2016 Ozone Plan

Plan Introduction & Proposed Stationary Source Control Measures

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www.OurAir.org

Presentation

- Background
- Process
- Plan Introduction
- Stationary Source Control Measures
- Discussions

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Ozone Standards

Basis	Concentration	Status
State 1-Hour	0.09 ppm	Nonattainment*
State 8-Hour	0.070 ppm	Nonattainment
Federal 8-Hour (Old)	0.075 ppm	Attainment
Federal 8-Hour (New)	0.070 ppm	Undetermined

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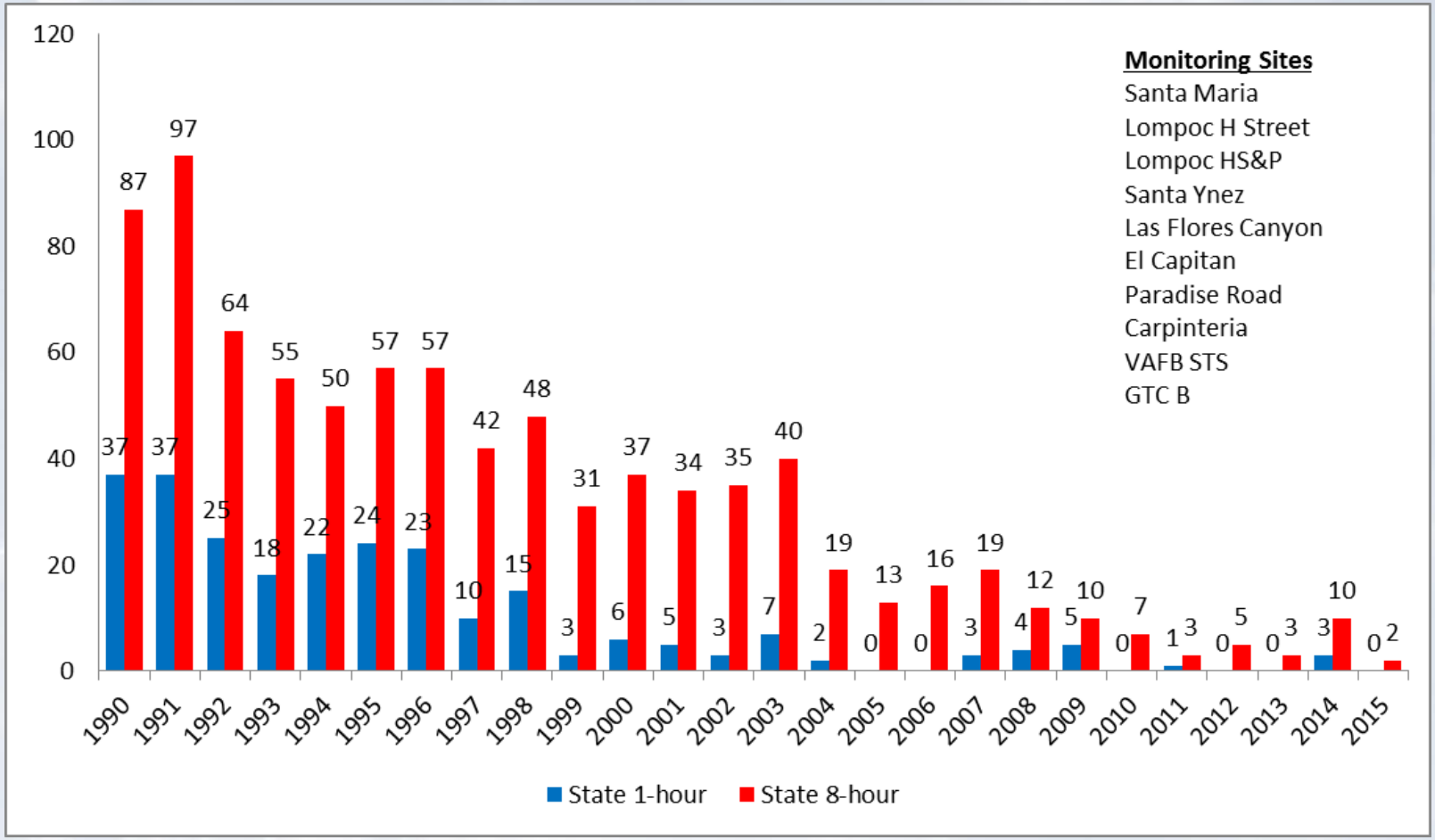
Days Exceeding Standards



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Plan Requirements

- **California Clean Air Act (1988)**
  - Attain the Ozone standard by the earliest practicable date
- **Triennial progress reports:**
  - 1991 (initial plan), 1994, 1998, 2001, 2004, 2007, 2010, 2013
- **Objectives:**
  1) Assess the effectiveness of our program
  2) Include strategies to obtain further emission reductions

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Developing the Plan

- Present in sections to CAC
- Solicit feedback and revise
- Present complete plan to CAC
- Public notice and review period
- Bring to the Board for adoption

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After Adopting the Plan

- Proposed Control Measures – develop according to plan schedule
- Further Study Measures – collect information, analyze

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Plan Organization

- **Chapter 1:** Introduction
- **Chapter 2:** Air Quality
  - Attainment Status, Trends, Population Exposure
- **Chapter 3:** Emission Inventory
  - Stationary Sources, Area-wide Sources, Mobile Sources
  - Emission forecasts
- **Chapter 4:** Stationary Source Control Measures
  - Proposed strategies to help meet attainment goals
- **Chapter 5:** Transportation Control Measures
  - SBCAG strategies that help reduce pollution

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Rulebook Format

Regulation	Name	Last Update
I	General Provisions	2012
II	Permits	2012
III	**Prohibitions**	**2014**
IV	Agricultural Burning	2002
V	Hearing Board	1978
VI	Emergencies	1981
VII	Conformity	1998
VIII	New Source Review	2013
IX	NSPS	2010
X	NESHAP	1993
XI	Public Notification	2010
XII	Registration Programs	2007
XIII	Part 70 Operating Permits	2011

Typical Rule Process

- Internal Review
- ARB & EPA Review #1
- Public Workshop
  - Send notices directly to affected businesses
  - E-mail everyone on the District's electronic subscription list
  - Place notice in the newspaper and on our website for the general public
- ARB & EPA Review #2
- CAC Review
- Board Review & Final Adoption
- **Typical Rule Process:** 6 - 9 months

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Adopting Feasible Measures

- **Technologically Feasible & Achieved in Practice?**
  - See Attachment A
- **How many emission reductions would we get and how soon can we get them?**
  - See Attachment B
- **How cost effective is the rule?**
  - Will be covered in more detail on the next few slides
- **How will the rule be implemented in the District?**

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Cost Effectiveness ($/ton)

- **Sources of Data:** Other Districts, CARB, EPA, Manufacturers
- **Emission Reductions:**
  - Emission Factors: Typically from the rule
  - Usage: Emission Inventory Data or conservative averages
- **Costs**:
  - Initial: Equipment, Installation
  - On-going: Maintenance, Emission Testing, Raw Materials
- **Project Life**: Conservative Average
- **Interest Rate**: U.S Department of Treasury

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Cost Effectiveness ($/ton)

- The C/E range will cover the majority of the projects.
- There can be outliers, as there may be unique facilities with special circumstances.
  - Can be looked at more in-depth during the rule development process
- For regulatory purposes, C/E calcs should be accurate to within +/- 30%

~ EPA Air Pollution Control Cost Manual

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Rule	Description	Adoption Schedule	Cost-Effectiveness ($/Ton)	Reductions (Tons/Year)	
				ROC	NO_X
360	**Boilers, Water Heaters, and Process Heaters (0.075 - 2 MMBtu/hr)** NOx limit: 30/55 ppmv → 20 ppmv for *new units*.	2016 - 2017	$2,800 to $11,300	-	19.8
361	**Boilers, Steam Generators, and Process Heaters (2 - 5 MMBtu/hr)** NOx limit: 30 ppmv → 9/12 ppmv for *new units*.	2017	$13,100 to $17,300	-	10.42
342	**Boilers, Steam Generators, and Process Heaters (5+ MMBtu/hr)** NOx limit: 30 ppmv → 9/15 ppmv for *new units*.	2017	$8,760 to $21,000	-	6.36
321	**Solvent Cleaning Machines and Solvent Cleaning** ROC limit: 50 g/L → 25 g/L.	2018	$0 to $1,000	6.35	-
351	**Surface Coating of Wood Products** Include solvent cleaning provisions at 25 g/L.	2018	$1,000 to $2,000	0.42	-
354	**Graphic Arts** Include solvent cleaning provisions at 25 – 100 g/L. Additional requirements for: Rotogravure, Flexographic, Lithographic, Letterpress, and Screen Printing operations.	2019	$1,000 to $3,100	98.21	-
				104.98	**36.58**

Rule 360: 0.075 - 2 MMBtu/hr Boilers

- Around 1,770 units within SB County
- Units are typically found at small commercial operations:
  - Apartment complexes, restaurants, office buildings
- Point-of-Sale rule. Permits typically not required
- 30/55 ppmv NOx → 20 ppmv for *new NG-fired units*.
- 70-80 different manufacturers with SCAQMD certified units

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Rule 361: 2 - 5 MMBtu/hr Boilers

- Around 160 units within SB County
- Units are typically found at larger institutions:
  - UCSB, VAFB, hotels, jails
- Permits are required
- 30 ppmv NOx → 9 or 12 ppmv for *new NG-fired units*.
- Semi-annual tune-up requirement
- Previously on “Further Study”

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Rule 342: 5+ MMBtu/hr Boilers

- Around 42 units within SB County
- Units are typically found at industrial operations:
  - Oil & Gas, Imerys, Marian Medical Center
- Permits are required
- 30 ppmv NOx → 9 or 15 ppmv for *new NG-fired units*.
- Biennial Source tests required
- Previously on “Further Study”

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Rule 321 - Solvents

- Applicability: Solvents not associated with Coatings
- Operations typically occur at unpermitted area sources:
  - Auto repair, welding shops, machinery cleaning
- Many specific exemptions built into the rule:
  - Examples: solvent cleaning at hospitals and janitorial cleaning
- Over 50 manufacturers with SCAQMD certified Clean Air Solvents
- Expected Compliance Method: Dilution or Substitution

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Rule 351 – Wood Coating

- Applicability: Commercial Wood Coating Operations
- Around 4 permitted facilities in the District
- Solvent substitution:
  - Lacquer thinner → Acetone or aqueous solvents
- Proposal will update the rule to be like other District coating rules
  - Autobody, Metal Parts, Adhesives, Polyester Resin Operations

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Rule 354 – Graphic Arts

- Applicability: Commercial Graphic Arts Operations
- Currently an area source. May have to start permitting to increase the enforceability of the rule.
  - Potentially 15 facilities over 1 tpy ROC
  - Santa Barbara Independent, Santa Maria Times, Book & Magazine publishers, commercial screen printing operations.
- Rule would not be applicable to Ink jet printers [digital operations]

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Further Study Control Measures

Rule	Description
325 **326** **343** **344**	**Crude Oil Production and Separation;** **Storage of ROC Liquids;** **Petroleum Tank Degassing; and** **Petroleum Sumps, Pits and Well Cellars** Include solvent cleaning provisions.
316	**Storage and Transfer of Gasoline** Delete the exemption for agricultural operations Would require a new program to register agricultural gasoline tanks.
—	**Organic Material Composting Operations** Limit ROC emissions from commercial composting operations Management practices for small facilities. Control devices for larger facilities.

Further Study - Highlights

- 325 – 344 rules
  - Would lower solvent limits for onshore and offshore O&G
  - Moved from Proposed to Further Study
    - Not many Air Districts have adopted similar rules yet → Not completely sure if the rule can be achieved in practice.
    - Need to talk with Ventura and South Coast to see how they handle this source category.
    - We would like to refine the emission reduction and C/E calcs.

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Further Study - Highlights

- 316: Storage and Transfer of Gasoline
  - Delete exemption for agricultural gasoline tanks.
  - CARB 2007 report: approximately 500 ag tanks in the County
    - 90% of which are smaller than 1,000 gallon capacity
    - Based on a survey of all fuel providers.
      - 33% response rate
  - Would need to create a registration program for all of the tanks
  - Approximately 4 tpy reductions at full implementation

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Further Study - Highlights

- Green Waste Composting
  - No District rule yet for this source category
  - Medium-sized facilities:
    - 20% VOC control using mitigation measures
    - Apply water prior to turning
    - Apply finished compost top layer
  - Large-sized facilities:
    - 80% control system – Full cover and collection system
  - Potentially one source would be affected:
    - Engel & Grey in Santa Maria - Medium

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Discussion

- We would like to focus the discussion on the overall feasibility of the control measures.

- If anyone wants to discuss or review any of the calculations in-depth, please e-mail me at mitrot@sbcapcd.org

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