



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

AGENDA: 4

# Regulation 13: Climate Pollutants, Rule 1: Significant Methane Releases



**Climate Protection Committee Meeting**  
September 20, 2018

**William Thomas Saltz**  
Office of Rules and Strategic Policy

- Why Focus on Methane
- Methane Rule Development Overview
- Draft Regulatory Concepts
- Rule Development Schedule
- Conclusion

# Why Focus on Methane?



CH<sub>4</sub>

- Methane is 86 times more potent than carbon dioxide (CO<sub>2</sub>) *[on a 20-year horizon]*
- Air Districts support State's CH<sub>4</sub> emissions reduction goal of 40% by 2030 (SB 1383)
- Current Inventory: 10 Million MT CO<sub>2</sub>e *[20 yr. GWP]*
  - ***Top-down studies indicate Bay Area methane emissions may be 1.3 – 2.3 times higher [Fairley and Fischer 2015; Jeong et al., 2017]***



# Methane Rule Development

*Map to systematically reduce methane emissions*

## OIL & GAS



Significant Methane Releases [Reg. 13-1]

Regulation 13: Climate Pollutants

Natural Gas Processing & Distribution [SB 1371]

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

Refineries

## BIOLOGICAL



Organic Material Handling [Reg. 13-2]

Composting [Reg. 13-3]

Anaerobic Digestion

Landfills [Reg. 8-34]

Wastewater



# Methane Rule Development Stakeholder Outreach Effort

Eight separate meetings with  
a variety of stakeholders

Petroleum Refineries

Landfill Operations

Wastewater  
Treatment

Natural Gas Storage  
and Distribution



# Draft Regulation 13, Rule 1

## *General concepts*

### 13-1: Significant Methane Releases

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

**CONCEPT** *Limits emissions from significant CH4 releases*

#### SCHEDULE

**WORKSHOPS**  
Fall 2018

**TO BOARD**  
Early 2019



# Draft Regulation 13, Rule 1

## *Regulatory Review*

### STANDARDS

*Methane releases shall be abated if*

**EMISSIONS**  
> 10,000 PPM

### FIX TIMES

*Releases*

**MINIMIZE RELEASE**  
WITHIN 3 DAYS

**ABATE RELEASE TO 500 PPM**  
WITHIN 14 DAYS

*Recurrent releases*

**MINIMIZE RELEASE**  
WITHIN 3 DAYS

**ABATE RELEASE TO 500 PPM**  
WITHIN 7 DAYS



# Draft Regulation 13, Rule 1

## *Regulatory Review (cont'd)*

### LIMITED EXEMPTIONS

- **All sources:** if methane emissions < 10 lb/day for each of 3 consecutive days
- **Refinery flares:** if operator can show that each flare sufficiently destroys the methane
- **Maintenance or repairs:** exempt if abatement requirements are met within 3 days
- **Landfill working face:** exempt if abatement requirements are met within 3 days



# Draft Regulation 13, Rule 1

## *Regulatory Review (cont'd)*

### Other Requirements

- **Post Abatement Monitoring**
- **Recordkeeping**
- **Reporting**



# Draft Regulation 13, Rule 1

## *Next Steps*

- **Workshops and Comment Period**

**Early Fall 2018**

Submit written comments  
to: [wsaltz@baaqmd.gov](mailto:wsaltz@baaqmd.gov)



- **Amend Draft Rule as Appropriate**
- **Publish Proposed Rule and Staff Report**
- **Public Hearing in late 2018/early 2019**

# Rule 13-1

# *Questions / Contact Info*



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BAY AREA  
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AGENDA: 5

# *Organics Recovery Strategy*



Climate Protection Committee Meeting  
September 20, 2018

Dr. Chad White  
Senior Planner

## Key Points

- Support for emerging sector / methane reduction
- Need to minimize criteria, toxic, and climate emissions
- Opportunities for BAAQMD and Bay Area leadership

## Strategic Directions

- Scientific investigation of emissions and sources
- Regulation through best practices, mitigation measures
- Support and guidance for local government
- Convening to encourage resilience and facilitate consensus

# Drivers



**GHG + Waste  
Reduction  
Goals**



**Growth of  
Recovery  
Operations**



**Sustainable  
Development  
of California  
Bio-economy**

# Achieving 75% Diversion

**2.3 million** tons per year    **new organics recovery to meet goal**  
(per CalRecycle 2014 waste characterization study)



**1.5 million** tons per year    amount of above suitable for composting

- **1.0 million** tons per year    capacity of current composting infrastructure

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**0.5 million** tons per year    new composting infrastructure needed



# Recovery Options



chipping and grinding



aerated composting



covered composting



compost



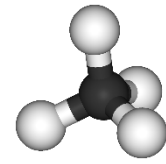
slurry production



anaerobic digestion



co-digestion with sewage



+



digestate



"bio"methane (CH<sub>4</sub>)



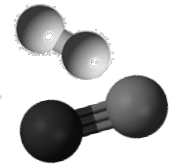
size reduction and drying



gasification



pyrolysis



+



syn gas (CO + H<sub>2</sub>)

biochar



diversion



Collection

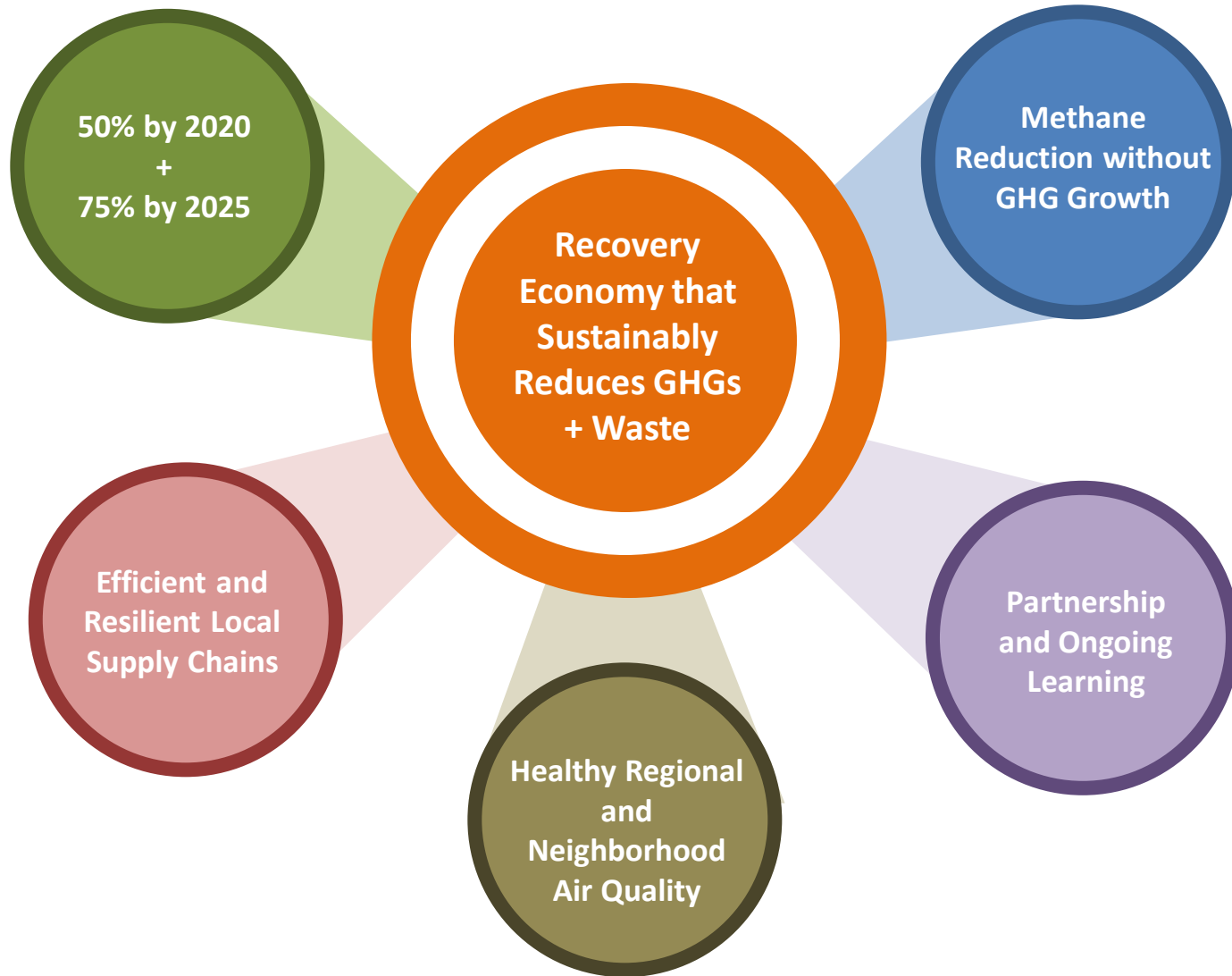
Pre-processing

Processing

Products



# Vision



# Strategy





# Engagement Examples

- Compost - Methane Strategy Expert Panel Nov 2017
- Anaerobic Digester Operator Training Feb 2018
- Anaerobic Digester Short Course Mar 2018
- Compost - Methane Strategy Expert Panel Jun 2018
  
- **Regional Event: “Developing a Sustainable Organics Recovery Sector”** June 25, 2018  
(Bay Area Metro Center)



# Regulation 13: Methane

## Reg 13-2

## Reg 13-3

	Reg 13-2	Reg 13-3
<b>TITLE</b>	organic material handling	composting operations
<b>SOURCES</b>	handling and storage of materials	decomposition stages of composting
<b>EMISSIONS</b>	methane · VOC	methane · VOC
<b>CONCEPT</b>	<ul style="list-style-type: none"> <li>· Recordkeeping/Reporting</li> <li>· Registration and Permitting</li> <li>· Best Management Practices</li> </ul>	<ul style="list-style-type: none"> <li>· Best Management Practices</li> <li>· Mitigation Measures</li> <li>· Controls/Abatement</li> </ul>
<b>SCHEDULE</b>	Workshop: spring 2019 To Board: summer 2019	Workshop: spring 2019 To Board: summer 2019



# Planning and Policy Support

- Encouraging life-cycle understanding and approaches
  - Determining best practices in waste contracting
  - Determining best practices in source separation
  - Determining best practices in procurement and application
- Encouraging resilient local recovery infrastructure
  - Supporting local siting and rightsizing
  - Supporting organics diversion planning
  - Assuring access to recovery infrastructure
- Linking to climate action and adaptation planning
  - Encouraging return of materials to soils
  - Facilitating capture of carbon credits for sequestration

# Takeaway Points

- Strategy support organics recovery to reduce methane
- Complexities and trade-offs in this endeavor
- Circumstances position BAAQMD as leader in this space

## Next Steps

- Advance understanding and characterization of emissions
- Proceed with development of Regs 13-2 and 13-3
- Partner with local government re: best practices, guidance
- Look to support sector development and “OrgTech” economy