



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

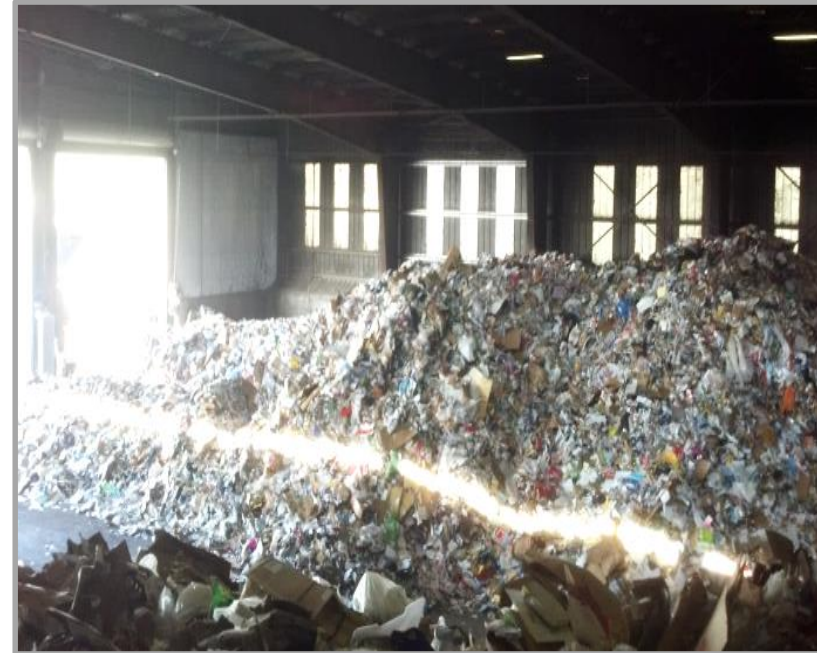
Milpitas/San Jose Waste Facilities Update

**Stationary Source Committee
March 20, 2017**

**Wayne Kino
Director of Enforcement**

Overview

- Changing Solid Waste Industry
- Odor Impacts
- Milpitas/San Jose Facilities
- 2016 Highlights & Ongoing Improvements
- Challenges & Next Steps





Changing Solid Waste Industry

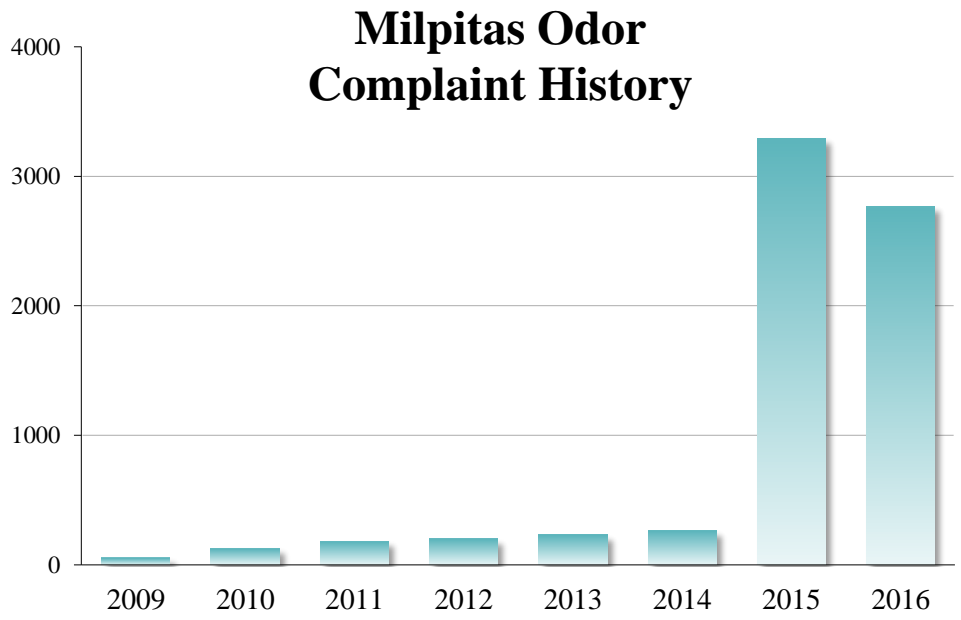
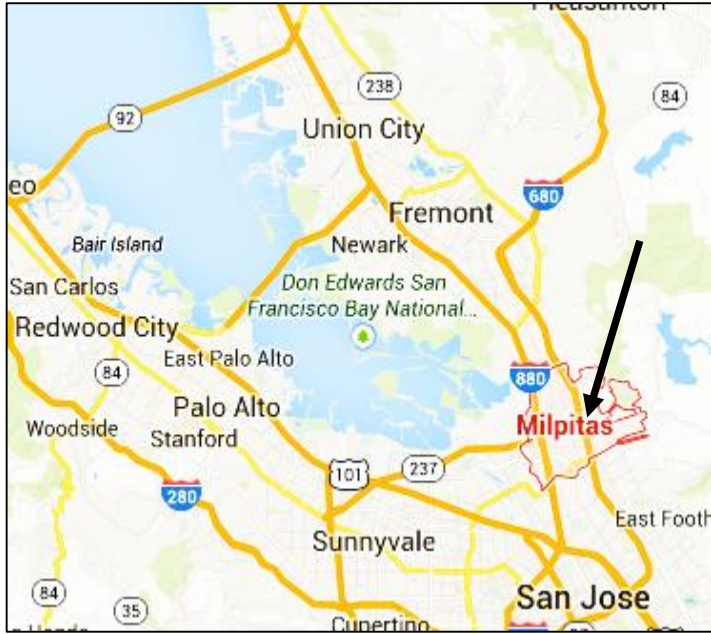
California's Waste Diversion Priorities

- 75% Diversion from Landfills by 2020
- Diverting Organics Away from Landfills
- Increase Composting Capacity
- Expand Recycling Infrastructure
- Incorporate New Technologies for Processing Organics



Odor Impacts

- Increasing odors from solid waste industry
- Odor complaints in Milpitas/San Jose Area:
 - 2015: ~ 3,500 complaints
 - 2016: ~ 2,800 complaints





Facilities and Sources



LEGEND

- A: Newby Island Resource Recovery Park**
 - A1 - Sanitary Landfill**
 - A2 - Material Recovery Facility (MRF)**
 - A3 - Compost Facility**

- B: Zero Waste Energy Development Company (ZWED)**

- C: San Jose - Santa Clara Regional Wastewater Facility**



Facilities and Sources

(Continued)

**Newby Island
Material Recovery Facility
(MRF)**



Newby Island Landfill



Newby Island Composting



**Zero Waste Energy Development (ZWED)
Dry anaerobic digestion facility**



**San Jose Santa Clara Regional
Wastewater Facility**





Air District Role

- Permitting Authority
- 17 CCR § 95460 - Methane Emissions from Municipal Solid Waste Landfills
- Regulation 7 – Odorous Substances
- Regulation 8, Rule 34 – Solid Waste Disposal
- Regulation 9, Rule 2 – Hydrogen Sulfide
- CH&SC §41700 - Public Nuisance



Air District Role

(Continued)

- Complaint Process
 - 1-800-334-ODOR (calls accepted 24/7)
 - Inspector response to all odor complaints
 - Rigorous confirmation process
- Inspections have yielded results
 - Enforcement actions
 - Identification of odor sources and changes within facilities
 - More thorough understanding of facilities' interdependent relationships and sharing of odorous materials
 - Improvements to facility operations



2016 Highlights

Facility Improvements (*complaints decreased by 18% from 2015)

- Newby MRF implements best management practices to reduce odors from waste stockpiling and processing (1st quarter 2016)
- Newby Landfill completes upgrades to gas header and installs additional gas wells (April 2016)

Permit Related Activities

- District issues ZWED Permit to Operate (Oct 2016)
- **San Jose Planning Commission approves Newby Island Landfill Expansion (Dec 2016)**

A photograph of a white lighthouse on a cliff overlooking the ocean under a blue sky with clouds.

Facility Improvements

- San Jose Santa Clara RWF continues capital investment project (Sept 2016 - ongoing)
- ZWED conducts pilot study of outdoor, covered aerated static composting (Feb 2017 - ongoing)
- Newby MRF tests new odor neutralizer (May 2017)
- Newby composting operation transitions to aerated static piles (4th Quarter 2017)



Challenges

- Increasing organic diversion will continue to impact air quality
- District-wide increases in waste-related odor complaints
- Jurisdictional challenges over odors from compost and green waste



Next Steps

- Continue to strengthen partnership with CalRecycle and Local Enforcement Agencies
- Continue to participate in the quarterly South Bay Odor Stakeholder Group meetings
- Update Complaint Procedures including public workshops
- If adopted, apply new particulate emission rules and Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities
- Amend Regulation 7, Odorous Substances and develop regulations for composting and anaerobic digestion



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Spare the Air – Cool the Climate A Blueprint for Clean Air and Climate Protection in the Bay Area

Stationary Source Committee

March 20, 2017

Henry Hilken
Director of Planning and Climate Protection
Idania Zamora
Rule Development



Critical Challenges

Climate Change

- The greatest common global challenge
- The biggest threat to our environment, economy, health and quality of life

Health Inequities

- Equal access to healthy air is a fundamental right that still eludes many Bay Area residents

This Plan focuses on strategies that will help us meet both of these challenges



What Is This Plan?

Multi-pollutant plan to update 2010 Clean Air Plan

A comprehensive strategy of 85 measures to:

- reduce ozone and fine particles throughout the region
- reduce air toxics in impacted communities
- reduce GHGs toward long-range targets
 - 40% below 1990 levels by 2030
 - 80% below 1990 levels by 2050

This Plan lays out a Bold Vision for a future Bay Area with a thriving economy, truly equitable access to healthy air, and a healthy, secure environment

Where Do We Want To Be In 2050?

Laying out a Bold Vision for a future Bay Area

- GHG emissions have been reduced by over 80%
- Disparities in health risk from air pollution have been eliminated
- Eliminate fossil fuel combustion/keep fossil fuels in the ground
- Buildings are fossil-fuel free
- Power supply is nearly 100% renewable
- Transportation based on EVs and renewable diesel
- Half of all trips are via transit, biking or walking
- Oil companies are part of the solution, producing renewable fuels
- Organics are cut from waste stream and put to productive use





How Does This Plan Get Us There?

It sets us on a path to 2050 by laying out specific actions the Air District will take over the next 3-5 years

Using all available tools: rules, grants & incentives, partnerships, local gov't collaboration, community engagement, research

Priorities in the Plan:

- Reduce emissions of criteria pollutants and toxic air contaminants from all sources
- Reduce emissions of “super-GHGs” such as methane
- Improve energy efficiency/reduce demand for fossil fuels
- Reduce fossil fuel combustion
- Decarbonize the energy system/increase renewable energy
- Reduce transportation emissions via technology, reduced VMT



How Does This Plan Address Stationary Sources?

Through a three-pronged strategy that aims to

Decrease Greenhouse Gas Emissions

- Improve industrial efficiency
- Stop methane leaks

Reduce Criteria Pollutants from Large Sources

- Execute Refinery Strategy
- Address PM in Bay Area

Lower Exposure to Toxics

- Use latest science & HRA guidance
- Focus on existing sources



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Decreasing GHG Emissions

Improve Industrial Efficiency

Basin-wide Combustion Strategy (SS18)

Approach to stabilize and increase combustion efficiency

- Phase 1: Carbon Intensity (CI) Caps
 - CI = CO₂ emitted per unit of input or output
 - CI limits for refineries, power plants and cement
- Phase 2: Source-by-Source Rulemaking
 - Identify cost-effective and technically feasible efficiency improvements leading to GHG and CAP emission reductions

Rules in Development

- Draft Rule 12-16 caps refinery GHG and criteria emissions (SS11)
- Draft Rule 13-1 limits refinery carbon intensity (SS12)
- Draft Rule 2-2 lowers GHG BACT threshold (SS17)



Decreasing GHG Emissions

Stop Methane Leaks

Basin-Wide Methane Strategy (SS16)

Reduce region's CH₄ emissions in support of ARB's SLCP strategy

- Improve methane emissions inventory (SL3)
- Prohibit significant methane leaks in the region
- Remove methane exemption from relevant rules
- Rulemaking to reduce methane emissions from
 - Natural gas & oil production (SS13, SS14)
 - Natural gas distribution network (SS15)
 - Landfills (WA1) and Composting Operations (WA2)
- Use incentives, best practices and other tools to reduce methane from the agriculture sector (AG2, AG3, AG4)



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Reducing Criteria Pollutants from Large Sources: *Refinery Strategy*

Refinery Emission Reduction Strategy

On track toward goal of 20% emissions reduction by 2020

Rule	Addresses	CM	Adoption Date
6-5	Reduces PM from FCCUs	SS1	Dec. 2015
8-18	Reduces VOC from equipment leaks	SS2	
11-10	Reduces VOC & toxics from cooling towers	SS3	
9-14	Reduces SO ₂ from coke calcining operations	SS8	Apr. 2016
12-15	Tracks crude slate changes and emissions	SS10	

17% reduction in total refinery CAP emissions from adopted rules



Reducing Criteria Pollutants from Large Sources: *Refineries and Others*

Refinery Emission Reduction Strategy (goal: 20% by 2020)

What's Next?

Rule	Addresses	CM	Scheduled
9-9	Nitrogen oxides (NO _x) from gas turbines	SS22	2018
TBD	Further refinery SO ₂ reductions	SS5, 6, 7	2018
6-5	Condensable PM & SO ₂ reductions from FCCUs (Phase 2 of Rule)	SS1	2018

Other Large Sources

- Amended Rule 9-13 to limit SO₂ and ammonia from cement manufacturing (SS19)



Reducing Criteria Pollutants from Large Sources: *Reduce PM*

New and Amended Regulation 6 Rules

Prioritize largest PM emissions reductions in the region

- Amendments to Rule 6-1 to reduce PM limits **(SS31)**
- Rule 6-6: PM from trackout **(SS36)**
- Rule 6-7: PM from asphalt operations **(SS37)**
- Rule 6-8: PM from bulk material storage, handling and transport, including coke and coal **(SS35)**

Evaluate Cost-Effective Strategies for Other PM Sources

- Commercial cooking **(SS34)**
- Fugitive dust **(SS38)**



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Lowering Exposure to Toxics

Include Latest Science

Toxics New Source Review (NSR) Program (Rule 2-5) now includes latest health risk assessment (HRA) guidelines (SS21)

Background

- Rule 2-5 implements Air District's HRA and Risk Management (RM) procedure through NSR program
- OEHHA released HRA and RM guidance in 2015

Amendments to Rule 2-5 adopted in Dec 2016

- Update the Air District's HRA and RM procedures to follow statewide guidelines (also updated by ARB and CAPCOA)
- Increase stringency of the program with higher number of projects triggering HRAs and implementing risk reduction



Lowering Exposure to Toxics

Focus on Existing Sources

NEW Draft Rule 11-18 (SS20)

Reduces public's exposure to localized health risks

- Hundreds of facilities will be evaluated, including refineries
- Health Risk Assessments (HRAs) conducted by Air District staff **using latest OEHHA guidelines**
- Threshold for facilities to develop and execute District-approved Risk Reduction Plans reduced from 100 per million (100/M) to 10/M
- Refineries have among highest priority for HRAs (Phase 1)
- Rule 11-18 ready for Board action in 2017



Implementation: 2017 & 2018 Rule Development Calendar

CM #	2017 Control Measures
SS 20	Toxics Risk Cap (Rule 11-18)
SS 11	Refinery Emissions Cap (Rule 12-16)
SS 31, 35, 36, 37	Particulate Matter (Rule 6, 6-1, 6-6, 6-7, 6-8)
SS 13	Oil and Gas (Rule 8-37)
SS 12	Refinery Carbon Intensity Limits (Reg. 13-1)
SS 9, 17	GHG BACT and Crude Slate in Permits (Rule 2-1, 2-2)
SS 16	Basin-Wide Methane Strategy

CM #	2018 Control Measures
SS 5, 6, 7	Refinery Sulfur Emissions (Rule 9-1)
SS 22	Stationary Gas Turbines (Rule 9-9)
SS 19	Portland Cement (Rule 9-13)
SS 1	Fluid Catalytic Cracking in Refineries (Rule 6-5 Phase 2)
SS 15	Natural Gas Processing and Distribution
SS 40	Odors
WA 1, 2	Landfills and Composting Operations