AIR ISSUES & REGULATIONS COMMITTEE

A Committee of the Bay Area Clean Water Agencies

BACWA Annual Members Meeting

January 11, 2019

Air Issues & Regulations Update

Local

- Rule 11-18 Air Toxic Emissions at Existing Facilities
- Standard Permit Conditions & Permit Handbook Update

Global

- SB 1383: Short-Lived Climate Pollutant Reduction Regulation
- BAAQMD Regulation 13
- BAAQMD Climate Tech Review & Financing

Adaptation

- SWRCB Climate Change Vulnerability Survey

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

- Purpose:
  Protect public from toxic air contaminants at existing facilities
- Sources at WWTPs:
  - Process emissions
  - Engines and incineration
  - Standby generators (Generator only facilities exempt if RAL < 250)
- Phased implementation based on cancer prioritization – All WWTPs in Phase 2
- If triggered, requires:
  - Risk Reduction Plan development
  - 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

- Status Update:
  - 11-18 Implementation Working Group meeting quarterly
  - Technical Dispute Resolution Committee members identified (active and retired regulators from other Air Districts)

- Next Steps:
  - Monitor progress of Phase 1 via Working Group
  - Verify emission calculations methodology with permit engineer & update concentration data as appropriate
  - Update emissions inventory values

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Standard Permit Conditions & Permit Handbook Revisions

- BAAQMD suggested BACWA provide edits
  - Standard Permit Conditions
    - Waste Handling (food waste)
    - Digestion
    - Cogeneration
  - Permit Handbook

Join us January 16th to discuss edits & major issues

- Timeline for edits unspecified – need to be responsive to inform rule development under Regulation 13 (climate pollutants)

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SB 1383 SLCP reduction regulation to become effective in 2022

- 40% methane reduction by 2030 (relative to 2013 levels)

- Organics diversion from landfills (including biosolids, sludges, digestate)
  - 50% by 2020 (relative to 2014 levels)
  - 75% by 2025 (relative to 2014 levels)

- CEC and CPUC to adopt policies/ incentives to increase biogas production/use
- Enforcement begins 2024

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Formal rule-making to begin in January: *Proposed Organic Waste Reduction Regulations*

- Expecting the formal draft regulation to address:
  - Limits on local ordinances
  - Need for jurisdictions and POTWs to negotiate whether biosolids can continue to be landfilled
  - Procurement of compost and biogas (RNG)

- Expected to be released January 18th (45-day comment period begins)

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BAAQMD Regulation 13: Climate Pollutants Rule Development

Map to systematically reduce methane emissions

Rules and Regulations	GHGs	Odors	VOCs	Toxics
Regulation 13: Climate Pollutants	N_20, PCPs	n/a	n/a	n/a
Rule 13-1: Significant Methane Releases	CH_4	Yes	Yes	Yes
Rule 13-2: Organic Material Handling	CH_4	Yes	Yes	Yes
Rule 13-3: Composting Operations	CH_4	Yes	Yes	Yes
*Rule 13-4: Wastewater Operations**	CH_4, N_2O	Yes	Yes	Yes

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BAAQMD Regulation 13: Climate Pollutants Rule Development

Map to systematically reduce methane emissions

- **Next Steps**:
  - Additional Methane Expert Panel meetings
  - Rule 13-1 to go to Public Hearing in 2019
  - Workshops for 13-2 and 13-3 to be held in first quarter of 2019, to Board of Directors in third quarter 2019
  - 13-4 rule development to begin in late 2019
  - Meeting with BAAQMD staff March 7th to provide "Anaerobic Digestion 101"

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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

Bay Area Air Quality Management District

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 Systems	Natural Gas Compression	1
	Refining - Combustion	8
	Refining - Other	18
Metals	Iron and Steel Production	6
Minerals	Cement Production	14
Power Generation	Batteries	2
	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 (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_2O process emissions
  - Microalgae cultivation for CO_2 capture in sludge stream
  - Thermophilic AD
  - Bioprocesses for oxidation of CH_4
  - Temperature-phased AD
  - CANDO process

Climate Tech Kick-Off at BAAQMD: January 22nd RSVP by January 15th

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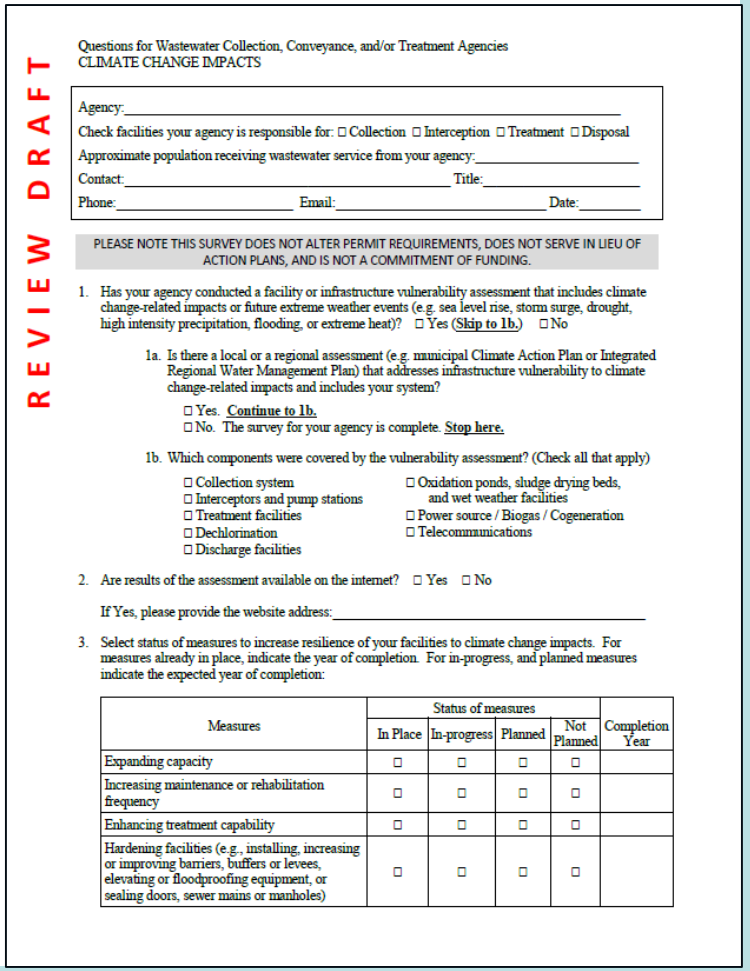
Are you vulnerable? SWRCB seeks your input!

- State Water Board seeks feedback from permitted facilities:
  - Recommended permit modifications and other regulatory requirements to reduce vulnerability of water and wastewater infrastructure to flooding, storm surge, and sea level rise.
  - Encourage use of U.S. EPA's Climate Resilience Evaluation & Awareness Tool or a comparable approach to identify vulnerabilities to climate change impacts at water and wastewater utilities.



REVIEW DRAFT

Questions for Wastewater Collection, Conveyance, and/or Treatment Agencies
CLIMATE CHANGE IMPACTS

Agency:_____

Check facilities your agency is responsible for: ☐ Collection ☐ Interception ☐ Treatment ☐ Disposal

Approximate population receiving wastewater service from your agency:_____

Contact:_____ Title:_____

Phone:_____ Email:_____ Date:_____

PLEASE NOTE THIS SURVEY DOES NOT ALTER PERMIT REQUIREMENTS, DOES NOT SERVE IN LIEU OF ACTION PLANS, AND IS NOT A COMMITMENT OF FUNDING.

1. Has your agency conducted a facility or infrastructure vulnerability assessment that includes climate change-related impacts or future extreme weather events (e.g. sea level rise, storm surge, drought, high intensity precipitation, flooding, or extreme heat)? ☐ Yes (**Skip to 1b.**) ☐ No

   1a. Is there a local or a regional assessment (e.g. municipal Climate Action Plan or Integrated Regional Water Management Plan) that addresses infrastructure vulnerability to climate change-related impacts and includes your system?

   ☐ Yes. **Continue to 1b.**
   ☐ No. The survey for your agency is complete. **Stop here.**

   1b. Which components were covered by the vulnerability assessment? (Check all that apply)

   ☐ Collection system
   ☐ Interceptors and pump stations
   ☐ Treatment facilities
   ☐ Dechlorination
   ☐ Discharge facilities
   ☐ Oxidation ponds, sludge drying beds, and wet weather facilities
   ☐ Power source / Biogas / Cogeneration
   ☐ Telecommunications

2. Are results of the assessment available on the internet? ☐ Yes ☐ No

   If Yes, please provide the website address:_____

3. Select status of measures to increase resilience of your facilities to climate change impacts. For measures already in place, indicate the year of completion. For in-progress, and planned measures indicate the expected year of completion:

Measures	Status of measures				Completion Year
	In Place	In-progress	Planned	Not Planned	
Expanding capacity	☐	☐	☐	☐	
Increasing maintenance or rehabilitation frequency	☐	☐	☐	☐	
Enhancing treatment capability	☐	☐	☐	☐	
Hardening facilities (e.g., installing, increasing or improving barriers, buffers or levees, elevating or floodproofing equipment, or sealing doors, sewer mains or manholes)	☐	☐	☐	☐	

Thank you!

Upcoming Meetings:

January 16th
BACWA AIR Committee, 10 am – 1 pm &
AIR Permit Conditions Subcommittee 1 - 2 pm
(EBMUD)

CASA Air Quality, Climate Change & Energy (ACE) Workgroup
January 15th, 9 – 11 am

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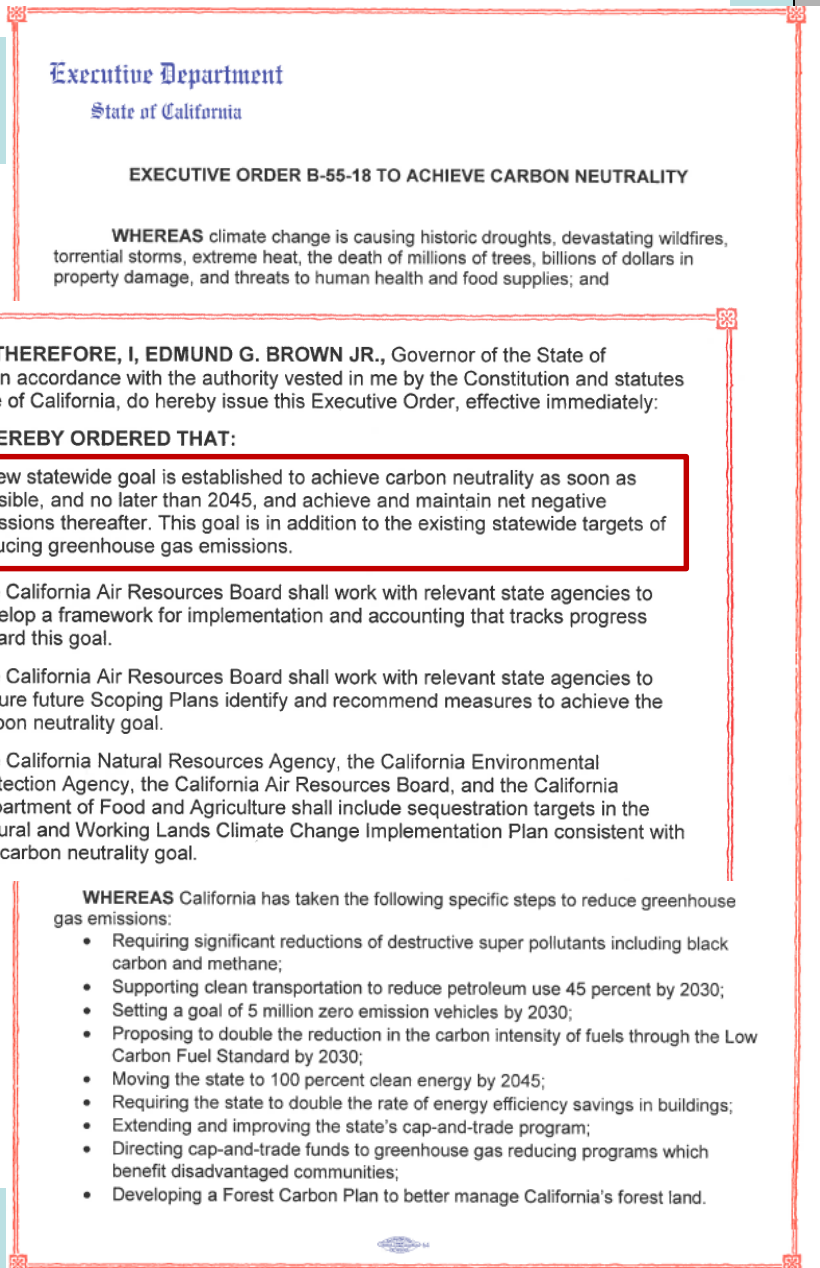
California to be Carbon Neutral by 2045!

- Executive Order B-55-18
- SB 100:
  100% Clean Energy Act
  - 50% by 2026 (no longer 2030)
  - 60% by 2030
  - 100% by 2045 (w/out increasing GHG emissions in Western Grid)
- SB 1440: Biomethane Procurement
  - Requires PUC to <u>consider</u> adopting policies & incentives



Executive Department

State of California

EXECUTIVE ORDER B-55-18 TO ACHIEVE CARBON NEUTRALITY

WHEREAS climate change is causing historic droughts, devastating wildfires, torrential storms, extreme heat, the death of millions of trees, billions of dollars in property damage, and threats to human health and food supplies; and

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the Constitution and statutes of the State of California, do hereby issue this Executive Order, effective immediately:

IT IS HEREBY ORDERED THAT:

1. A new statewide goal is established to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing greenhouse gas emissions.
2. The California Air Resources Board shall work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal.
3. The California Air Resources Board shall work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.
4. The California Natural Resources Agency, the California Environmental Protection Agency, the California Air Resources Board, and the California Department of Food and Agriculture shall include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

WHEREAS California has taken the following specific steps to reduce greenhouse gas emissions:

- Requiring significant reductions of destructive super pollutants including black carbon and methane;
- Supporting clean transportation to reduce petroleum use 45 percent by 2030;
- Setting a goal of 5 million zero emission vehicles by 2030;
- Proposing to double the reduction in the carbon intensity of fuels through the Low Carbon Fuel Standard by 2030;
- Moving the state to 100 percent clean energy by 2045;
- Requiring the state to double the rate of energy efficiency savings in buildings;
- Extending and improving the state's cap-and-trade program;
- Directing cap-and-trade funds to greenhouse gas reducing programs which benefit disadvantaged communities;
- Developing a Forest Carbon Plan to better manage California's forest land.