



AIR ISSUES & REGULATIONS COMMITTEE
A Committee of the Bay Area Clean Water Agencies

Quarterly Meeting
May 26, 2021

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Agenda

- COVID-19: Resources and Meetings
- State Legislation that May Impact Air Issues & Regulations
- Proposed Amendments to BAAQMD Regulation 2 (Permitting)
- Criteria Air Pollutant & Air Toxics Reporting:
AB 617 & AB 2588 Program Updates
- BAAQMD Rule 11-18: Reduction of Risk from Air Toxics
- SB 1383: SLCP Reduction Regulations and Implementation Status
- BAAQMD Proposed Regulation 13: Climate Pollutants CH₄ and N₂O
- CARB Advanced Clean Vehicle Rules
- New BACT for Large Standby/Emergency IC Engines
- Open Discussion/Member Updates
- Adjourn



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But first...THANK YOU, RANDY!



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COVID-19



- **CWEA Webinar: May 25th**
- **CWEA-CASA Webinar: Jun 30th**
- CASA website for resources: <https://casaweb.org/covid-19/>
- Wastewater-based epidemiology (WBE) efforts →
 - Survey sent (from Greg Kester) on behalf of Water Quality Monitoring Council to understand who is participating in WBE and other details
 - CDC managing national database (SWRCB to submit data) – National Wastewater Surveillance System
 - Health and Human Services data collection target: 30% population
- Reevaluate in-person meetings as conditions allow



Last Updated: 12/1/20

COVID-19 is impacting the wastewater community in a variety of unique and challenging ways. Below are a series of resources that may be useful to reference for local wastewater agencies as we navigate through this crisis. As a reminder, this information represents the state of our knowledge at a point in time and should be used as a resource for exploring additional actions. Circumstances are always subject to change, and agencies must make their own decision about what course of action is most appropriate, balancing public safety while ensuring the continued delivery of critical infrastructure services.



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Status of Recently Introduced State Legislation

- AB 426: Toxic air contaminants
- AB 1001: Air pollution and mitigation measures for air and water quality impacts
- AB 1005: Scientific review panel, toxic air contaminants
- ~~AB 619: SLCP implementation, organic waste~~



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Proposed Amendments to BAAQMD Reg 2: Permitting

- Appears driven by external pressures:
 - Advocates urge BAAQMD to revise permitting rules so new sources of are no longer allowed in communities overburdened by poor air quality.
 - Emphasized community members are dying of cancer and emissions from stationary sources are responsible for higher rates of cancer in overburdened communities.
- BAAQMD is proposing to make the rules within Regulation 2 more health protective
 - Make air toxics permitting rule more stringent, District-wide or in overburdened communities (i.e., target facilities triggering NSR)
 - Enhance public noticing and analysis requirements
 - Evaluate methodologies to make permitting more stringent for sources that emit diesel particulate matter



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BACWA Comment on Proposed Amendments to BAAQMD Reg 2: Permitting

- Support BAAQMD protecting public health by reducing risk. We work to increase overall livability of communities as an essential public service.
- Efforts already underway to increase risk reduction (Rule 11-18, AB 617/AB 2588 regulations, OEHHA, etc.) – fastest and most effective options.
- Stationary sources represent only 6% of the risk!
 - Efforts to reduce risk need to focus on the remaining 94%, the majority of which is associated with vehicle emissions.
 - CARB is already developing regulations to electrify vehicles to reduce those emissions and resulting risk. We support BAAQMD efforts to accelerate transition to cleaner mobile sources.

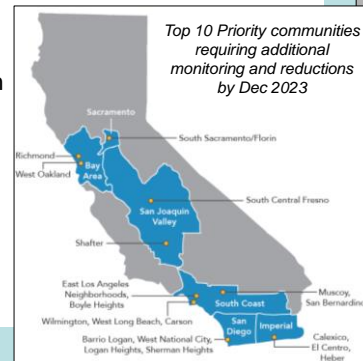


Comments due May 28th!

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CARB enacted Criteria Air Pollutant & Toxic Air Contaminant Reporting (CTR)

- Enacted January 1, 2020 via AB 617
- Gives CARB authority to “harmonize” air monitoring, reporting, & emissions reduction programs from stationary sources
 - Assess community exposure
 - Establish criteria for air monitoring
 - Identify strategies for emissions reduction
- Steps being taken to:
 - Establish emission reduction targets & enforcement programs
 - Develop uniform statewide reporting and public access to enhance public’s right to know



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CARB decided to update the AB 2588 Air Toxics "Hot Spots" Program at the same time

- Expanding the compound list to >1000 compounds (previously >500)
- KEY ISSUES:
 - Many of the compounds do not have known toxicity levels
 - Many of the compounds do not have known emission factors
 - Many of the compounds are not relevant to WWTPs
- Where does this leave WWTPs?
 - What do we report?
 - How can we report if there are no known emissions factors or toxicity levels?



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How can WWTPs comply with the updated CTR and Air Toxics "Hot Spots" Programs?

- WWTPs to report business as usual through 2028
- In meantime, WWTPs w/ air permits perform a "two-step process" to determine shortlist of compounds
- Two-Step Process consists of:
 - GC/MS Scan for determining detectable compounds
 - Quantification Process (Mimic 1990 Pooled Emissions Estimation Program, PEEP)
 - Quantification methods approved by CAPCOA
 - Toxicity potentials approved OEHHA Scientific Review Panel



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WW Sector's Past Experience: 1990 Pooled Emissions Estimation Program

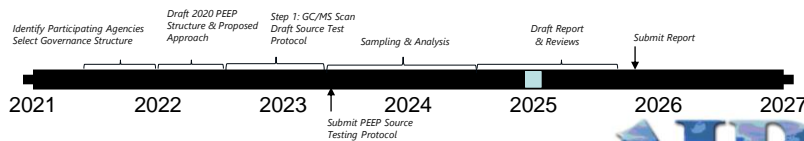
- Provided participating agencies a standard estimation methodology for determining air toxics emissions from their respective facilities
 - 25 POTWs across CA formed a Joint Powers Authority
 - 18 unit processes (liquid, solid, gas handling)
 - 20 sites (from northern to southern CA)
 - 3 rounds of sampling over 5 months
 - Project duration: ~2.5 years (1988-1990)
 - Budget: \$2.5M (1990)
- Result: Emission factors for a shortlist of compounds determined via collaboration between participating agencies and air district staff



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Next steps for the Wastewater Sector...

- California Association of Sanitation Agencies to draft proposal for performing the Two-Step Process with members
- Approximate timeline for Two-Step Process: ~5 years
- Approximate total cost: ~\$10 Million (spread across participating members)
- Execute the Two-Step Process requires various steps



CASA One-Page Summary to educate your staff and local air district staff – draft underway!



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Rule 11-18: Risk Reduction from Air Toxic Emissions at Existing Facilities

- Purpose: Protect public from TACs from existing facilities
- Phased implementation based on cancer prioritization – WWTPs in Phase 2 (data requests starting 2021)
- **ISSUES:**
 - Emission factors are outdated (based on old influent data) and may result in erroneously high Prioritization Scores.
 - Grouping of related sites (adjacent landfills, etc)
- 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)



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Rule 11-18: Risk Reduction from Air Toxic Emissions at Existing Facilities

Implementation Procedures (April 2018)

“Provide opportunities for public review and comment on site-specific health risk assessment results and risk reduction plans.”

First draft HRA under Rule 11-18:

- AB&I Foundry
- Draft HRA public workshop held May 7
- Hosted jointly by BAAQMD and Citizens for a Better Environment
- Draft HRA showed elevated health risk (46 per million)
- Primarily due to toxic metals



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Rule 11-18: Risk Reduction from Air Toxic Emissions at Existing Facilities

- Actions to Monitor:
 - Final implementation schedule from BAAQMD
 - BAAQMD plans to send data requests in quarterly batches – expect Phase II sites with Priority Score >100 to be first (starting third or fourth quarter 2021)
 - 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...



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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
 - Adopted Nov 9, 2020
 - State to enforce Jan 1, 2022
 - Local jurisdictions start Jan 1, 2024
 - Compliance by Jan 1, 2025



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SB 1383 (SLCP Reduction & Implementation)

- Items to address...
 - Transfer of Emission Reduction Credits (offsets) from landfills to projects that divert/process organic waste – if combusting onsite (discussing with CAPCOA and air districts)
 - Designating facilities as landfilling that are not determined to be diversion, can go through determination process to get approved
 - Understand procurement of products and if they will consider other products (specifics in regulations) and how they apply to city and district facilities
 - Non-Local Entities (including special districts)
 - Streamlining permitting (Ventura County composting facility)
 - Understand how to handle County Ordinances
 - Updates to General Order
 - Leave behind a map of ordinances to CalRecycle for outreach



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BAAQMD Proposed Regulation 13: Climate Pollutants CH₄ and N₂O

Rule development suspended due to COVID-19 & lack of data

Rule	Next Workshop	Board Presentation	Notes
13-1: Significant Methane Releases	TBD	TBD	Tabled indefinitely to focus on source-specific rules.
13-2: Organic Waste Handling	TBD	TBD	Draft focused on organic material handling: Material Recovery Facilities, Transfer Facilities, Chip & Grind Facilities.
13-3: Composting Operations	TBD	TBD	Draft language in development, not released.
13-4: Sewage Treatment & Anaerobic Digestion	TBD	TBD	BACWA requested involvement to provide input on draft language. Draft rule to consider biogas produced/collected, minimizing other 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.
13-5: Hydrogen Plants	-	TBD	Focus on hydrogen production at petroleum refineries.

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BAAQMD Proposed Regulation 13:

Climate Pollutants CH₄ and N₂O

Rule development suspended due to COVID-19 & lack of data

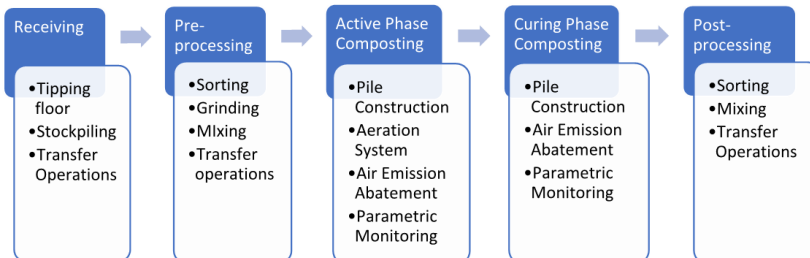
- BAAQMD realized it needed more data, before drafting regulations!
- Draft BMPs summarized for Organic Material Handling and Compost Facilities
- BACWA to summarize current BMPs for POTWs via survey, specifically:
 - Anaerobic digesters and ancillary equipment
 - Other treatment processes (i.e., lagoons)
- BAAQMD may incorporate BMPs as part of standard permit conditions vs further regulate



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Drafting Survey to Summarize BMPs for Controlling CH₄ through ADs and Lagoons

- Basic block process flow diagram of solids/biogas through AD's and lagoon
 - Identify solids handling prior to digestion and post-digestion processes
 - Identify areas of potential biogas leaking/releasing



Example: Compost flow diagram showing general steps

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Review Draft Survey Q's Summarizing BMPs for CH₄ Control at ADs and Lagoons

- List (by process) best management practices to detect and control methane emissions
 - Leak detection – methods to check/tools and frequency of checks pre-, during, and post-digestion
 - Biogas/methane capture
 - Biogas conditioning
 - Onsite combustion (beneficial use/abatement)
 - Other beneficial uses (processing for CNG or pipeline injection)
 - Additional input:



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CARB Advanced Clean Vehicle Rules: Clean Truck Rule

Clean Truck Rule Details

- Requires manufacturers increase electric vehicles sales thru 2045
- Requires large entities report vehicle 2019/2020 activity by **May 1, 2021**:
 - >\$50 M in revenue from related subsidiaries, subdivisions, or branches, and ≥1 vehicle
 - Owns 50 or more vehicles
 - Dispatches 50 or more vehicles into or throughout California
 - Is a government agency (federal, state, local, and municipalities)!

Next Steps...

- OAL approved March
- Report activity data by May 1st
- Activity data will be used as basis for Clean Fleet Rule regulatory development.
- Be sure to report:
 - Mileage
 - Hours of operation
 - Remote assets
 - Specialty vehicles and needs



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CARB Advanced Clean Vehicle Rules: Clean Fleet Rule

Clean Fleet Rule Details

- Zero-emission fleets by 2045
- Government entities viewed as early adopters
- Convert public fleets by 2035 (purchase agreement by 2027)
- Goal to adopt regulation by end of 2021 (may extend into 2022)
- Workshops held 3/2 and 3/4

Working with CMUA, ACWA, CSDA, SCPPA and SoCalGas

Next Steps...

- Comments submitted 4/2
 - Provisions for essential public services
 - Biogas as low carbon fuel / RNG
 - Exemption process
 - Support normal replacement cycle
 - Support purchases of NZEV
 - Regulatory timeline flexibility
 - Avoid stranded assets
 - Early action credit
- Met with CARB 4/16
- Draft regulation to come



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New BACT for Large Emergency Diesel Engines

- Issued December 22, 2020 and applies to:
 - Large diesel emergency engines ≥ 1000 bhp
 - Applications deemed complete since January 1, 2020

EPA Tier 4 Emission Standards

Pollutant	BACT Limit
POC	0.14 g/bhp-hr
NO _x	0.5 g/bhp-hr
SO ₂	CARB Diesel Fuel (15 ppm sulfur)
CO	2.6 g/bhp-hr
PM-10	0.02 g/bhp-hr

What if the engines that are proposed in the application do not meet the new BACT standards?

- Install diesel particulate filter to meet PM emissions limits
- Install selective catalytic reduction system to meet NO_x emissions limits
- Purchase EPA-certified or EPA-compliant Tier 4 engine

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New BACT for Large Emergency Diesel Engines $\geq 1,000$ bhp

- Brief Board Members / electeds on BACT process, communication issues, and POTW planning process considerations – to be drafted
- Provide BAAQMD Staff specific asks (points made to Board) – to be drafted
- CASA tracking/responding to requests from other Air Districts
 - Sacramento Metro AQMD – comments submitted by 4/30
 - South Coast AQMD – end of May/early June
 - Coordinate with Hospital Association as an essential public service (Tier 4 Engine in SoCal hospital automatically shut off due to low urea)
- Local status updates



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New BACT for Large Emergency Diesel Engines

- Central San status update
- San Mateo status update



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Open Discussion / Member Updates

- BAAQMD Leadership meeting topics
 - Permitting process
 - BAAQMD Regulation 2 amendments target making air toxics permitting more stringent, however...
 - Air toxics risk reduction implementation already underway
 - CARB AB 617 / AB 2588 regulations (*Wastewater Sector Approach*)
 - BAAQMD Rule 11-18 (*beginning implementation in 2023*)



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Thank you!

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Standard Permit Conditions

- Digestion
- Cogeneration
- Organic Waste Handling (food waste)
- Timeline unspecified – need to be responsive to inform rule development under Regulation 13



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Biogas/Biomethane Use Management: EPA Renewable Fuel Standard

- RIN values: D3 (sludge derived biogas) vs D5 (food waste derived biogas)
- Co-Digestion biogas RIN value – EPA willing to consider an approach to allocated D3 and D5 values based on the proportion of biogas that is derived from sludge vs food waste



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Biogas Accidental Release Prevention & Risk Management Impacts

- OSHA's Process Safety Management (PSM) Standard
 - Triggered by >10,000 lbs of biogas (unless all is used onsite)
 - General RMP Guidance - Appendix F: Supplemental Risk Management Program Guidance for WWTPs states...

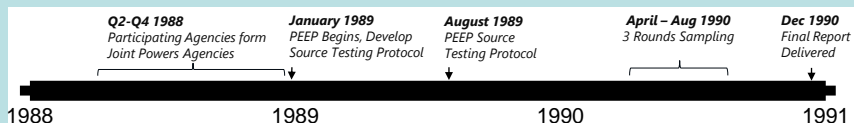
"For methane, the 10,000-pound threshold applies to the total weight of the flammable mixture of digester gases, not just the weight of methane or flammables in the mixture."

- Scenarios through which the PSM program **may** allow exemptions from its requirements



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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



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