

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

Quarterly Meeting
June 9, 2022

Agenda

- 2022 State Legislation Update
- BACWA-BAAQMD Implementation Workgroup Update
- BAAQMD South Bay Odor Study
- CARB Scoping Plan Update Targeting Carbon Neutrality by 2045
- BAAQMD Proposed Regulation 13: Climate Pollutants Reduction
- BAAQMD to Evaluate Localized Impacts of PM_{2.5}
- CARB Potential Amendments to Diesel Engine Off-Road Emission Standards
- Developing Tier 5 Criteria Pollutants and CO₂ Standards
- Open Discussion/Member Updates
- Adjourn



2022 State Legislation Update

- Senate and Assembly Bills introduced by Feb 18th
- CASA's tracking list



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BACWA-BAAQMD Implementation Workgroup Update

- *Forum to facilitate a collaborative relationship to further our common goals (to protect our communities from pollution) related to:*
 - *Permit process*
 - *Inspections*
 - *Rule development*
 - *Standard permit conditions*
 - *Best available control technologies*
 - *Balancing competing regulatory priorities*



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BACWA-BAAQMD Implementation Workgroup Update

- Met March 30th (Next Meeting: July 18th)
 - BAAQMD Regulation 2 (Permits)
 - BAAQMD Rule 11-18: Reduction of Risk from Air Toxic Emissions at Existing Facilities
 - CARB Criteria Air Pollutant & Air Toxics Reporting: AB 617 & AB 2588 Program



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BAAQMD Regulation 2 (Permits)

- Allowable risk 6 per million (vs 10 per million)
- New definitions (*may be revised in future updates*)
 - "essential public services" (vs emergency)
 - "baseline" is lowest of 3 scenarios ("actual", "permitted", "capacity")
- Extends BAAQMD review times
 - completeness from 15 to 30 working days
 - action from 35 to 90 or 180 working days (depending on complexity)
 - public comment response from 30 to 60 days
- Implementation Workgroup established under this regulation
 - Work closely with air district staff to address concerns and ensure continued partnership in achieving shared goals



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

- Phased implementation based on cancer prioritization
 - High priority first, with inventory requests beginning Fall 2024
 - Next group begin ~1 year later and consecutively after that
- **Issue:** Emission factors used are based on old influent data and can result in erroneously high Prioritization Scores and unnecessary risk reduction measures
- **Next Steps:** Closely coordinate risk reduction planning with statewide two-step process (to complete by 2027) to...
 - Update relevant TAC emission factors
 - Determine cost-effective risk reduction measures



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

Prioritization Score	No. of POTWs	Inventory Requests	Approve Final HRAs	Approve Final Risk Reduction Plans *
> 100	8	Q3 2024	Q2 2026	Q4 2027
> 50	13	Q3 2025	Q4 2027	Q2 2029
> 25	8	Q1 2027	Q4 2028	Q2 2030
> 10	10	Q1 2028	Q4 2029	Q2 2031

Timing of risk reduction implementation is not in sync with CARB-approved “two-step process” BUT we will involve the air district in the process!



CARB Criteria Pollutant/Toxics Reporting & Air Toxics “Hot Spots” Program Updates

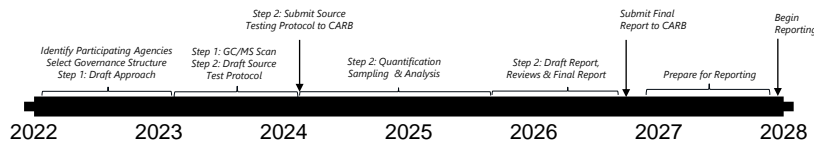
- AB 617 gives CARB authority to “harmonize” air monitoring, reporting, & emission reductions from stationary sources
- AB 2588 Hot Spots compound list expanded from >500 to >1000 compounds
- Key Issues – many of the compounds...
 - Have unknown toxicity levels
 - Have unknown emission factors
 - Are not relevant to WWTPs
- Phased compliance allows WWTPs to report business-as-usual through 2028 while...
- WWTPs perform a “two-step process” to determine relevant compounds and update emission factors



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

- Two-Step Process:
 1. Scan air space of unit processes to determine detectable compounds
 2. Quantify emissions (Mimic 1990 Pooled Emissions Estimation Program)



Result: Short-list of compounds and emissions factors determined by participating agencies as well as local air district and CARB staff (to inform permitting and Rule 11-18)


Cost estimate being developed for FY 23/24 budgeting



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Next steps for Wastewater Sector...

- CASA 2022 actions:
 - Draft approach for Step 1 of two-step process (examining scan and source test requirements)
 - Identify participating agencies
 - Select governing structure
- Meeting with air districts and source test specialists to discuss scan methods – assessing which compounds have methods
- Monthly subgroup meetings for remainder of the calendar year



Understanding New Requirements for Air Toxics Reporting

California air districts are beginning to adopt recent amendments to the California Air Resources Board's (CARB) Air Toxics "Hot Spots" Program Emissions Inventory Criteria and Guidelines (EICC) and the Reporting of Certain Air Pollutants and Toxic Air Contaminants Regulation (CTR). This fact sheet is to inform your organization of those regulatory updates, how they apply to the wastewater sector, and for your reference in discussions with air district staff.

REGULATORY UPDATES: As part of improving air toxic emissions reporting, the public's access to the data, and reduction strategies for priority communities, the updates to the EICC and CTR:

- Expand the number of compounds to be validated for monitoring and reporting from a total of ~500 to over 1,000 for permitted waste facilities, including wastewater treatment plants (WWTPs).
- Establish criteria for air monitoring AND an approach for the waste sector (i.e., the "two-step" process) to identify a short list of toxics relevant to WWTPs.
- Identify strategies/benefits for emissions reductions (prioritizing overburdened communities).

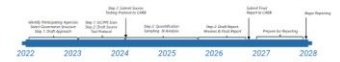
Since most of the 1,000+ compounds do not have approved sampling or laboratory methods and have not been assessed by the Office of Environmental Health Hazard Assessment, health risks associated with these compounds cannot be quantified. In turn, any prematurely reported information will yield erroneous emission estimates, causing confusion and potentially unwarranted alarm for our neighbors.

WASTEWATER SECTOR IMPACTS & RESPONSE: CARB approved a phased compliance approach that allows permitted WWTPs to report toxics as usual through 2028 while the sector executes the two-step process to:

1. Perform a scan of air samples across various treatment plant unit processes to determine detectable compounds (of the 1,000+ compounds).
2. Quantify the emissions of detectable toxic compounds based on an approved sampling and analysis approach (working with air districts and CARB).

The two-step process will take approximately five (5) years and cost up to \$10 million for the wastewater sector to complete. In the meantime, the wastewater sector is unable to quantify any new air toxic compounds until the completion of the statewide two-step process and must rely upon the results of the two-step process as the "best available data and methods." In other words, no new air toxics need to be reported until 2028.

The winter/spring of 2022 CASA will work with the membership to establish an oversight and cost-recovery structure for the two-step process. Therefore, about 20 WWTPs will need to sample emitting unit processes in accordance with approved protocols. A tentative schedule of the two-step process is provided below:



For more information or if you have questions, please contact Sarah Desbauriers at sdesbauriers@carboffice.com or David Rothbart at david.rothbart@carboffice.com. Updates are provided as part of CASA's Air Quality, Climate Change, & Energy Workgroup monthly meetings and an Air Toxics subgroup has been established. Your input is needed.

Screening and sampling protocols will be developed in collaboration with and approved by local air districts and CARB staff. CASA will lead the coordination and development of the protocols.

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BAAQMD South Bay Odor Study

- **Purpose:** ID sources/operations causing odors at Newby Island (including POTW lagoons and turbulent streams)
- **Outcome:** ID chemical "fingerprints" for various sources
"Fingerprints likely to be consistent across similar sources"
 - Screening and targeted measurement through mobile platform (ppt levels)
 - Focused field sampling and data collection over three seasons
- **Next Steps:** Determine course of action (i.e., voluntary compliance, abatement, regulatory changes); share study findings; apply method to other sources
 - Consider covering process areas with high odor emission rates
 - Extract and treat foul air in dedicated odor treatment facility
 - Install wastewater conveyance channel aeration
 - Minimize odor emitting activities
 - Routine maintenance to minimize leakage at PRV



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CARB Scoping Plan Update Targeting Carbon Neutrality by 2045

- Scoping Plan [Workshops](#) through Spring 2022 on:
 - Short-Lived Climate Pollutants (SLCP reduction under SB 1383 regs)
 - Transportation Sector (ACF regulation)
 - Natural and Working Lands
 - Electricity Sector (SB 100 report)
 - Environmental Justice
- Full draft released May 10, 2022 (final draft in Fall 2022):
 - Proposed Advanced Clean Fleet Regulation (vehicle electrification)
 - SB 1440 CPUC Decision to Extend Procurement Requirements for Biomethane Pipeline Injection
 - SB 1383 SLCP Reduction Implementation



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Proposed CARB Advanced Clean Fleet Regulations

Advanced Clean Fleet Rule

- Zero-emission vehicle purchases by 2045
- Applies to vehicles with a gross vehicle weight rating $\geq 8,500$ lbs
- Government entities viewed as early adopters
- Convert public fleets by 2035 (purchase agreement by 2027)
- Goal to adopt regulation by end of 2022

Issues of Concern (remain)

- No provisions for essential public services
- Near-ZEV definition does not allow for wastewater biogas as low carbon fuel
- Support normal replacement cycle of vehicles within public fleets and delayed start date for low population counties
- Unreasonable regulatory timeline
- Credit for early purchase



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SB 1440 CPUC Decision to Extend Procurement Requirements for Biomethane Pipeline Injection

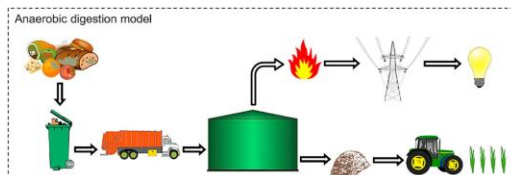
- Staff Proposal released June 3rd
 - Biomethane procurement targets can be adopted in a cost-effective manner while complying with state and federal law
 - 14 specific issues to ensure compliance with CA Public Utilities (PU) Code Section 651(b)
- CPUC approved recommendation February 24th extending biogas procurement through 2030
- CARB staff pushing for biogas to be pipeline injected, but need multiple options



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SB 1383 Regulations: Organics Diversion & SLCP Reduction

- Targets 40% methane reduction by 2030
- Organic waste diversion from landfills – 50% by 2020 and 75% by 2025
- Incentivizes biogas production
- **Issues:** BAAQMD regulations do not consider overall methane reduction (i.e., at landfills) and act to limit increases in biogas production
- **Next Steps:** BAAQMD to consider CARB/CalRecycle/SWRCB's scope for total methane reduction in Rule 13-4 development and support increased biogas production/utilization



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BAAQMD Proposed Regulation 13: Climate Pollutants

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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Revised Summary Graphics in Development: BMPs for Controlling CH₄

- 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)



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Revised Summary Graphics in Development: BMPs for Controlling CH₄

- New graphics under development
 - Summary of Bay Area POTW Biogas/Methane Production and Use
 - Summary of BMPs (Structural and Procedural)
 - Summary of Lagoons (Types and Details)
- BMPs 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)



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BAAQMD to Evaluate Localized Impacts of PM_{2.5}

BAAQMD wants a tool to evaluate localized impacts of PM_{2.5}

- Not adequately considered in permitting or CEQA guidance (considering thresholds)
- OEHHA guidance does not address undifferentiated PM_{2.5}
- NAAQS are poorly suited for evaluating localized impacts and have been found to be insufficiently health protective

BAAQMD Next Steps (to develop methodology by end of 2022)

- Draw from studies of PM_{2.5} (health impacts)
- Work with experts from OEHHA, CARB, and US EPA
- Hold public discussions through Advisory Council



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CARB Potential Amendments to In-Use Off-Road Diesel-Fueled Fleets Regulation

- Amendment concepts included:
 - Tier 0, 1, and 2 phase-out and vehicle adding conditions
 - Renewable diesel requirement (other alternative fuels)
 - Requirements for prime contractors and public works
- CASA and agencies commented January 2022
 - Essential public services must operate at all times to protect public health/environment, as such we support:
 - Inclusion of alternative fuels use, e.g., wastewater-derived biogas
 - Exemption for vehicles used for emergency operations and the addition of vehicles used for essential public services
 - Inclusion of compliance flexibility when equipment/vehicles are not available
 - A feasible process needed for records review and tracking fleet compliance
 - Definitions
- May 16th Workshop



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CARB Amendments to Diesel Off-Road Emission Standards: Tier 5 Criteria Pollutant & CO₂

- BAAQMD issued Tier 4 BACT December 2020
 - Diesel backup engines ≥1000 bhp
- CARB rulemaking underway
 - Board consideration 2024-2025
 - Implementation 2028-2029

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

Proposed Tier 5 emission standards

Pollutant	Potential Limit Reduction from Tier 4 Limits *
NO _x	75-90% reduction
PM	50-75% reduction
NMHC	no change
CO	no change
	*depending on engine size

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Open Discussion / Member Updates

- Request for stack retrofits for source testing
- Source test visit by BAAQMD



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Thank you!

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