Quarterly Meeting
September 2, 2020

Agenda

- COVID-19: Regulatory Contingency Planning
- BAAQMD-BACWA Relationship
- BAAQMD Rule 11-18: Reduction of Risk from Toxics
- Toxics: AB 617 & AB 2588 Updates – Wastewater Sector Response
- BAAQMD Policy Clarification: PERP
- SB 1383: Statewide SLCP Reduction Regulations Status
- BAAQMD’s Proposed Regulation 13 (Climate Pollutants)
- Member Updates/Open Discussion
  - Governor’s EO (N-74-20): Emergency Generator Use
- Adjourn
COVID-19

- BACWA Update
- CASA website: https://casaweb.org/covid-19/
- SWRCB factsheet on wastewater
- WEF biosolids factsheet
- Wastewater-based epidemiology – CDC to take leadership and serve as national repository

BAAQMD-BACWA

- Partners in…
  - Regulatory development
  - Innovative technology support
  - Funding support

- Mimic BAAQMD-RWQCB
  - Regularly meetings – Quarterly?
  - 1-2 topics per meeting
Rule 11-18: Risk Reduction from Air Toxic Emissions at Existing Facilities

- **Purpose:**
  - Protect public from toxic air contaminants at existing facilities
- **Phased implementation based on cancer prioritization** – WWTPs in Phase 2 (starting in late 2020)
- **ISSUE:** Emission factors are outdated (based on old influent data) and may result in erroneously high Prioritization Scores
- If WWTP triggers Rule, it requires:
  - Health Risk Assessments (18-month process)
  - Risk Reduction Plan development (18-month process)
  - Implementation of Risk Reduction Measures (5 years + 5 years to implement)

Actions to Monitor:
- Final implementation schedule from BAAQMD (Phase I ongoing)
- Watch for email from BAAQMD, will send data requests in quarterly batches – expect Phase II sites with Priority Score >100 to be first (starting end of 2020)
- Plants expected to respond to data request (2-4 months)

**AIR Emissions Inventory Subcommittee**
- Need members to run the data collection and emissions inventory spreadsheet template

- Still need to address emission factors...
Toxics: AB 617 & AB 2588 Updates

Two programs getting updated this calendar year…

• AB 617: Criteria Air Pollutant and Toxic Air Contaminant Reporting
  – Implements statewide annual reporting of criteria air pollutant and toxic air contaminant emissions data from facilities. It establishes new policies to improve emissions inventory data (which is critical to understanding the sources of emissions contributing to adverse health risks or other impacts at the local, regional, and statewide level).

• 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.

CTR & Air Toxics: WW sector approach to determine relevant toxics for reporting

• Aligning implementation of CTR and AB 2588 amendments - both scheduled for adoption in November 2020
• Met with CARB staff July 29th and submitted comments August 19th
  – Confirmed most ≥4 tpy facilities will report 2022 data in 2023 (initial annual report), subsequent reports required annually commencing with 2026 data being reported in 2027:
    • 2023 report: In absence of quantification methods, POTWs to report compounds as you were (business as usual) for 2022 data
    • 2027 report: CARB stated wastewater sector has until 2026 to perform “two-step process” in collaboration with CARB and air districts to determine set of compounds to report.
  – Two-step process:
    • GC/MS Scan Process for Determining Sector-Specific Compound List
    • Quantification Process (once Sector-Specific Compound List is determined)
Toxics: Initial Qualitative Screening

- 10 members performing inlet/outlet headworks foul air GC/MS scan
- LACSD results:
  - 10 tentative detections of new Appendix A-1 compounds
  - Detected compounds are not listed as carcinogenic by CARB – no OEHHA cancer potency values assigned to these compounds

CTR & Air Toxics: WW sector approach to determine relevant toxics for reporting – CASA’s Next Steps

- Collecting qualitative screening/review results
  - Identify detectable AB 2588 Appendix A-1 compounds
  - Use EPA Method TO-15 followed by GC/MS to scan peaks against the NIST Mass Spectral Library (data are not reportable)

- To review detectable AB 2588 Appendix A-1 compounds to establish complete draft shortlist of wastewater-specific compounds

- Setting standing monthly call with CARB and CAPCOA, start in September

- CARB would like a white paper summarizing influent semi-volatile components (potential to aerosolize) and transformation processes that occur across treatment – CASA to research

- Summarizing details of sampling in PEEP study

- Drafting formal outline of wastewater sector’s approach (based on meetings and PEEP study)
Toxics: 1990 Pooled Emissions Estimation Program (PEEP)

- Provided participating agencies a standard estimation methodology for determining air toxics emissions from their respective facilities.
  - 25 POTWs across CA formed a JPA
  - 18 unit processes (liquid, solid, gas)
  - 20 sites (managed as north and south)
  - 3 rounds of sampling over 5 months
  - Project duration: ~2 years (1989-1990)
  - Budget: $2.5M (1990)

- Result: Emission factors for a short-list of targeted compounds determined by participating agencies and air district staff

Toxics: 1990 PEEP Timeline Details

|------------|--------------|-------------|-----------------|---------|

Compounds targeted: 20-25 Volatile Organic Compounds (VOCs) for raw wastewater, non-combustion processes, and combustion processes.

Processes targeted:
- Aerated Grit Chamber
- Primary Sedimentation Tanks
- Diffused Air Activated Sludge
- Mechanically-Mixed Air Activated Sludge
- Pure Oxygen Activated Sludge
- Trickling Filters
- Secondary Clarifiers
- Tertiary Filters
- Chlorine Contact Tank
- Dechlorination Facilities
- Dissolved Air Flotation Thickeners
- Gravity Sludge Thickeners
- Anaerobic Digesters
- IC Engines
- Digester Gas Fired Boilers
- Belt Filter Press
- Sludge Centrifuge
- Sludge Drying Beds
PERP Equipment at Stationary Sources

- New BAAQMD Policy: Use of PERP Equipment at Stationary Sources (February 2020)

- PERP equipment that is used as a necessary part of a stationary source operation does not qualify for the permit exemption in Regulation 2, Rule 1, Section 105. The owner/operator of such PERP equipment must obtain a District permit.

- “Sewage treatment plants" specifically identified as affected facilities.

SB 1383 (SLCP Reduction Implementation)

- 40% methane reduction by 2030 (relative to 2013 levels)
- Organic waste diversion from landfills (includes biosolids, digestate, and sludges)
  - 50% by 2020 (relative to 2014 levels)
  - 75% by 2025 (relative to 2014 levels)

- Next Steps
  - Analysis of the Progress Toward SB 1383 Goals released Aug 18th (Webinar held Aug 25th)
  - Adoption of regulations targeted for Q3 2020
  - State to enforce on jurisdictions January 1, 2022
  - Local jurisdictions to enforce January 1, 2024
  - Compliance by January 1, 2025
Purpose:
"Enable the Water Board to work with wastewater agencies, local governments, community members and other stakeholders to inform approaches to better coordinate and cost-effectively maximize organic waste diversion from landfills, co-digestion at wastewater treatment plants, and beneficial biogas and biosolids utilization."

SWRCB Co-Digestion Capacity Analysis

1. Estimated amount/spatial distribution of food waste in 2025 and 2030
2. Assessed existing excess capacity of digestion and key receiving/biogas/biosolids processes without rehab/modifications
3. Estimated capacity and investments needs for key processes to fully utilize digestion capacity and maximize co-digestion
4. Assessed GHG emission reduction potential through co-digestion
5. Case Studies: Investigated opportunities and barriers at small- to medium-sized facilities
6. Case Studies: Examined impacts on biogas/biosolids production at two larger facilities with full-scale demonstrations
7. Appendices with analysis details, decision-making tool

CWEA-CASA Webinar September 9th
6. Regional Hot Topic:
BAAQMD Climate Pollutants Regulation

Rules and Regulations

<table>
<thead>
<tr>
<th>Regulation</th>
<th>GHGs</th>
<th>Odors</th>
<th>VOCs</th>
<th>Toxics</th>
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</thead>
<tbody>
<tr>
<td>Rule 13-1: Significant Methane Releases</td>
<td>CH₄</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Rule 13-2: Organic Material Handling</td>
<td>CH₄</td>
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<td>Rule 13-3: Composting Operations</td>
<td>CH₄</td>
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<tr>
<td>Rule 13-4: Wastewater Operations*</td>
<td>CH₄, N₂O</td>
<td>Yes</td>
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<tr>
<td>Rule 13-5: Hydrogen Plants</td>
<td>CH₄</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Rule 8-34: Solids Waste Disposal Sites*</td>
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* Future rule development efforts.

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Regional Hot Topic:
BAAQMD Climate Pollutants Regulation

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<thead>
<tr>
<th>Rule</th>
<th>Next Workshop</th>
<th>Board Workshop</th>
<th>Notes</th>
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<tbody>
<tr>
<td>13-1: Significant Methane Releases</td>
<td>TBD</td>
<td>TBD</td>
<td>Tabled indefinitely to focus on source-specific rules.</td>
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<tr>
<td>13-4: Sewage Treatment &amp; Anaerobic Digestion</td>
<td>TBD</td>
<td>TBD</td>
<td>BACWA requested involvement to provide input on draft language; draft rule to consider biogas produced/collection, minimizing methane pollutants, flare requirements, record keeping, reporting requirements, etc. BAAQMD is working with BACWA to collect baseline information to inform rule development and reviewing an unsolicited proposal.</td>
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<tr>
<td>8-34: Solid Waste Disposal (Landfills)</td>
<td>2020?</td>
<td>2020?</td>
<td>Focus on methane from landfills – BAAQMD to align with state and federal requirements.</td>
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Regional Hot Topic:
BAAQMD Climate Pollutants Regulation

- BAAQMD convening an Organic Recovery Technical Working Group (TWG)

- BAAQMD considering an unsolicited proposal for identifying / developing options for mitigating methane and VOC emissions
  - Anaerobic digesters and ancillary equipment
  - Other treatment processes (i.e., lagoons)

- Partnering with BACWA in effort to develop a baseline understanding of current practices and emissions

Research: $\text{N}_2\text{O}$, $\text{CH}_4$, & $\text{NH}_3$
Emissions from POTWs

- Research by Princeton and UC-Riverside began in April 2020 – $\text{N}_2\text{O}$, $\text{CH}_4$, and $\text{NH}_3$ from WWTPs
- Looking for wastewater agency partners
- Requested presentation of the research and what partnering may look like
N₂O & The Climate Registry (TCR)

• Technical Workgroup meeting this summer to discuss/determine how to handle/categorize N₂O process and effluent emissions
  – Recognize nutrient source driving these emissions is from the community a WWTP serves, not within the control of a WWTP
  – Consider showing N₂O emissions as a Scope 3 emission within a WWTP’s inventory (vs Scope 1) – reflecting it’s the responsibility of a community

• TCR performed a literature review to share with the Workgroup
• First meeting: September 3rd

Member Updates/Open Discussion

• Governor’s EO (N-74-20): Emergency Generator Use
  • Permitting requirements or conditions of certification adopted by the Energy Commission...as well as related permitting requirements adopted by local air quality management districts, that restrict the amount of power that a facility may generate,..., are suspended.

  • Any facility that operates...by Paragraph 1 (above) of this Order shall:
    – Notify the relevant local air quality management district, the Energy Commission, and the Air Resources Board of its actions w/in 48 hours
    – Report additional fuel use, additional hours of operation, and energy produced by that additional use and operation to the relevant local air quality management district, the Energy Commission, and the Air Resources Board w/in 30 days

  • Suspension (began August 16 and) shall expire at 11:59 pm on August 20
Thank you!

Sarah Deslauriers
sdeslauriers@carollo.com
925-705-6404

Courtney Mizutani
cmizutani@sbcglobal.net
925-686-5533