



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

Quarterly Meeting
November 29, 2017

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Agenda

1. Introductions
2. BAAQMD Rule Updates
3. Greenhouse Gas (GHG) Related Updates
4. Lunch & Member Updates
5. Tour SFPUC's Living Machine
6. Upcoming Meetings



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BAAQMD Rule Updates

- Regulation 11, Rule 18:
Reduction of Risk from Air Toxic Emissions at Existing Facilities
 - Central San's Approach
 - Status Update –
Proximity Adjustment Factor Data to BAAQMD
 - Next Steps (list of facilities and timeline)
- Regulation 9, Rule 2:
Inorganic Gaseous Pollutants – Hydrogen Sulfide
- Variance from Permit Conditions



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

- Purpose:
Protect public from toxic air contaminants at existing facilities
- Sources at POTWs:
 - Process emissions
 - Engines and incineration
 - Standby generators (Generator only facilities exempt if RAL<250)
- Requires:
 - BAAQMD conduct Health Risk Assessments (30-day review)
 - Risk Reduction Plan development
 - Implementation of Risk Reduction Measures (5 years to implement)
 - Phased Implementation based on cancer prioritization number



Rule 11-18: Central San's Approach

- See slides provided by Central San.



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

- Status Update:
 - Working to update Prioritization Scores by providing agency-specific Proximity Adjustment Factor data to BAAQMD
- Potential next actions/issues:
 - Collecting influent flow and concentration data
 - TBARCT determinations
 - Updating emissions factors through source tests (if needed)
 - Discuss barrier to POTW projects that increase biogas production and use onsite



Rule 11-18: Comment Letters

- October 16th – Proposed Rule and EIR
 - Sewage treatment plant description inaccuracies
 - Potential impact to biogas production
 - Concern about cross-media impacts
- October 25th – Staff Report and Socio-Economic Analysis
 - Continuing to work collaboratively with BAAQMD
 - Concerns about cost effectiveness and planning horizons
 - No-cost option is not an option
 - Appreciation for all POTWs being placed in Phase II



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Rule 9-2: Inorganic Gaseous Pollutants - Hydrogen Sulfide

- Prohibits H₂S emissions that result in ground level concentrations > 0.06 ppm averaged over 3 minutes OR 0.03 ppm averaged over 60 minutes
- Including source emission concentrations in permit conditions, based on modeling results
- Currently impacting Authority to Construct (ATC) permits for new projects



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Variance from Permit Conditions

- City of Petaluma WWTP improvement project:
Construction of second anaerobic digester
- Isolating digester resulted in a pressure relief valve periodically venting for a period of <2 hours
- City notified BAAQMD Inspector prior to work
- City reached out to BAAQMD prior to shutdown – no feedback
- Notice of Violation for failure to abate digester gas at all times
- BAAQMD later requested the City to submit an application for a variance months in advance of shutdown, no exceptions or variances



GHG Related Updates

- Draft 2030 Target Scoping Plan
- SB 1383 Regulation (short-lived climate pollutant reduction):
Statewide Methane Reduction, Organic Waste Diversion, &
Biogas Production
- BAAQMD Basin-Wide Methane Strategy



Draft 2030 Target Scoping Plan

- Draft released October 27th
- Objectives:
 - Achieve 2030 target
 - Provide direct GHG emissions reductions
 - **Provide air quality co-benefits**
 - Protect public health
 - Minimize emissions “leakage”
 - Support climate investment in disadvantaged communities
 - Facilitate sub-national and national collaboration
 - **Support cost-effective and flexible compliance**
 - Support Clean Power Plan and other federal action



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Draft 2030 Target Scoping Plan

- Incorporates AB 398 (post-2020 Cap-and-Trade Program)
- Addresses AB 617 (ARB monitoring of TACs and CAPs)
- Supports partnership between wastewater and waste management to manage organic waste diverted from landfills to generate biogas
- Acknowledges cross-sector interactions with water/wastewater
- Potential additional/supporting actions:
 - Local water/wastewater utilities should adopt long-term goal to reduce GHGs by 80% below 1990 levels by 2050 (consistent w/ DWR's Climate Action Plan), then move toward low carbon or net-zero carbon water.
 - Local water/wastewater utilities should develop distributed renewable energy.



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Draft 2030 Target Scoping Plan

- Encourage resource recovery WWTP projects to help reduce fugitive methane by 40% by 2030, to include:
 - Opportunities to support co-digestion of food waste streams at wastewater treatment plants
 - Incentivizing methane capture systems at WWTPs to produce renewable electricity, transportation fuel, or pipeline biomethane
- Support compact development & land use patterns, associated conservation & management strategies for natural & working lands that reduce per capita water consumption through more water-efficient built environments.
- No deadline for comments
- Full final Scoping Plan – November
- Final Board consideration – December 14/15



SB 1383: SLCP Reduction Strategy Implementation

- Methane Reduction:
 - 40% by 2030 (relative to 2013)
- Organics Diversion from Landfills:
 - 50% by 2020 (relative to 2014)
 - 75% by 2025 (relative to 2014)
- Increase in Production/Use of Biogas:
 - State agencies to consider/adopt policies and incentives
 - CEC to incorporate in the 2017 Integrated Energy Policy Report
 - CPUC to consider policies in support of in-State biogas production/use
- Formal rule development began Oct 30th
- Rule to be adopted by end of 2018



SB 1383: CASA Comments on Draft Regulatory Text

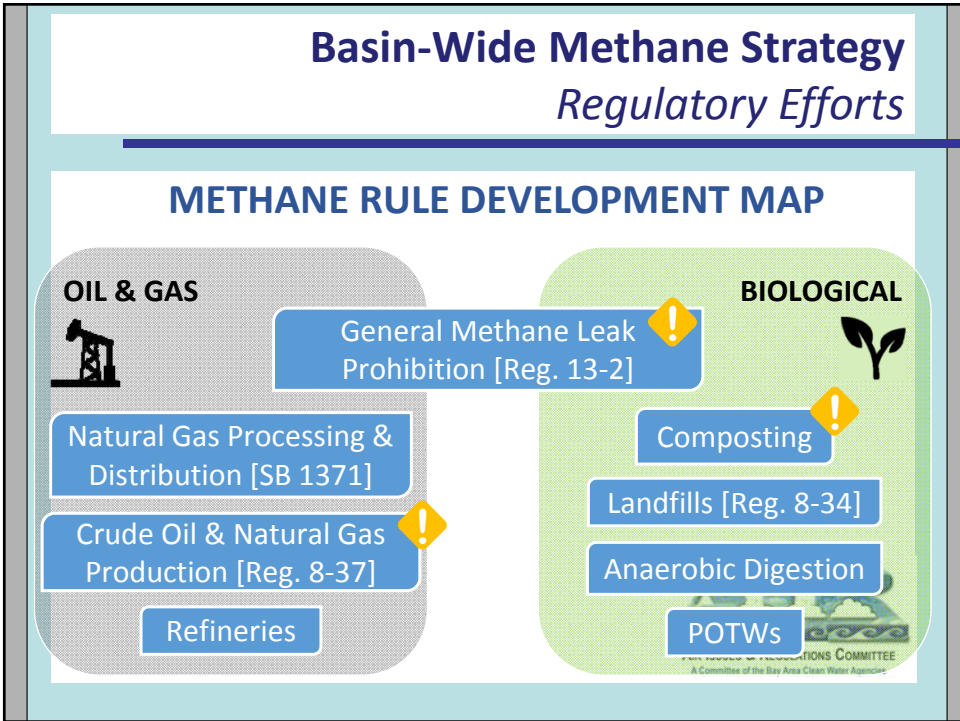
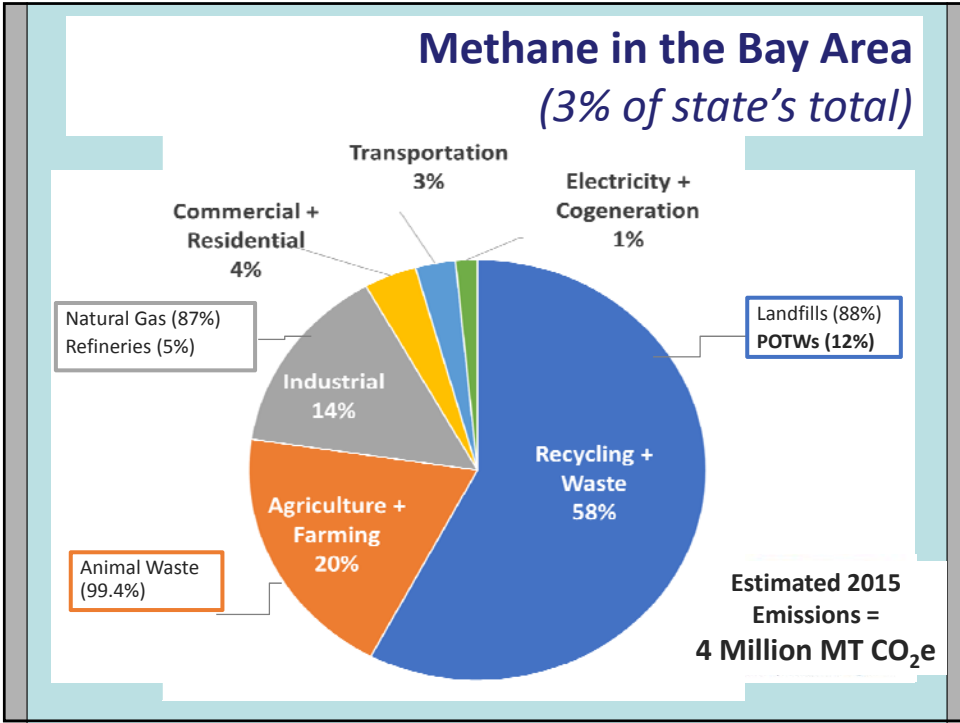
- Section 20.1(b) Recycling.
Product of in-vessel digestion and composting is biosolids, **land application of biosolids must be included as recycling option.**
- Section 30.3 Waivers.
POTWs may experience treatment process upsets and **must be able to dispose of sewage sludge in a landfill on a temporary emergency basis.**
- Add Section 60.3 Cleanliness of Organic Waste for Further Processing.
Must have assurance organic feedstock is clean, such that there is no negative impact on the digestion or compost process or supporting equipment.
- Section 80.1 Organic Waste Recycling Standards and Policies.
 - Set statewide standard for land application and beneficial use of biosolids. Establish approach based on US EPA's federal standards in 40 CFR part 503 or SWRCB's Statewide General Order.
 - Must have assurance markets exist for the use of the biogas. Require set volumes of in-state biogas from anaerobic digestion be procured by Investor and Publicly Owned Utilities (IOU/POU).



2017 Clean Air Plan

- Key Priorities:
 - Reduce Criteria Air Pollutants and Toxic Air Contaminants
 - Reduce Emission of Super-GHGs
 - Reduce Demand for Fossil Fuels
 - Decarbonize the Energy System
- Control Strategies
 - Stationary Sources: Rule 11-18 and Biogas Flares
 - Natural & Working Lands: Carbon Sequestration
 - Water: Promoting Biogas Recovery at POTWs
 - Further Studies: Lower ICE NOx and Investigate POTWs for Sources
 - Waste & Super-GHGs: Organics Diversion and Basin-Wide Methane Strategy





Regulation 13, Rule 2: General Methane Leak Prohibition

Establish limit for methane leaks across all Bay Area sources

Background

- Aliso Canyon leak released ~2.4MMTCO₂e during 2015-2016
- Air District Rule 8-2 prohibits large leaks of organic emissions (15 lbs/day and >300 ppm total carbon on a dry basis) throughout District *but exempts natural gas*

Purpose

- To allow Air District to take prompt action in case of large leaks
- To serve as a **backstop** while source-specific rules are adopted

How will it work?

- Operators will need to fix leaks > 10,000 ppm and 10 lb/hr

New Rule (draft in April 2018): Composting Operations

Control methane and VOC emissions from composting (WA 2)

Background

- State goal of 75% waste diversion by 2020 is increasing composting, etc.
- Increase in odor complaints from facilities handling organic waste

Facilities

Composting operations
(both stand-alone and at landfills)



Wood chipping &
grinding facilities



Organic waste handling
(e.g., material stockpiling)



How will it work?

- Implement BMPs for smaller operations
- Emissions control equipment for larger operations



Basin-Wide Methane Strategy Regulatory Efforts

METHANE RULE DEVELOPMENT MAP

OIL & GAS



General Methane Leak Prohibition [Reg. 13-2]

Natural Gas Processing & Distribution [SB 1371]

Crude Oil & Natural Gas Production [Reg. 8-37]

Refineries

BIOLOGICAL

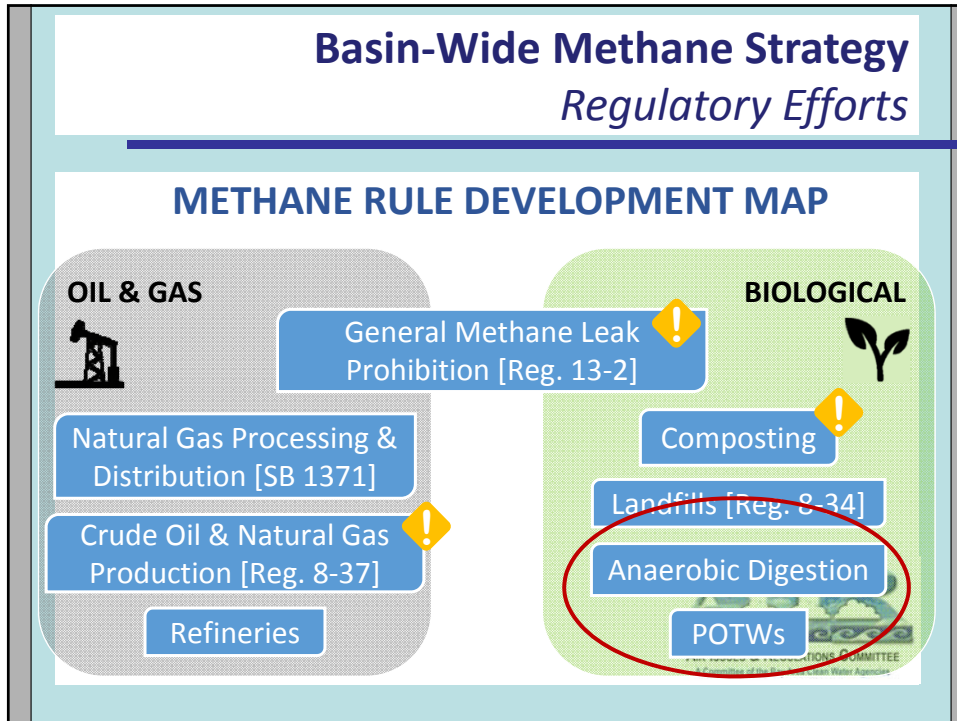


Composting

Landfills [Reg. 8-34]

Anaerobic Digestion

POTWs



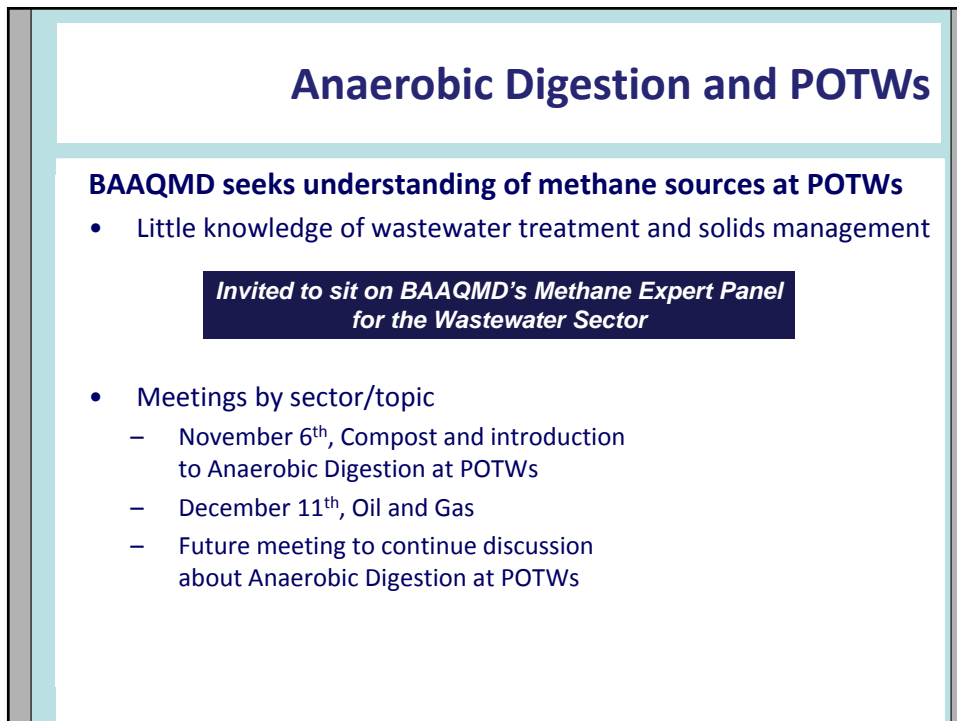
Anaerobic Digestion and POTWs

BAAQMD seeks understanding of methane sources at POTWs

- Little knowledge of wastewater treatment and solids management

***Invited to sit on BAAQMD's Methane Expert Panel
for the Wastewater Sector***

- Meetings by sector/topic
 - November 6th, Compost and introduction to Anaerobic Digestion at POTWs
 - December 11th, Oil and Gas
 - Future meeting to continue discussion about Anaerobic Digestion at POTWs





Methane Research Efforts *Led by the Air District*

Identify emission 'hotspots', perform source attribution, and improve the emissions inventory

GHG Research Van

- Fast measurements of CO₂, CH₄, & N₂O
- Source apportionment using chemical tracers
- Currently conducting preliminary leak surveys
 - fine-tune equipment
 - refine source attribution and data collection methodologies



LUNCH & MEMBER UPDATES



Upcoming AIR Committee Meetings

- 2018
 - March 21st – Location/Tour TBD
 - June 6th – BAAQMD Office
- **JOIN US FOR THE TOUR OF SFPUC's LIVING MACHINE!**



THANK YOU!

