municipal solid waste landfills, farms where biosolids are applied to the land, and community water systems, among others.

We are guessing that trying to understand what these actions mean for your utility has at some point caused you to throw up your hands in frustration.<sup>1</sup> Indeed, conflicting information about the potential implications of the designations for clean water utilities abounds. While that is partially because no one knows exactly how these novel actions will play out, there are some things we *do* know, resources we have available for utilities to use, and actions NACWA and our partners are taking to help contain potential negative impacts the designations could have on the water sector.

This document attempts to put all the critical information about the final rule in one place for the NACWA membership. To help make information about a statute with not just one but two commas in its title more digestible, we have organized it pursuant to frequently asked questions (FAQs) that utility members have asked us about the designations.

**This document is intended for informational purposes only and does not constitute direct legal advice from NACWA. NACWA continues to strongly urge members to consult with counsel to obtain advice concerning the potential impacts of the rule on their individual utility. That said, we do hope this document encourages utilities to follow one piece of important, non-legal, advice: don't panic!**

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<sup>1</sup> Or maybe that's just us.

These designations are troubling, but we as a sector will do what we always do – work collaboratively and diligently to protect human health and the environment, even when decisions are made that lead to unnecessarily complicated policy outcomes. Please contact NACWA’s General Counsel, [Amanda Aspatore](#), with any questions.

## Primer Outline

### **Question 1: We are Clean Water Act people. What is this CERCLA statute of which you speak? – Pg. 3**

- How CERCLA Works
- National Priorities List
- Who Is Liable Under CERCLA
- Existing CERCLA Exclusions Potentially Applicable to Clean Water Utilities
  - o Federally Permitted Releases
  - o The Normal Application of Fertilizer

### **Question 2: What does this new rule do? – Pg. 10**

- PFOA and PFOS “Hazardous Substance” Designations
  - o “Totality of the Circumstances” Analysis
- EPA Enforcement Discretion Policy

### **Question 3: What do I need to do immediately to comply with the new rule? – Pg. 14**

- New Reporting Requirements
  - o Application to Clean Water Utilities
  - o Duty to Investigate
- State Laws
- Indirect Impacts

### **Question 4: Does the fact that PFOA and PFOS are “hazardous substances” mean that, legally, I now have to manage biosolids or treat effluent containing PFOA or PFOS differently? – Pg. 18**

### **Question 5: The Biggie – Are utilities going to have to pay for PFOA and PFOS cleanups under the new rule? – Pg. 20**

- EPA’s Position
- NACWA’s Position

### **Question 6: What is the status of efforts to obtain a statutory exemption from CERCLA PFAS liability for the water sector? – Pg. 23**

### **Question 7: What resources does NACWA have to help me think through next steps in light of these designations? – Pg. 24**



## Question 1: We are Clean Water Act people. What is this CERCLA statute of which you speak?

CERCLA is the federal environmental statute dedicated to the cleanup of hazardous substances, particularly legacy contamination sites. Have you heard of the Love Canal? Where Hooker Electrochemical Company (now Occidental Chemical Corporation) buried over 21,000 tons of dangerous chemicals in leaky drums in New York State and then sold the property to a local school district for \$1.00, thereby causing major soil and groundwater contamination and a public health disaster? CERCLA was Congress' response to that.

### How CERCLA Works

CERCLA gives EPA the authority to order or conduct short-term removal actions where there are releases or threatened releases of hazardous substances requiring a prompt response, as well as longer-term remedial actions specifically designed to permanently reduce dangers to the environment and human health associated with releases or threatened releases of hazardous substances.

To fund these removal and remediation actions, CERCLA establishes liability for "potentially responsible parties" (PRPs) for releases of hazardous substances, as well as a trust fund (called the "Superfund") to pay for cleanups when no responsible party can be identified.

In the wake of the Love Canal, Congress was focused on ensuring that, wherever possible, the parties responsible for causing contamination perform or pay for its cleanup. Congress therefore did two things when it enacted CERCLA: (1) defined the scope of PRPs very (very, very) broadly; (2) made liability for that broad range of PRPs strict, joint and several, and retroactive (i.e., you didn't have to know you were causing contamination to be liable, and if you caused *any* of the contamination at a site, you are potentially legally responsible for the cost of cleaning up the *whole* site).

Under CERCLA's structure, EPA can sue PRPs to force them to conduct or fund cleanups, private parties who voluntarily conduct cleanups of designated hazardous substances can seek reimbursement from PRPs, and PRPs can sue *other* PRPs to try to make them pay for at least some of the costs of any of those cleanups. Think "cleanup funding cage matches," but way less fun and with lawyers instead of professional wrestlers.

CERCLA also includes certain reporting requirements related to releases of hazardous substances that will become effective for PFOA and PFOS when the rule takes effect on July 8, 2024. While we do not anticipate that many utilities will release PFOA or PFOS in

large enough quantities to trigger these requirements, utilities should be aware of them, and they are discussed in more detail in Question 3 below.

Importantly, we want to flag for utilities that CERCLA is primarily focused on site-specific cleanups of and liability for pollution that has *already occurred*. It is not a forward-looking permitting statute, such as the Clean Water Act (CWA), which utilities are more familiar with. As EPA explains in the preamble of the rule:

CERCLA is unlike traditional environmental statutes that prospectively regulate, among other things, how facilities operate and provide limitations on discharges, emissions, releases, or disposal of certain chemicals into water, air, or land. Instead, CERCLA is designed to address contamination already in the environment on a site-specific basis, which includes evaluating the nature, extent, and risk to human health and/or the environment from the release.

As we go through the information below, it is important to keep in mind that CERCLA does not address everyday operations and permitting, nor, outside of reporting requirements, does it set categorical standards for what types or amounts of releases of a hazardous substance may warrant a particular response.<sup>2</sup> We aren't saying remembering that will make everything else make sense, but it will help.

### **National Priorities List**

When EPA receives a report of a potentially hazardous waste site, it reviews historical information and visits the site to assess the potential for releases of hazardous substances, determine if the site poses an immediate threat to human health and the environment, and decide whether additional information should be collected. EPA then employs the Hazard Ranking System,<sup>3</sup> which looks at factors ranging from toxicity to the

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<sup>2</sup> EPA did recently strengthen its [Regional Screening Levels \(RSLs\)](#) for certain PFAS, including PFOA and PFOS, for tap water and soil. RSLs are not de facto cleanup levels, but instead are risk-based values EPA uses in its CERCLA implementation to help determine if further investigation or other actions, such as sampling or additional risk assessments, are needed at a site. EPA lowered the PFAS RSLs based on the strict cancer slope factors used in the recently finalized Safe Drinking Water Act PFAS National Primary Drinking Water Regulation.

<sup>3</sup> The Hazard Ranking System focuses on four major pathways: groundwater, surface water, soil exposure / soil vapor intrusion, and air mitigation.

presence of sensitive populations, and ultimately proposes to list the worst hazardous waste sites on the National Priorities List (NPL).<sup>4</sup>

Once EPA has decided to list a site on the NPL, that begins the formal process for EPA to study the site and select and implement a remedy. This process is often long and complex, and involves remedial investigation,<sup>5</sup> a feasibility study,<sup>6</sup> a proposed cleanup plan,<sup>7</sup> a Record of Decision (ROD)<sup>8</sup> in which a remedy is adopted, and then implementation of the cleanup plan by either EPA or PRPs.<sup>9,10</sup> Following completion of the selected remedy, EPA will also conduct monitoring and reviews to determine whether the remedy is intact or if further action is necessary.

EPA searches for PRPs early in the cleanup process to begin negotiating with them concerning either paying for or performing the cleanup. This search can include document review, title searches, site investigation, interviews, and information request letters. The Agency informs PRPs of their potential liability at an NPL site through general

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<sup>4</sup> EPA proposes NPL listings in the *Federal Register* and holds a public notice and comment period prior to making a listing determination.

<sup>5</sup> During remedial investigation, EPA characterizes contamination at the site through sampling efforts, sets levels of contamination reduction the cleanup will seek to achieve (called “preliminary remediation goals”), conducts community outreach, and begins to establish an Administrative Record.

<sup>6</sup> Feasibility studies include evaluation of the potential performance and cost of treatment options. Treatment options are supposed to be “cost effective.”

<sup>7</sup> These can include phased implementation, and focus on source control and removal of hazardous substances. EPA holds a public comment period and conducts public meetings on proposed cleanup plans.

<sup>8</sup> RODs describe the contamination present, response actions that need to be taken, and the remedy selected. They serve as the basis for all subsequent orders to PRPs to perform remedial work.

<sup>9</sup> EPA can perform the remedy itself, but typically will issue unilateral orders or enter into administrative orders on consent with PRPs to perform (or contribute funding for) the remedial work.

<sup>10</sup> As noted above, private parties can also undertake voluntary cleanups of hazardous substances. To obtain cost recovery for such cleanups under CERCLA, they must be consistent with the National Contingency Plan, which generally requires that they include similar steps to those undertaken by EPA, including public participation, remedial investigations, and feasibility studies considering different treatment technologies and appropriate remedies.

notice letters, and then sends special notice letters when it is ready to negotiate with the PRP to clean up a site or fund its cleanup.<sup>11</sup>

### **Who Is Liable Under CERCLA**

CERCLA Section 107(a) outlines the following categories of persons or entities that may be liable for the costs or performance of cleanups of hazardous substances:

- (1) Current owners and operators of a facility where hazardous substances come to be located;
- (2) Owners and operators of a facility at the time that hazardous substances were disposed of at the facility;
- (3) Generators and parties that arranged for the disposal or transport of the hazardous substances;
- (4) Transporters of hazardous waste that selected the site where the hazardous substances were brought.

A lot of the terms in those four bullet points are legal works of art,<sup>12</sup> but suffice it to say that several types of “releases” or “disposals” of hazardous substances can lead to clean water utilities falling into one (or more) of those four categories of PRPs, including discharges of effluent (including end-of-pipe, combined sewer overflows [CSOs], sanitary sewer overflows [SSOs], and stormwater), as well as all three biosolids management practices (incineration, land-filling, and beneficial land application).

In other words, all of the work utilities do to protect human health and the environment in their communities every day can expose them to CERCLA liability when hazardous substances – like PFOA and PFOS – are entering their systems. While downplaying the threat this fact poses to utilities and public ratepayers (more on that later), EPA does acknowledge it in its enforcement discretion memo, which explains:

Community water systems and POTWs conduct public services by providing safe drinking water and managing and processing public waste. These entities are required to treat PFAS-contaminated sources of drinking water and receive PFAS-contaminated wastewater. They do not manufacture PFAS nor use PFAS as part of an industrial process. Through their operation processes, these parties may discharge

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<sup>11</sup> Additional information concerning EPA’s general CERCLA enforcement activities, PRP identification and communication, negotiations, and settlements can be found at <https://www.epa.gov/enforcement/superfund-enforcement>.

<sup>12</sup> Some definitely lean in the direction of a Jackson Pollock painting, if you catch our drift.

effluents, dispose or manage sewage sludge, biosolids, and drinking water treatment residuals; and arrange for the disposal of spent treatment media (i.e., activated carbon filters, anion exchange media, or membranes) and/or the discharge of leachate, permeate, or regeneration brines.<sup>13</sup>

### Existing CERCLA Exclusions Potentially Applicable to Clean Water Utilities

CERCLA does include several exclusions and defenses against liability that can apply to clean water utilities. Though limited in scope, they are important shields that have protected utilities from unwarranted CERCLA liability in the context of other hazardous substances and could provide some relief in the context of PFOA and PFOS under certain circumstances. Two of the most common are the exclusion from the definition of covered “releases” of (1) “federally permitted releases” and (2) the “normal application of fertilizer.”

#### Federally Permitted Releases

“Federally permitted releases” not subject to CERCLA liability or reporting requirements are just what they sound like: “releases” (i.e., discharges, emissions, etc.) made pursuant to certain permits issued under a federal environmental statute, including discharges under a CWA National Pollutant Discharge Elimination System (NPDES) permit.<sup>14</sup> Specifically, the CERCLA federally permitted release exclusion applies to: (A) discharges in compliance with an NPDES permit; (B) discharges “resulting from circumstances identified and reviewed and made part of the public record” with respect to an NPDES permit; and (c) continuous or anticipated intermittent discharges from a point source identified in an NPDES permit that are “caused by events within the scope of relevant operating or treatment systems.”<sup>15</sup>

While the general concept of the federally permitted release exclusion is clear, as you may have guessed from the statutory language quoted above, its scope is a little blurry. EPA has issued limited guidance on the exemption and few courts have addressed its application. In 1988, EPA proposed a rule on federally permitted releases, but that rule was

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<sup>13</sup> The memo makes similar acknowledgements for MS4s and publicly owned or operated municipal solid waste landfills, and also states that farms that apply biosolids as a soil amendment “provide for a beneficial application of a product from the wastewater treatment process...[which] can result in both economic and resource management benefits, including conservation of landfill space, reduction in methane gas from landfills, reduction of releases from incinerators, and reduced demand for synthetic fertilizers.”

<sup>14</sup> The federally permitted release exemption also applies to certain permits issued under the Clean Air Act, Resource Conservation and Recovery Act, and Safe Drinking Water Act.

<sup>15</sup> CERCLA § 101(10)(A)-(C).

never finalized. Even so, the preamble to that proposed rule confirmed that EPA at least at that time considered the scope of the NPDES permit exemption to include both pollutants discharged in compliance with the effluent limitations in an NPDES permit, as well as pollutants and other conditions that were reflected in the permit application process and made part of the public record.<sup>16</sup>

Unfortunately, however, EPA is less willing to make such statements these days. In the enforcement discretion policy accompanying the PFAS designations, when addressing NPDES effluent discharges from POTWs, EPA instead states that it “does not take a position on the applicability of a ‘federally permitted release’ as defined in CERCLA section 101(10).”<sup>17</sup>

Even assuming that courts will find that “federally permitted releases” include both NPDES-permitted discharges compliant with effluent limitations and releases of pollutants addressed in the permit application process but not limited in the permit (which we certainly hope they do), there are important limitations on the federally permitted release exclusion utilities should be aware of. Releases of hazardous substances that are listed in a facility’s NPDES permit which exceed the applicable permit limit are not considered “federally permitted releases.”<sup>18</sup> Discharges that EPA contends are “unpermitted,” such as SSOs, are also not likely to be covered. And the exclusion is unlikely to be available for past discharges made pursuant to permits that did not include consideration of PFOA and PFOS which, given CERCLA’s retroactivity, can potentially be the source of considerable liability in the context of so-called “forever chemicals.”

### The Normal Application of Fertilizer

The other primary exclusion applicable to utilities is that for the “normal application of fertilizer.”<sup>19</sup> Past EPA guidance indicates that the land application of biosolids as a soil

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<sup>16</sup> See 53 Fed. Reg. 27271-72 (Jul. 19, 1988).

<sup>17</sup> EPA points to a decision from the U.S. Court of Appeals for the D.C. Circuit in support of its position that “section 102 is [not] the appropriate mechanism to establish liability exclusions, and EPA questions whether it has the authority to do so through this provision.” *Kelley v. EPA*, 15 F.3d 1100, 1108 (D.C. Cir. 1994) (“Congress...has designated the courts and not EPA as the adjudicator of the scope of CERCLA liability”). This is also the case EPA has alluded to when asked by NACWA and others to conduct separate rulemakings clarifying the scope of the existing statutory exclusions for “federally permitted releases” and the “normal application of fertilizer” in the context of PFAS.

<sup>18</sup> See, e.g., [POTW Management](#) at 14-15.

<sup>19</sup> 42 U.S.C. § 9601(22).

amendment in accordance with 40 CFR Part 503 constitutes the normal application of fertilizer, and thus would typically not be considered a covered “release” subject to CERCLA liability and reporting requirements.<sup>20</sup>

Again, however, EPA’s statements on the scope of the exclusion in the context of the PFOA and PFOS designations are not giving us warm and fuzzy feelings. Specifically, EPA states in the final rule that:

EPA acknowledges that the CERCLA definition of ‘release’ explicitly excludes the ‘normal application of fertilizer.’ EPA believes this language is best read as requiring a site-specific analysis and that a categorical exclusion for all contaminated biosolid application using section 102(a) risks exceeding the limits of the exclusion as envisioned by Congress.<sup>21</sup>

EPA goes on to state that “site-specific decisions are also the more appropriate opportunity to evaluate unacceptable risk posed by specific releases, rather than a blanket exclusion for certain uses of PFAS-containing materials that may not account for site-specific risk.”<sup>22</sup> Not exactly the clear statement excluding beneficial land application of municipal biosolids from CERCLA liability that NACWA and the agricultural sector want to see.

Nor have court decisions been particularly illuminating to date. Few courts have evaluated the applicability of the exclusion, and some that did have taken a limited view of its scope. In particular, courts have struggled to define what constitutes the “normal”

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<sup>20</sup> See, e.g., EPA, [A Plain English Guide to the EPA Part 503 Biosolids Rule](#), at 52–53 (1994). See also, e.g., *Standards for the Use or Disposal of Sewage Sludge*, 58 FR 9248-01 (Feb. 19, 1993) (“If the placement of sludge on land were considered to be ‘the normal application of fertilizer,’ that placement could not give rise to liability under CERCLA. Today’s rule, as previously noted, establishes standards for sewage sludge when applied to the land for a beneficial purpose (i.e., as a fertilizer substitute or soil conditioner). Sludge placed on the land for such beneficial purpose and applied in compliance with the requirements for land application of sewage sludge provided in §§ 503.13(b) (2) and (4), § 503.14 and § 503.15 (where applicable) of the final rule today, and in accordance with accepted agricultural practices using appropriate application rates, which constitutes the normal application of fertilizer, does not constitute a ‘release.’”).

<sup>21</sup> See Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, U.S. Environmental Protection Agency, 89 Fed. Reg. 39124, 39168 (May 8, 2024).

<sup>22</sup> See 89 Fed. Reg. 39169.



application of fertilizers, with some even reaching the conclusion that the presence of hazardous substances suggests that the application is not “normal.”<sup>23</sup>

As discussed further below, given these uncertainties and the limitations of existing exclusions, NACWA and our sector partners are continuing our efforts to obtain more comprehensive statutory protections against unwarranted PFAS CERCLA liability for utilities.

## Question 2: What does this new rule do?

### PFOA and PFOS “Hazardous Substance” Designations

Under CERCLA Section 102(a), EPA can designate as “hazardous substances” any elements, compounds, mixtures, solutions or substances “which, when released into the environment, may present substantial danger to the public health or welfare or the environment.” The rule outlines EPA’s determinations that PFOA and PFOS present such a danger based on available scientific and technical information.

Specifically, the rule states that “in consideration of the evidence of adverse effects to human health and the environment from PFOA and PFOS exposure, their persistence and mobility in the environment, and the significant potential for human exposure due to their prevalence in the environment, EPA concludes that PFOA and PFOS may present a substantial danger to public health or welfare or the environment when released.” As such, the rule amends the CERCLA list of hazardous substances at 40 CFR Part 302.4 to include PFOA and PFOS, including their salts and structural isomers.

Notably, EPA has never designated a CERCLA hazardous substance under Section 102(a) before. The hundreds of other existing CERCLA hazardous substances were

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<sup>23</sup> See *Sheridan v. D&D Grading, Inc.*, No. 16-CV-5085(JS)(ARL), 2019 WL 1433086, at \*5 (E.D.N.Y. Mar. 29, 2019) (“Plaintiffs argue that ‘the normal application of fertilizer’ permits only that, and appear to argue that ‘fertilizer’ such as this, containing numerous hazardous substances, does not fall within the exception. The Court agrees.”); *Fallowfield Dev. Corp v. Strunk*, No. CIV. A. 89-8644, 1994 WL 498316, at \*1 (E.D. Pa. Sept. 2, 1994), *aff’d sub nom. Fallowfield Dev. Corp. v. Strunk*, 96 F.3d 1432 (3d Cir. 1996) (holding application of “sludge” fertilizer on cornfields “not ‘normal’ because it was contaminated” with lead and chlorinated solvents). See also, *United States v. Morrison-Quirk Grain Corp.*, No. CV88-L-720, 1990 WL 482139, at \*4 (D. Neb. May 4, 1990) (application of pesticide according to manufacturer’s instructions and industry practice not “normal application” where pesticide leached down into grain elevator); *City of Tulsa v. Tyson Foods, Inc.*, 258 F. Supp. 2d 1263, 1288 (N.D. Okla. 2003), *vacated pursuant to settlement* (July 16, 2003)(denying summary judgment and holding that interpretation of “normal application of fertilizer” is a fact-based inquiry).

automatically listed because they were first found to be CWA hazardous substances or toxic pollutants, Clean Air Act (CAA) hazardous air pollutants, Resource Conservation and Recovery Act (RCRA) hazardous wastes, or Toxic Substances Control Act (TSCA) imminently hazardous substances.<sup>24</sup>

In other words, this is the first time EPA has subjected substances to CERCLA's cleanup and liability regime without first addressing the substances under its primary air, water, waste and toxics laws. This has led to questions about what sites may rise to the level of needing remediation and what the appropriate cleanup standards should be. The indestructible nature and ubiquity of PFAS likewise present unique challenges in the context of CERCLA's traditional removal and remediation processes (which, as we noted, were crafted with abandoned leaking barrels in mind).<sup>25</sup>

EPA downplays many of these questions and concerns in the preamble of the final rule, stating that CERCLA actions are always driven by site-specific cleanup levels (known as "applicable or relevant and appropriate requirements," or ARARs), and pointing to the recently promulgated PFOA and PFOS Safe Drinking Water Act (SDWA) maximum contaminant levels (MCLs), as well as certain state PFAS standards, as examples of potential PFAS ARARs.<sup>26</sup> EPA also takes the position that "many of the same response and cleanup methods available" to address other hazardous substances can be used to remove and remediate PFAS, including, for example, asserting in the Regulatory Impact Analysis that "wastewater treatment plants may dispose of sludge by incineration which can destroy PFOA and PFOS under certain conditions."<sup>27</sup>

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<sup>24</sup> More on Congress' inability to break out a thesaurus and find synonyms for the word "hazardous" below.

<sup>25</sup> We may have PFAS in our homes and bodies, but last we checked we didn't have barrels from Oxy Chem laying around the kitchen. Expired cereal is about the worst we've got going on in that regard.

<sup>26</sup> See 89 Fed. Reg. 39171-72 ("the current regulatory landscape for PFOA and PFOS is sufficient to inform future remedies, and regulatory actions to address PFOA and PFOS are increasing").

<sup>27</sup> While NACWA strongly supports the ongoing efforts by wastewater utilities and others to study potential thermal PFAS destruction technologies, this assertion came as a bit of a surprise to us given that EPA's recently released document, [Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances – Version 2 \(2024\)](#), states that "there is low confidence in the reliability of [SSIs] to control PFAS releases." NACWA was also troubled by EPA's lack of acknowledgement of incinerator capacity constraints throughout the country, which have, somewhat ironically, been largely driven by stringent EPA air regulations.

NACWA is continuing to evaluate EPA's assumptions underlying the rule, as well as how CERCLA removal and remediation actions for PFOA and PFOS may impact utilities. Suffice it to say, however, that we are not yet convinced of EPA's rosy outlook for applying a strict liability federal cleanup regime to ubiquitous substances that were commercially engineered to be indestructible, that we do not yet know how to treat for in the volume of wastewater and biosolids generated daily, and for which we do not yet know what concentrations will be considered protective of public health and the environment.

#### "Totality of the Circumstances" Analysis

In EPA's initial proposal to designate PFOA and PFOS as hazardous substances, the Agency took the position that CERCLA Section 102(a) precluded them from considering any costs of the designations when making their determination. NACWA and others found the assertion that EPA was somehow legally precluded from considering whether they were about to effectively turn every American washing a non-stick pan into a hazardous substance transporter...questionable. Apparently upon further reflection, so did their counsel.

EPA states in the final designations that it "is not resolving whether section 102 is best construed as precluding or requiring consideration of costs in designating a hazardous substance."<sup>28</sup> Rather, EPA determined that, whether just looking at science and technical information or also including consideration of costs pursuant to a "voluntary" "totality of the circumstances" analysis,<sup>29</sup> the designations are justified.

In particular, while downplaying the potential impacts – including the costs associated with complex litigation and environmental cleanups – which the designations could impose on utilities, EPA focused on the benefits associated with achieving more timely cleanups of contaminated sites and, allegedly, "holding polluters accountable for contamination they caused (i.e., the "Polluter Pays" principle)."<sup>30, 31</sup> NACWA continues to

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<sup>28</sup> Likely translation: we didn't like our arguments either and would now like to ghost them.

<sup>29</sup> According to EPA, this expanded economic assessment includes a Regulatory Impact Analysis (RIA) which is consistent with E.O. 12866 and OMB Circular A-4.

<sup>30</sup> See 89 Fed. Reg. 39125.

<sup>31</sup> EPA failed to respond to concerns raised by NACWA that, in many instances, PFAS manufacturers may be able to fully escape CERCLA liability for PFAS cleanups. Federal court cases interpreting CERCLA, including one from the U.S. Supreme Court, have held that companies that manufactured but were not involved in disposing of a hazardous substance are not responsible for cleaning it up. Thus, unless the manufacturer was involved in the actual disposal, CERCLA would currently not hold them accountable for the environmental damage they caused. See, e.g., *Burlington Northern and*

evaluate EPA's "totality of the circumstances" analysis and its potential legal vulnerabilities, and has serious concerns about how it addresses the costs the rule could impose on clean water utilities.

### **EPA Enforcement Discretion Policy**

The same day EPA put out the pre-publication version of the PFOA and PFOS hazardous substance designations, the Assistant Administrator of EPA's Office of Enforcement and Compliance Assurance, David Uhlmann, issued a memorandum to EPA's Regional and Deputy Administrators and Counsels, [PFAS Enforcement Discretion and Settlement Policy Under CERCLA](#). In that memo, EPA indicates that it does not intend to seek response actions or costs under CERCLA related to PFOA and PFOS from POTWs,<sup>32</sup> MS4s,<sup>33</sup> community water systems,<sup>34</sup> municipal solid waste landfills, or farms applying biosolids, as "equities do not support" doing so.<sup>35</sup>

Moreover, the memorandum outlines how EPA intends to help shield those entities (let's call them "passive receivers" here for ease of use) from third-party suits brought by other PRPs for PFAS-related cleanup costs by doing two things: (1) requiring other PRPs to waive their rights to sue passive receivers as a condition of settling their own liability with

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*Santa Fe Ry. Co. v. U.S.*, 556 U.S. 599 (2009) (holding where a company makes a "useful product" but is not engaged in its ultimate "disposal," the company is not responsible for CERCLA cleanups necessitated by contamination from that product).

<sup>32</sup> Defined as "a treatment works (as defined by CWA section 212) that is owned by a state or municipality (as defined by CWA section 502(4))."

<sup>33</sup> Defined as "a conveyance or system of conveyances that is: owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.; designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches); not a combined sewer; and not part of a sewage treatment plant or POTW. See 40 C.F.R. § 122.26(b)(8)."

<sup>34</sup> Defined as "a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. See 40 C.F.R. § 141.2."

<sup>35</sup> The memo also directly applies to publicly owned airports and local fire departments, and states that EPA will consider applying it to additional entities (presumably contractors) working on behalf of state, local, and tribal governments to perform public services related to drinking water, stormwater, wastewater, residuals, biosolids, and solid waste management. When determining applicability to the later group, EPA states that it will consider whether the entity manufactured or used PFAS, and to what degree the entity is actively involved in the use, storage, treatment, transport, or disposal of PFAS.

EPA; and (2) entering into settlements<sup>36</sup> with passive receivers which would then legally protect them from contribution claims by other PRPs<sup>37</sup> seeking to make them pay more.

EPA notes in the memorandum that this enforcement discretion policy does not apply to PFAS reporting requirements (see Question 3 below), nor does it extend to enforcement actions taken under any other EPA programs or statutes. And it includes the familiar disclaimer language that it is non-binding and “is intended solely for the guidance of employees of the Agency.”<sup>38</sup> Nevertheless, the memorandum provides a clear, helpful statement that EPA does not believe the water sector should be held accountable under CERCLA for PFAS cleanups.

Obtaining such a clear enforcement discretion policy was a major goal of NACWA’s administrative advocacy. NACWA thanks our member utilities who diligently and successfully conveyed to EPA the critical need for such a policy and were instrumental to its adoption.<sup>39</sup>

### **Question 3: What do I need to do immediately to comply with the new rule?**

Importantly, PFOA and PFOS CERCLA cleanups will not start overnight. For new EPA-led cleanup actions, site evaluation and selection alone will likely take years or more. Other actions, including private party cleanups, reopening of existing cleanup plans to address PFOA and PFOS, and short-term removal actions, could begin sooner, but are still not automatically triggered by the rule. The only requirements the rule directly puts into place

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<sup>36</sup> The memo notes that these settlements can include *de minimis* or *de micromis* settlements, limited “ability to pay” settlements that address undue financial hardships, and settlements requiring in-kind services including monitoring and implementation of institutional controls.

<sup>37</sup> The memo also points out that passive receivers can themselves seek settlement with EPA so as to be able to take action to address contamination while obtaining protection from potential contribution claims from other PRPs.

<sup>38</sup> In other words, EPA, courts, and other PRPs are not bound by it.

<sup>39</sup> In particular, NACWA thanks NACWA Board of Directors members Mike Witt, General Counsel, Passaic Valley Sewerage Commission, and Tom Sigmund, Executive Director, NEW Water, as well as NACWA’s Legal Affairs Committee Co-Chairs, Devon Goodrich, Senior Counsel, New York City Department of Law, and Emily Jackson, Chief Legal Officer, Metro Water Recovery, for their tireless advocacy on this issue on behalf of the NACWA membership.



which may immediately impact utilities once the designations take effect on July 8, 2024, are those related to reporting.

### **New Reporting Requirements**

Under CERCLA Sections 103 and 111(g), facilities – including clean water utilities – must report releases of any PFOA, PFOS, their salts or structural isomers at or above the reportable quantity (RQ) of one pound or more within a 24-hour period<sup>40</sup> to the National Response Center as soon as they have knowledge of the release. Facility owners or operators must also provide reasonable notice to potentially injured parties.

Section 304 of the Emergency Planning and Community Right-to-Know Act (EPCRA) separately requires facility owners or operators to immediately notify their community emergency coordinator for the local emergency planning committee (LEPC) about any area likely to be affected by the RQ release, notify the State Emergency Response Commission (SERC) of any State or Tribal region likely to be affected, and submit a follow-up written report to their SERC and LEPC as soon as practicable after the release.

### Application to Clean Water Utilities

As noted above, effluent discharges (including end-of-pipe, CSOs, SSOs, and stormwater) and biosolids management activities (including land application, landfilling, and incineration) can all be considered “releases” under CERCLA subject to these reporting requirements. However, the same exclusions that may shield utilities from cleanup liability for certain releases – including those for “federally permitted releases”<sup>41</sup> and the “normal application of fertilizer” – also exempt those releases from CERCLA and EPCRA reporting requirements.

Even where utility releases are not covered by an exemption, NACWA does not anticipate that most utility effluent discharges or biosolids management activities will release enough PFOA or PFOS to trigger the one pound within 24-hours reportable quantity threshold. Additionally, non-exempted releases can qualify for reduced reporting

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<sup>40</sup> This is the statutory default RQ. While EPA may change the RQ for either PFOA or PFOS under CERCLA, it must do so through a formal notice-and-comment rulemaking process, and EPA has not indicated that it intends to set a different RQ for either PFOA or PFOS at this time.

<sup>41</sup> EPA notes in its response to comments that “generally, any release that violates a standard or limit specified in a facility’s NPDES permit must be reported pursuant to CERCLA section 103 and EPCRA section 304. If the permit limit is below the RQ for these substances, those releases are not required to be reported.” See 89 Fed. Reg. 39175.

obligations if they are “continuous releases.”<sup>42</sup> However, NACWA notes that EPA did not provide answers in the final rule to questions posed by NACWA and others concerning how to consider simultaneous releases across plants or systems, or how to determine release quantities when inputs of PFOA or PFOS into a system fluctuate.

To help determine whether your effluent discharges or biosolids management practices may trigger reportable releases, you can utilize NACWA’s [Reportable Quantity Calculator](#). The calculator includes information on average concentrations of PFOA and PFOS in wastewater and biosolids from recent research, but utility-specific data is recommended if there is a likelihood that your utility may be exceeding the RQ due to high daily flows or large daily quantities of land application. Utilities should use the calculator as a screening tool only, not for making regulatory determinations. NACWA also encourages utilities who may have PFOA or PFOS in their effluent discharges or biosolids to consult with counsel to ensure they are complying with CERCLA’s reporting requirements.

#### Duty to Investigate

Importantly, the rule is unclear with respect to whether utilities need to affirmatively investigate whether a reportable quantity of PFOA or PFOS has been released. In response to questions concerning whether the designations effectively require monitoring under certain circumstances, EPA states that “this rule does not require monitoring and analysis specifically.”<sup>43</sup>

Generally speaking, both CERCLA and EPCRA require the person in charge of a facility to notify the applicable authorities when they have *knowledge* that there has been a release in excess of an RQ. Some courts and administrative law judges have interpreted this to

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<sup>42</sup> See 42 U.S.C. § 9603(f); 52 Fed. Reg. 13381, 13384 (Apr. 22, 1987). Facilities may report releases that are “continuous” and “stable in quantity and rate” either on a per occurrence basis or as a “continuous” release. Reporting as a “continuous release” includes the following three steps: (1) initial notification by phone, (2) follow-up written report within 30 days after initial notification, and (3) additional written report on the first anniversary of the initial 30-day written report. No additional reporting is required, unless there is a statistically significant increase in the hazardous substance released or there are other changes to the character of the release. Detailed guidance regarding the requirements and criteria for this exemption can be found in EPA’s [Reporting Requirements for Continuous Releases of Hazardous Substances](#).

<sup>43</sup> We could have done without the “specifically.” However, EPA does later state that “EPA does not intend to require any further testing beyond that which is already required by other statutes and their implementing regulations,” though “testing may be required on a site-specific basis, consistent with CERCLA section 104(b).”

require reporting where there is either *actual* or *constructive* knowledge.<sup>44</sup> As such, where a utility has a strong reason to believe that PFOA or PFOS are present in a non-exempt discharge, it is possible that the utility could have an obligation to investigate and, where applicable, report.<sup>45</sup>

Utilities should also note that, if reporting is required, notification must be made *immediately*<sup>46</sup> upon knowledge of a release of a hazardous substance in excess of the reportable quantity.<sup>47</sup>

## State Laws

Some state environmental laws cross-reference CERCLA's hazardous substances list, and their requirements may therefore apply to PFOA and PFOS once the designations take effect. NACWA encourages utilities to review and discuss with counsel their applicable state laws, as what, if any, additional state requirements may become immediately applicable for utilities will vary by state.

## Indirect Impacts

While difficult to predict and not specifically required by the final rule, some utilities may also face more immediate indirect impacts upon its finalization. For example, just as utilities will be looking at taking steps to mitigate their own potential liability under CERCLA, landfill operators, farmers and other biosolids partners will likely be doing the same, and as a result may change their own policies and practices with respect to municipal biosolids. Likewise, pressure from the media and citizen groups, as well as local political pressure, may impact utility next steps. NACWA has and is continuing to develop resources to help utilities navigate these issues, including a [communications toolkit for PFAS and biosolids](#).

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<sup>44</sup> See, e.g., *Sierra Club, Inc. v. Tyson Foods, Inc.*, 299 F. Supp. 2d 693, 707 (W.D. Ky. 2003) (quoting *In the Matter of Thoro Products Co., Respondent*, No. EPCRA VIII-90-04, 1992 WL 143993, at \*11 (May 19, 2002)).

<sup>45</sup> This could include, for example, an SSO that a POTW knows or has reason to know is downstream from a facility that uses or manufactures PFAS.

<sup>46</sup> The rule did not provide information concerning how to account for delays in analytical reports.

<sup>47</sup> See EPA, [Emergency Release Notifications: EPCRA Section 304 and CERCLA Section 103](#).

#### **Question 4: Does the fact that PFOA and PFOS are “hazardous substances” mean that, legally, I now have to manage biosolids or treat effluent containing PFOA or PFOS differently?**

No, it does not. Before we explain why, we feel the need to give a public service warning. What we are about to say will make you want to shred the next few paragraphs to pieces. That is understandable, we simply ask that you not blame the messenger.<sup>48</sup>

As previously mentioned, CERCLA is primarily a backwards-looking statute that addresses legacy contamination. While utilities will want to consider what actions they are currently taking that may expose them to potential CERCLA liability in light of the designations – and may ultimately be required to take certain actions as part of an adopted removal or remediation plan under CERCLA – CERCLA does not impose general substantive requirements on the handling or disposal of “hazardous substances.”

There is a federal statute that imposes cradle-to-grave requirements on certain dangerous substances: the Resource Conservation and Recovery Act (RCRA). Under RCRA, “hazardous wastes”<sup>49</sup> – which are different from CERCLA hazardous *substances*<sup>50</sup> – are subject to substantive transportation, treatment, storage, and disposal requirements.<sup>51</sup>

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<sup>48</sup> In case you don’t believe us – which we really couldn’t fault you for – EPA’s website includes information on all of these topics: <https://www.epa.gov/hw/frequent-questions-about-hazardous-waste-identification>.

<sup>49</sup> RCRA hazardous wastes are solid wastes that have properties that make them dangerous or capable of having a harmful effect on human health or the environment. Under RCRA, wastes are designated as hazardous either under a hazardous waste listing (which are wastes from specified manufacturing or industrial processes), or under a characteristic determination (which looks at the waste’s ignitability, corrosivity, reactivity, and toxicity).

<sup>50</sup> And just to confuse everything a little bit more, as we mentioned above, all RCRA hazardous wastes are automatically designated as CERCLA hazardous substances. But CERCLA hazardous substances are not automatically designated (or regulated) as RCRA hazardous wastes. It’s a one-way street.

<sup>51</sup> We note that wastes within wastewater utility collection and treatment systems are generally excluded from RCRA’s requirements pursuant to RCRA’s domestic sewage exclusion. However, wastes, including biosolids, outside of such facilities typically must be independently evaluated to determine whether they meet the definition of “hazardous waste” and are thereby subject to RCRA’s management and disposal requirements. We will leave further explanation of that for another day – we’ve done enough damage to your sanity for now.

EPA has not yet proposed to designate any PFAS as RCRA hazardous wastes. Therefore, federal requirements related to how to handle and dispose of them do not apply at this time. However, in what may ultimately be a precursor to a RCRA hazardous waste designation, EPA has proposed to list nine PFAS, including PFOA and PFOS, as RCRA “hazardous constituents.”<sup>52</sup> EPA considers RCRA hazardous constituents to be chemicals of concern that may be appropriate for a hazardous waste designation. So, stay tuned, but for now no PFAS are subject to regulation as RCRA hazardous wastes.<sup>53</sup>

Nor are there currently other federal PFAS-specific requirements that would, for example, directly dictate what types of landfills<sup>54</sup> you can bring your biosolids to. But utilities should be aware that EPA is taking a number of actions that could ultimately lead to such requirements. For example, the Agency is undertaking risk assessments for PFOA and PFOS in biosolids.<sup>55</sup> If risk is found, EPA will develop appropriate limits and compliance requirements for biosolids management under CWA Part 503. Likewise, with respect to effluent discharges, EPA is developing recommended aquatic life<sup>56</sup> and human health<sup>57</sup> water quality criteria under CWA Section 304(a) which, once adopted into state water

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<sup>52</sup> RCRA hazardous constituents are chemicals that have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms. They can be assessed and addressed as part of RCRA “corrective action” processes at permitted and non-permitted hazardous waste treatment, storage and disposal facilities (TDSFs).

<sup>53</sup> NACWA has already expressed serious concerns to EPA over any RCRA rulemaking that would cause biosolids containing PFAS to meet the definition of “hazardous waste.” In addition to the significant problems that would cause for utilities beneficially land applying biosolids – which accounts for the management of 60% of biosolids across the country – RCRA subtitle C hazardous waste landfills cannot accept organic wastes, including biosolids, because they were not constructed with methane treatment.

<sup>54</sup> Interestingly, EPA states in its responses to comments that it “rejects the assertion that it has not evaluated if sufficient capacity exists for disposal and storage of PFOA and PFOS contaminated materials,” and points to the Biennial Hazardous Waste Report capacity assessment which “indicated that there is adequate capacity nationwide through 2044.” See 89 Fed. Reg. 39179.

<sup>55</sup> EPA has stated that it anticipates proposing these risk assessments in late summer or early fall of 2024 and finalizing them by the end of 2024.

<sup>56</sup> EPA proposed 304(a) aquatic life criteria for [PFOA](#) and [PFOS](#) in May 2022 and anticipates finalizing them in the coming months. The Agency has indicated that the final criteria are likely to be more stringent than originally proposed.

<sup>57</sup> EPA will likely propose human health water quality criteria in late summer 2024, utilizing the reference doses and cancer slope factors established in the SDWA PFAS MCLs.



quality standards, could lead to directly enforceable effluent limitations in utility NPDES permits. And of course, as noted above, even absent EPA legally mandating certain conduct, external local pressures or actions taken by biosolids partners or landfills in response to the designations could effectively require changes in utility practices.

### **Question 5: The Biggie – Are utilities going to have to pay for PFOA and PFOS cleanups under the new rule?**

It depends on who you ask.

#### **EPA's Position**

EPA takes the position that, because CERCLA has not ensnared utilities around the country in costly litigation and imposed on them massive cleanup costs in the context of other listed hazardous substances, fears that PFAS designations will do so are overblown. Rather, EPA “expects that those parties that are primarily responsible for contamination will bear the brunt of costs to address PFOA and PFOS releases while parties that are not primarily responsible can rely on statutory protections to limit liability, settlement with EPA to secure contribution protection, and EPA enforcement discretion to provide additional comfort.”<sup>58</sup>

EPA in fact gets a little sassy in response to the (we think legitimate) concerns the water sector raised during the rulemaking process, stating in the preamble that:

CERCLA will continue to operate as it has for decades. Indeed, CERCLA’s liability framework, coupled with EPA enforcement policies, has operated in a rational way for the more than 800 CERCLA hazardous substances already within its purview, some of which are similar to PFOA and PFOS in terms of ubiquity, mobility, and persistence...Forty years of CERCLA experience indicates that designation should not result in unusual CERCLA liability or litigation outcomes for parties who did not significantly contribute to the contamination.<sup>59</sup>

While that does beg the question of why, if passive receivers have nothing to worry about, EPA felt the need to immediately issue a memorandum outlining its intention to undertake actions to shield them from CERCLA liability, EPA eventually concedes that “some parties that do not bear primary responsibility for litigation may be sued and face

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<sup>58</sup> See 89 Fed. Reg. 39160.

<sup>59</sup> See 89 Fed. Reg. 39130.

uncertain litigation costs as a consequence.”<sup>60</sup> Because of this, EPA “developed the enforcement discretion policy.”<sup>61</sup> However, EPA insists throughout the final rule’s preamble that issuance of the policy was “unnecessary,” and that utilities are at no greater risk of being exposed to unwarranted CERCLA liability as a result of the final designations.

### **NACWA’s Position**

NACWA remains very concerned that these designations could subject utilities to extensive liability for PFAS cleanups, thereby turning CERCLA’s “polluter pays” model on its head and requiring communities to foot the bill for legacy pollution caused by companies that profited from PFAS sales and use for decades.

NACWA greatly appreciates EPA’s enforcement discretion memo and supports utilities seeking to avail themselves of both its terms and existing CERCLA exclusions. We also acknowledge that, in certain situations, they can provide utilities with important protections against CERCLA liability. However, as we have seen in numerous examples,<sup>62</sup> despite its very good intentions, EPA’s ability to protect utilities – and even, possibly, itself<sup>63</sup> – from third party litigation is statutorily limited under CERCLA.<sup>64</sup>

The Agency cannot shield utilities from suits initiated by private parties seeking cost recovery for voluntary cleanups, which NACWA is concerned could become more

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<sup>60</sup> Unsurprisingly, EPA also asserts that, in terms of accounting for such costs in the “totality of the circumstances” analysis, these potential litigation costs “cannot be known at this juncture with reasonable certainty.” See 89 Fed. Reg. 39163.

<sup>61</sup> See 89 Fed. Reg. 39161.

<sup>62</sup> See, e.g., the Newark, N.J. Diamond Alkali Superfund Site example outlined in [NACWA's comments](#) on EPA’s enforcement discretion policy. See also, the Fox River, WI case cited in [NACWA's comments](#) on the proposed PFOA and PFOS designations.

<sup>63</sup> The U.S. Chamber of Commerce previously [called](#) EPA’s stated intention to utilize its enforcement discretion to shield clean water agencies from CERCLA PFAS liability a potential “protection racket,” arguing that limiting the ability of PRPs to sue “any entity, public or private” for cleanup costs raises “due process and takings issues” as well as other “policy concerns.” NACWA continues to closely monitor whether any impacted stakeholders intend to challenge EPA’s issuance of the enforcement discretion policy.

<sup>64</sup> As noted above, the policy is also discretionary, non-binding, and can be changed at any time.

common in the context of PFAS.<sup>65</sup> Furthermore, even in situations where EPA can exercise its enforcement discretion, that exercise involves bringing utilities into highly complex litigation, determining their potential liability, and entering into a settlement agreement. In the best of circumstances, those lengthy legal and technical processes can consume significant community funds that would be better spent on utility projects benefiting human health and the environment. And “cleanup funding cage matches” that can involve hundreds of massive corporations with teams of attorneys fighting EPA and utilities every step of the way are, to put it mildly, not the best of circumstances.

NACWA also is concerned that EPA has systemically failed to recognize that the ubiquity of PFAS, their constant introduction into POTWs and MS4s from domestic sources which cannot be controlled under the CWA’s pretreatment program, the lack of effective and affordable treatment technologies, and the fact that most utility NPDES permits do not yet contain PFAS limits (and therefore provide at best a very limited shield against CERCLA liability) all present unique challenges for utilities in the context of the PFOA and PFOS designations. Likewise, the rule’s indirect impacts, including the additional strains it will likely put on the availability of already scant biosolids management options, cannot be overstated. These impacts were woefully underacknowledged, where acknowledged at all, in EPA’s cost analysis.<sup>66</sup> This is of significant concern to NACWA and is an area where future legal challenges to the final rule may be appropriate.

We also find it troubling that the preamble to the designations lists seven broad categories of entities that may be potentially affected by the designations: (1) PFOA and

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<sup>65</sup> EPA downplays issues raised by NACWA and others related to cost recovery actions, as such actions are limited to recovery of costs “consistent with the National Contingency Plan” and would only be brought by parties who would have the financial means to conduct cleanups in the first place. See 89 Fed. Reg. 39162. NACWA acknowledges these points, but they do not address the underlying issue: it is possible that private cleanups may be conducted with more frequency at sites with PFAS contamination given the ubiquity of PFAS and the low levels at which they may be found to pose risks. As such, utilities may face increased liability in terms of funding such cleanups than has been the case in the past with other hazardous substances.

<sup>66</sup> The Minnesota Pollution Control Agency developed a report, [Evaluation of Current Alternatives and Estimated Cost Curves for PFAS Removal and Destruction from Municipal Wastewater, Biosolids, Landfill Leachate, and Compost Contact Water](#), estimating that, while PFAS can be purchased for between \$50-\$1,000 per pound, it would cost between \$2.7 million - \$18 million per pound to remove PFAS from municipal wastewater depending on the size of the facility in question. NACWA acknowledges that estimating indirect costs of Agency actions can be challenging, but the fact that states have worked to appreciate the potential impacts their own PFAS-related actions could have on wastewater utilities underscores the need for EPA to do so for such an impactful national rulemaking.

PFOS manufacturers; (2) PFOA and PFOS processors; (3) manufacturers of products containing PFOA or PFOS; (4) downstream users of PFOA and PFOS; (5) downstream users of PFOA or PFOS products; (6) waste management facilities; and (7) wastewater treatment facilities. Two of those things are not like the others but, unfortunately, CERCLA often does not make such distinctions.

**Question 6: It really sounds like Congress should step in to shield utilities and the communities they serve from liability for PFAS cleanups. What is the status of efforts to obtain a statutory exemption from CERCLA PFAS liability for the water sector?**

Urging Congress to enact legislation amending CERCLA to ensure that clean water utilities and other “passive receivers” of PFAS<sup>67</sup> do not shoulder the costs of funding PFAS cleanups remains the top priority of the Water Coalition Against PFAS, which, in addition to NACWA, includes the American Water Works Association, Association of Metropolitan Water Agencies, National Rural Water Association, and National Association of Water Companies. And we are making progress!

In the Senate, S. 1430, the Water Systems PFAS Liability Protection Act, was introduced by Sen. Cynthia Lummis (R-WY) in May 2023. That legislation would shield stormwater, wastewater, and drinking water agencies from CERCLA PFAS liability. The Senate Environment and Public Works (EPW) Committee held a hearing in March 2024, *Examining PFAS as Hazardous Substances*, during which NACWA Board of Directors member Mike Witt, General Counsel at Passaic Valley Sewerage Commission, gave strong testimony on behalf of the Coalition in support of S. 1430. Bipartisan talks are now underway among EPW committee members concerning potential compromise legislation.

On the House of Representatives side, the companion to S. 1430, H.R. 7944, was introduced on a bipartisan basis in April 2024 by Reps. John Curtis (R-UT) and Marie Gluesenkamp Perez (D-WA).

NACWA firmly believes clean water agencies should be viewed as part of the solution for PFAS, not the problem, and should be treated as such through the enactment of both statutory protections from unwarranted liability and increased funding to help develop

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<sup>67</sup> In April 2023, EPA took comment on whether it should also designate seven additional PFAS – PFBS, PFHxS, PFNA, HFPO-DA (Gen X), PFBA, PFHxA, or PFDA – as CERCLA hazardous substances, as well as whether it should designate precursors (of the seven additional PFAS or PFOA or PFOS) or categories of PFAS as hazardous substances. In other words, the PFOS and PFOA designations are likely only the beginning of potential PFAS CERCLA liability for utilities, with precursors and PFAS that have not been subject to phase out programs posing additional concerns.

and implement critical treatment technologies and meet emerging regulatory requirements.

NACWA thanks the membership for their ongoing outreach to their representatives in support of these legislative efforts. That outreach directly contributed to the Senate EPW holding its hearing earlier this spring and continues to create momentum for Congressional action. We also thank the NACWA Board for their continued support of the Association's coordination across the water sector on Congressional advocacy through the Water Coalition Against PFAS. Through these efforts, please trust that NACWA staff is working every day to advance this issue on Capitol Hill.

### **Question 7: What resources does NACWA have to help me think through next steps in light of these designations?**

NACWA is currently working with outside counsel to develop a "checklist" of issues utilities should be considering in light of the PFOA and PFOS CERCLA hazardous substance designations. Those include things like discussing potential liabilities with your biosolids partners and insurance providers, taking steps to limit future liability under the CWA's pretreatment program and other authorities, reviewing contracts and insurance policies, and developing communications plans. The checklist will be available in the coming weeks and will be distributed to all members once finalized.

NACWA also has the following resources available for utilities:

**[PFAS Considerations Document](#)** – designed to help utilities navigate the quickly evolving, challenging PFAS federal and state regulatory landscape.

**[Communications Toolkit for PFAS and Biosolids](#)** – intended to help utilities navigate PFAS issues with your local media and customers.

**[Reportable Quantities Calculator](#)** – designed to help determine whether a utility's effluent discharges or biosolids generation could trigger CERCLA PFAS reporting requirements.

**[Legal Affairs Committee CERCLA Presentation](#)** – provides background information on CERCLA and PFAS hazardous substance designations.



## ITEM NO. RA7 OCEAN PROTECTION COUNCIL REPORT ON MICROPLASTICS REMOVAL

### Recommendation

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

### Strategic Plan Linkage

1. **Regulatory Compliance:** Proactively meet or exceed regulatory requirements for protection of the environment and public health.
  - a. Represent EBDA and the Member Agencies' interests by preemptively engaging in development of emerging regulations and permits and advocating for reasonable, science-based decisions.
  - e. Track and share scientific and regulatory developments related to emerging contaminants, and advocate for source control.

### Background

Microplastics are tiny bits of plastic five millimeters or smaller, and they are a ubiquitous pollutant that have been found nearly everywhere researchers have looked. In a landmark [study](#) published in 2019, San Francisco Estuary Institute found microplastics throughout San Francisco Bay's water, sediment, and fish. Additionally, the researchers found that approximately 130 million microparticles are discharged per day to the Bay in treated wastewater effluent, or approximately 47 billion microparticles annually, of which 17 billion are estimated to be plastic. While this sounds like a lot, it is notable that researchers found estimated microplastic loads from stormwater to be approximately 300 times greater than the estimated annual discharge from all wastewater treatment plants discharging into San Francisco Bay.

### Discussion

In June 2020, the California Ocean Protection Council awarded \$225,236 to the Southern California Coastal Water Research Project Authority (SCCCWRP) to conduct a study assessing the efficacy of microplastic removal with various wastewater treatment methods. The study involved extensive sampling effort at seven wastewater treatment facilities, including EBDA's combined outfall.

The findings conform with prior research conclusions that treatment successfully removes the vast majority of microplastics from effluent. Primary treatment accounted for the majority of the removal efficiency, with secondary treatment removing over 90% of the microplastic particles remaining after primary treatment. Plants with tertiary treatment have even higher removal efficiency. Microplastics removed in the treatment process likely partition to the solids, and this study did not look at microplastics present in biosolids.

Another important finding of this study is that the levels of microspheres present in wastewater appears to have decreased since previous studies were conducted. This suggests that microbead bans enacted through legislation at the state and federal level have been effective.

The study therefore provides further support for the wastewater community's position that the most effective way to address microplastics in effluent is through upstream source control.

Lastly, this study demonstrated that current methods for microplastics sampling in wastewater are incredibly challenging to implement. Considerable staff time is involved in monitoring the sampling apparatus to address clogging filters and other issues. EBDA staff wishes to extend appreciation to San Leandro lab staff for the time and dedication they devoted to participating in this study.

# Characterizing the Removal of Microplastics by California Wastewater Treatment Plants: Implications for Management Strategies

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## EXECUTIVE SUMMARY

This report details a screening-level study to ascertain levels and compositions of microplastics in selected wastewater treatment plants (i.e., Publicly Owned Treatment Works or POTWs) in coastal California. This information is used to predict initial estimates of removal efficiencies for microplastics at various levels of wastewater treatment (e.g., primary, secondary, tertiary). Seven POTWs in major coastal urban areas of the state participated in this study. Wastewater samples were collected in influent (n = 7), primary effluent (n = 6), secondary effluent (n = 13), tertiary effluent (n = 4), and biosolids (n = 5) at various locations at these POTWs between November 2022 and December 2023. For each of two sampling events per POTW, 1400-5760 L of effluent water was collected using online filtration, and 19-52 L of influent water was collected using standard integrative autosamplers. Microplastic particles were extracted from these samples using an acid/alkaline digestion technique to destroy interferences from organic particulate matter and density separation to remove inorganic particulates, and quantified and identified using visual microscopy and Fourier-transform infrared spectroscopy. Concentrations and compositions of microplastics in wastewaters and biosolids were measured, from which initial broad estimates of removal efficiencies across stages of treatment (primary, secondary, tertiary), and discharge from final effluent could be computed.

Microplastics levels were variable amongst POTWs and treatment levels, and decreased substantially in the first treatment stage with further removal over each subsequent treatment stage. Median total concentrations of microplastic particles (>125  $\mu\text{m}$ ) were 11.6 particle/L in influent (range 4.4-52.4), 1.0 particles/L in primary effluent (range 0.09-3.4), 0.3 particles/L in secondary effluent (range 0.01-1.5), and 0.05 particle/L in tertiary effluent (range 0.002-0.1). Overall removal efficiencies between influent and final effluent averaged  $95.3 \pm 6.7\%$ ,  $99.1 \pm 0.7\%$ , and  $99.9\%$  for primary, secondary, and tertiary treatment, respectively. Primary treatment accounted for the majority of the removal efficiency, with secondary treatment removing an average of  $91.8 \pm 10.7\%$  of microplastic particles remaining after primary treatment, and tertiary treatment removing  $85.0 \pm 7.1\%$  of microplastic particles remaining after secondary treatment. The levels of microplastics observed at these coastal California POTWs were in the general range of those observed at POTWs earlier in the state and throughout the world, as were removal efficiencies. Biosolids had levels ranging from 3 to 52 microplastic particles/gram, also in keeping with other measurements from the literature; however, some microplastics removed during the various wastewater treatment steps are not transferred to biosolids, as some collected solids from both primary and secondary treatment are incinerated or landfilled instead, depending on the POTW. These observations suggest that California POTWs are removing most of the microplastic contaminants from wastewaters with existing treatment techniques. For the most part, the size distributions, morphologies, colors, and

polymer types of microplastic particles differed in each POTW and treatment stage, as observed elsewhere. This is likely due to a complex combination of factors, including the composition of incoming sewage to each facility and various treatment processes in play, as well as challenges with sample collection procedures.

The seven POTWs in this study were estimated to discharge daily an average of  $114 \pm 71$  million microplastic particles for each POTW discharging final primary effluent,  $124 \pm 150$  million particles for each POTW discharging secondary effluent, and  $0.38 \pm 0.39$  million particles for each POTW discharging tertiary effluent. These calculations were based on measured total microplastic concentrations in final effluent and monthly and annual average final effluent water flow rates at the time of sampling. For example, a secondary POTW's final effluent had 0.02 plastic particles/L in the first sampling event and 0.08 in the second, resulting in estimates of 2.4-9.3 million microplastic particles/day depending on which measured flow rate (low of 30.8 million gallons/day or MGD, high of 32.5 MGD) was used in the calculation. These estimates are in keeping with other estimated exports of microplastics from wastewater sources worldwide, and are subject to considerable variability given the fluctuations and variability inherent in wastewater and in contaminants therein, including microplastics.

Only 6 microspheres were observed in wastewaters in this study, compared with previous work that found 111 plastic spheres that were mostly polyethylene and between 250-500  $\mu\text{m}$  in diameter. This observation suggests that federal and state bans on microspheres that went into effect in the interim were an effective means by which to address reducing this specific type of microplastic in wastewater. Other upstream microplastic mitigation strategies, such as washing machine and dryer filters may be effective at reducing levels of these contaminants in wastewaters.

Overall, this study provides initial data and insights into the levels and compositions of microplastics at some California coastal POTWs. Given logistical constraints arising from the significant time and expense associated with microplastics sampling and analysis, a robust statistical study design to address the questions noted above and to account thoroughly for estimates of variability is beyond the scope of this study. In addition, the contribution of microplastics from wastewaters to California's coastal waters relative to other significant pathways such as stormwater is not clear without further focused studies using standard and consistent methodology. Previous study has estimated that the contribution of secondary and tertiary wastewater effluent of microplastics to San Francisco Bay are a fraction of a percent of that from stormwater, which is untreated. However, further study is needed to compare the relative importance of these two pathways, and their potential loadings, to California's coastal waters statewide. This study provides regional data beyond the San Francisco Bay region that can be refined through further study. Monitoring of wastewaters and urban stormwater runoff

can inform the statewide strategy for managing microplastic contamination in the state's coastal waters.