



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

**Quarterly Meeting**  
**March 26, 2019**

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## Agenda

- AB 617: Community Air Protection Program
- GHG Updates
  - SB 1383: Statewide SLCP Reduction Strategy Implementation
  - BAAQMD's Regulation 13
- Air District Updates:
  - Rule 11-18 (Reduction of Risk from Toxics at Existing Facilities)
  - Permit Handbook Revisions
  - Flare Rules (SCAQMD Flare Rule 1118.1)
- Annual BACWA-BAAQMD Meeting – Agenda Items Brainstorm
- FY '20 Budget & Tasks Discussion
- Member Updates / Open Discussion
- Delta Diablo Tour (Optional)



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## AB 617: Community Air Protection Program

- CARB to harmonize community air monitoring, reporting, & local emissions reduction programs for CAPs and TACs (and GHGs)
- October 2018, CARB sets direction:
  - Assess community exposure
  - Establish criteria for air monitoring
  - Identify source contributions and strategies for emissions reduction
- October 2019:
  - Establish emission reduction targets, schedule, & enforcement programs
  - Air Districts to submit annual progress reports to CARB in 2019 for 2018



## AB 617: Proposed Regulation Criteria Air Pollutant & Toxic Air Contaminant Reporting

- Applicability thresholds for stationary sources:
  - Subject to GHG Mandatory Reporting Regulation (some exclusions)
  - Emit 250+ tpy of a nonattainment criteria air pollutant or its precursor
  - Receives an “elevated” Air Toxics Hot Spots prioritization based on cancer or non-cancer health impacts
  - **\*\*NEW\*\***...Sector list, including 10 MGD WWTPs w/ covered systems to report the complete AB 2588 list of toxic compounds (over 500 compounds) on an annual basis (5 MGD uncovered systems).
- Comments due March 29<sup>th</sup>



## AB 617: Proposed Regulation Criteria Air Pollutant & Toxic Air Contaminant Reporting

### Comments on changes to proposed reporting regulation

- Inadequate review time – 15 days inadequate, recommend at least one more opportunity to comment (summer 2019)
- Original applicability thresholds should be maintained for Phase I
  - Focus on sources of high risk compounds
  - Future phases, consider program expansion
  - Unfunded mandate, consider cost-effectiveness
- Wastewater sector approach - current & accurate process
  - Air District default emission factors are not accurate
  - Monitoring/reporting the full AB 2588 list of compounds is unnecessary, unrealistic, and costly (collecting examples of testing/sampling costs to reflect this and will comment on the overall cost-ineffectiveness)
  - Take a step-wise approach to determine facility size and a short-list of compounds



## GHG UPDATES



## Organic Waste Diversion - SB 1383: SLCP Reduction Strategy 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)
- CEC/CPUC to incentivize biogas production/use
- **45-day comment period ended March 26<sup>th</sup>**  
Adoption 2019 – Effective 2022 – Enforceable 2024



## **DRAFT** Infrastructure Report to CalRecycle

- Purpose: Report on state of existing (composting & anaerobic digestion) infrastructure that can accept/process diverted organic waste from landfills to help state meet SB 1383 mandates for methane reduction
- For: CalRecycle
- By: Matt Cotton, Integrated Waste Management Consulting, LLC
- Comments submitted by CASA March 15<sup>th</sup>
  - Not reviewed by CalRecycle yet or Advisory Committee
  - Missing anaerobic digestion at WWTPs





## Bay Area AQMD Regulation 13: Climate Pollutants Rule Development

### Rules and Regulations

|   | GHGs                               | Odors | VOCs | Toxics |
|---|------------------------------------|-------|------|--------|
| Regulation 13: Climate Pollutants       | N <sub>2</sub> O, PCPs             | n/a   | n/a  | n/a    |
| Rule 13-1: Significant Methane Releases | CH <sub>4</sub>                    | Yes   | Yes  | Yes    |
| Rule 13-2: Organic Material Handling    | CH <sub>4</sub>                    | Yes   | Yes  | Yes    |
| Rule 13-3: Composting Operations        | CH <sub>4</sub>                    | Yes   | Yes  | Yes    |
| Rule 13-4: Wastewater Operations*       | CH <sub>4</sub> , N <sub>2</sub> O | Yes   | Yes  | Yes    |
| Rule 8-34: Solids Waste Disposal Sites* | CH <sub>4</sub>                    | Yes   | Yes  | Yes    |

\* Future rule development efforts.



## Draft Regulation 13, Rule 1 *General concepts*

### 13-1: Significant Methane Releases

**PURPOSE** *to mitigate major releases rapidly; will act as backstop while source-specific rules are adopted*

**CONCEPT** *Prohibits ongoing significant methane releases*

#### SCHEDULE

**WORKSHOPS**

Early Fall 2018

**TO BOARD**

Summer/Fall 2019

*Submit Approaches by Summer 2019 to Prevent Biogas/Methane Release during Digester Cleaning*



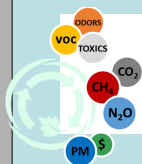


## Bay Area AQMD Regulation 13: Climate Pollutants Rule Development

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| Rule 13-4: Wastewater Operations*       | CH <sub>4</sub> , N <sub>2</sub> O | Yes   | Yes  | Yes    |
| Rule 8-34: Solids Waste Disposal Sites* | CH <sub>4</sub>                    | Yes   | Yes  | Yes    |

\* Future rule development efforts.



## Draft Regulation 13, Rule 2 General concepts

### 13-2: Organic Material Handling

**PURPOSE** to limit methane and VOC emissions from the transfer and storage of organic material at all facilities

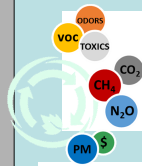
- Recordkeeping and Reporting
- Registration and Permitting
- Best Management Practices

#### SCHEDULE

**WORKSHOPS**  
Spring 2019

**TO BOARD**  
End of 2019

**AIR ISSUES & REGULATIONS COMMITTEE**  
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## Draft Regulation 13, Rule 3 General concepts

### 13-3: Composting Operations

**PURPOSE** to limit methane and VOC emissions from processes typically part of composting operations

#### CONCEPT

- Best Management Practices
- Mitigation Measures
- Control Requirements

**SCHEDULE**

**WORKSHOPS**

Spring 2019

**TO BOARD**

End of 2019

RELATIONS COMMITTEE  
A Committee of the Bay Area Clean Water Agency



## Bay Area AQMD Regulation 13: Climate Pollutants Rule Development

### Rules and Regulations

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| Rule 8-34: Solids Waste Disposal Sites*  | CH <sub>4</sub>                    | Yes   | Yes  | Yes    |

Met with BAAQMD staff March 7<sup>th</sup> to provide "WWTP: 101"

\* Future rule development efforts.



## Bay Area AQMD Regulation 13: Climate Pollutants Rule Development

- **Next Steps:**

- Methane Expert Panel meetings to resume?
- Rule 13-1 to go to Public Hearing in 2019
- Workshops for 13-2 and 13-3 to be held in second quarter of 2019, rules being drafted, to Board of Directors by end of 2019
- 13-4 rule development to begin in late 2019  
(more workshops on specific WWTP topics to be scheduled)



## BAAQMD Climate Technology Review

### Climate Technology Review

An Assessment of Opportunities to Reduce  
Greenhouse Gas Emissions at Stationary Sources  
in the Bay Area

October 2018



Table ES-1. Number of Mitigation Measures by Industry Sector

| Industry             | Subsector                 | Measures |
|----------------------|---------------------------|----------|
| Agriculture          | Soil Management           | 5        |
|                      | Enteric Fermentation      | 1        |
|                      | Manure Management         | 5        |
| Buildings            | Commercial                | 35       |
|                      | Residential               | 19       |
| Electronics          | Semiconductors            | 10       |
| Petroleum<br>Systems | Natural Gas Compression   | 1        |
|                      | Refining - Combustion     | 8        |
|                      | Refining - Other          | 18       |
| Metals               | Iron and Steel Production | 6        |
| Minerals             | Cement Production         | 14       |
|                      | Batteries                 | 2        |
| Power<br>Generation  | Combined heat and power   | 6        |
|                      | Fuel Cells/Electrolyzers  | 1        |
|                      | Power Plants              | 1        |
| Waste                | Composting                | 8        |
|                      | Landfills/Combustion      | 15       |
|                      | Wastewater                | 12       |
| Other                | Asphalt Drying            | 3        |
|                      | Carbon Capture            | 1        |
|                      | Food Processing           | 8        |
|                      | Glass Production          | 8        |
|                      | Industrial Gas Suppliers  | 1        |
| Total                |                           | 188      |



## BAAQMD Climate Technology Review

- 12 wastewater sector mitigation measures identified (Table 16)
  - Annamox
  - Microalgae to replace denitrification
  - Nitrification tank gas capture/co-firing
  - Adjust operations to reduce GHGs in sludge path
  - Geomembrane cover for AD
  - Methane capture/flare from activated sludge
  - Bioscrubber for N<sub>2</sub>O process emissions
  - Microalgae cultivation for CO<sub>2</sub> capture in sludge stream
  - Thermophilic AD
  - Bioprocesses for oxidation of CH<sub>4</sub>
  - Temperature-phased AD
  - CANDO process

*List based on  
literature review  
with no input  
from POTWs*



**Climate Tech Kick-Off at BAAQMD:  
January 22<sup>nd</sup>**

## Climate Tech Kick-Off at BAAQMD: Jan 22<sup>nd</sup>

- Sources below cap-and-trade threshold that together “make a big chunk of the pie” of GHG emissions in Bay Area
- Presentations by EBMUD & CMSA on Co-digestion
- Approach for assessing projects – Emissions Reduction Potential, Economic Viability, Barriers (Favorability), Investment Scale (Affordability), Maturity (TRL/Company)
- Climate Tech Finance - IBank
  - Loans for Public Agencies
  - Loan Guarantees for Small Businesses
  - CLEEN Center (CA Lending for Energy & Environmental Needs)
  - ISRF, Infrastructure State Revolving Fund Program



# BAAQMD RULE UPDATES



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

- Purpose:  
Protect public from toxic air contaminants at existing facilities
  - Process emissions
  - Engines and incineration
  - Standby generators (Generator only facilities exempt if RAL < 250)
- Phased implementation based on cancer prioritization –  
WWTPs still in Phase 2
- If WWTP triggers rule, requires:
  - BAAQMD conduct an HRA (30-day review)
  - WWTP develop Risk Reduction Plan
  - Implementation of Risk Reduction Measures  
(5 years + 5 years to implement)



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

- Status Update:
  - Next 11-18 Implementation Working Group meeting: June 2019
  - Implementation procedure document issued
- Next Actions:
  - Monitor progress of Phase 1 via Working Group
  - Update emissions inventory values (Subgroup Update!)
  - Verify emission calculations methodology with permit engineer & update concentration data as appropriate
  - Continue tracking AB 617 regulation development



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## Standard Permit Conditions & Permit Handbook Revisions

- BAAQMD suggested BACWA provide edits to:
  - Standard Permit Conditions (see attachments)
    - Digestion - edited
    - Cogeneration - edited
    - Organic Waste Handling (food waste) – Sarah to edit based on language used in the SWRCB Co-digestion Capacity Analysis
  - Permit Handbook
- Timeline unspecified – need to be responsive to inform rule development under Regulation 13 (climate pollutants)



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## Proposed Flare Rules: SCAQMD, SJVAPCD, & BAAQMD



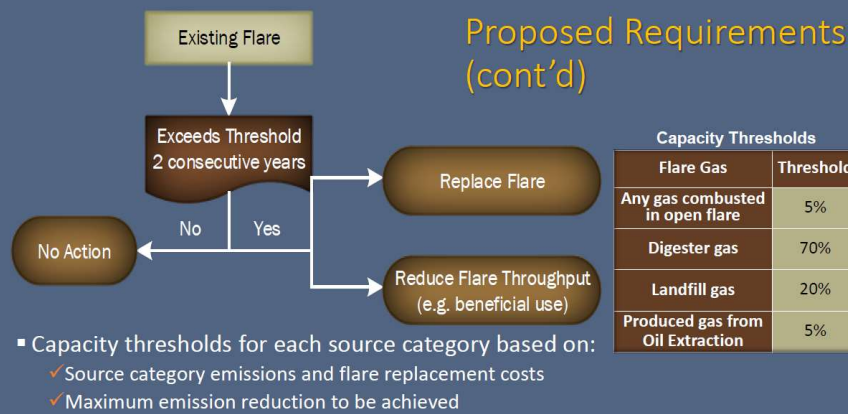
- **SCAQMD – Rule 1118.1**

- Control of non-refinery flare emissions  
(NO<sub>x</sub> @ 0.06 lbs/MMBtu, CO, VOCs...AND capacity thresholds)
- Rule approved January 4<sup>th</sup>
- SCAQMD staff to begin looking into potential impact of advanced co-digestion under SB 1383
- February 27<sup>th</sup> meeting with BAAQMD, SJVAPCD, and wastewater agencies in Sacramento during “Rethink Methane Symposium”



## SCAQMD Non-Refinery Flare Rule

### Proposed Requirements (cont'd)



Source tests begin within 12 months &  
every 5 years going forward



## Proposed Flare Rules: SCAQMD, SJVAPCD, & BAAQMD



- **SJVAPCD**
  - Flare Rule 4311: Limit emissions of VOCs, NO<sub>x</sub>, & sulfur oxides (SO<sub>x</sub>) from operation of flares
  - Anticipates adopting SCAQMD approach
- **BAAQMD**
  - Plans for new rule by 2020 to reduce NO<sub>x</sub> from non-refinery flares (requiring biogas & non-refinery flares to meet lowest available emissions reduction (LAER) level)



## Annual BACWA-BAAQMD Meeting – Agenda Items Brainstorm

- Regulation 13
- Rule 11-18
  - Emissions inventory updates
  - Impacts of AB 617's regulation
- Flare Rule Amendments Expected?
- Standard Permit Conditions Edits



## FY '20 Budget & Tasks Discussion

- FY '19 Budget = \$50,000 → FY '20 Budget = \$75,000
- Additional budget for increased activities in FY '20
  - Rule 11-18, Phase 2 preparations
  - Implementation of AB 617 (Steering Committee involvement)
  - Regulation 13 development
- Likely need increased meeting frequency (e.g., every other month)



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## MEMBER UPDATES / OPEN DISCUSSION!



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**THANK YOU!**