



Bay Area 2004 Ozone Strategy

Draft Control Measures



Bay Area 2004 Ozone Strategy

Presentation Overview

- Ozone background
- Ozone planning process
- Draft control measures and further study measures
- Next steps



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Ozone Health Effects

- Irritates nose, throat, respiratory system
- Difficulty breathing, shortness of breath
- Aggravates asthma, bronchitis, emphysema
- Long-term exposure – damages lung tissue
- Children, seniors, people with respiratory illnesses are most at risk



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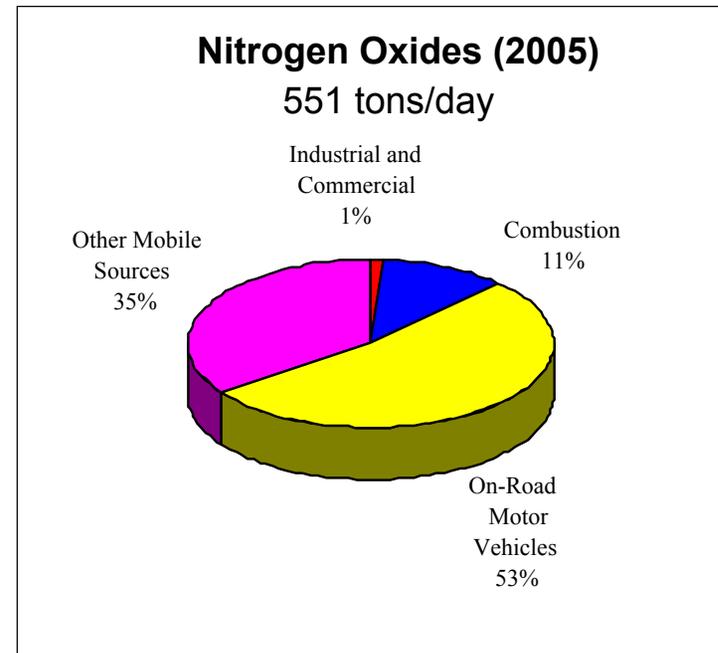
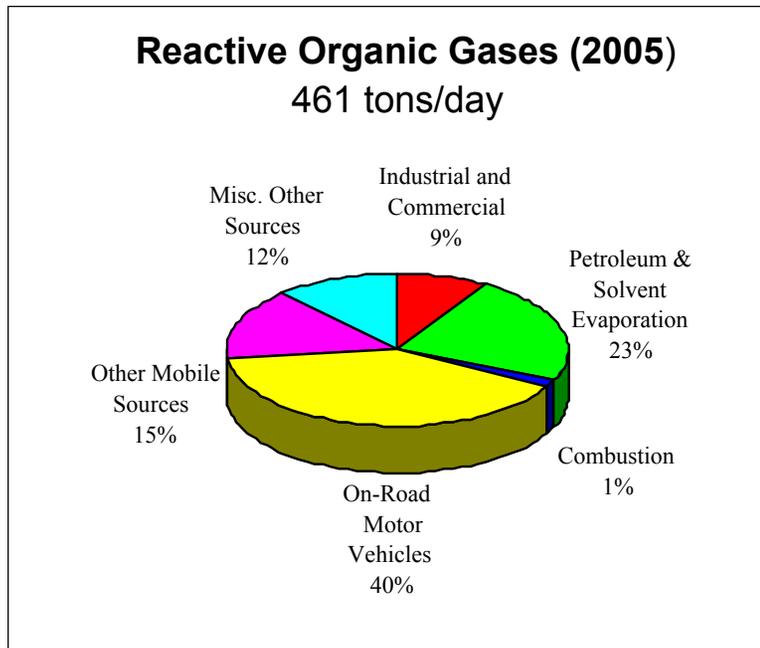
What is Ozone?

- Not emitted directly from smokestacks and tailpipes
- Formed by photochemical reactions between hydrocarbons and nitrogen oxides
- Regional pollutant
- To reduce ozone, must reduce emissions of hydrocarbons and nitrogen oxides
- Local benefits of ozone control measures



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Sources of Pollutants That Form Ozone





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Ozone Standards

- State and national Clean Air Acts set health-based standards for ozone
- State standard is more strict
- District monitoring stations measure air quality conditions
- Bay Area sometimes exceeds State or national ozone standards



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Ozone Trends

- High ozone concentrations and days over standard have decreased
- April 2004 – Bay Area attained national 1-hour ozone standard
- Why this progress? – District regulations, cleaner vehicles, other programs
- Still violate State standard



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Ozone Planning Requirements

- Bay Area 2004 Ozone Strategy prepared by Air District, MTC and ABAG
- Addresses State *and* national planning requirements
- State requirements
 - Adopt all feasible control measures
 - Attain State standard in Bay Area
 - Reduce transport to downwind regions
- National requirements
 - Maintain attainment of national 1-hour standard



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Control Strategy

- Set of control measures to reduce emissions
- Stationary source measures
- Mobile source measures
- Transportation control measures
- Further study measures



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Regulatory Authority

- **National (US EPA)**
 - Regulate aircraft, ships, trains, construction equip.
- **State (Air Resources Board)**
 - Regulate cars, trucks, buses, consumer products
- **Regional**
 - Air District
 - Develop AQ plans and control measures
 - Regulations and permits for stationary sources
 - MTC
 - Regional transportation plans and programs
 - Implement TCMs, along with cities & counties, Caltrans, transit agencies, and others



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Wide Range of Control Measure Ideas

- Ozone Working Group
- Community meetings
- Other air districts' regulations, control measures and suggestions
- District Board members, Advisory Council and staff
- Members of the public
- Previous Bay Area air quality plans



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Considerations in Evaluations of Potential Control Measures

- Technological feasibility
- Likely emission reductions
- Public acceptability and community concerns
- Cost effectiveness
- Potential environmental and socioeconomic impacts
- Other factors



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Draft Stationary Source Measures

- Industrial/Commercial Processes
 - Auto Refinishing
 - Graphic Arts Operations
 - High Emitting Spray Booths
 - Polyester Resin Operations
 - Wood Products Coating
- Combustion Processes
 - Boilers less than 10 MM BTU/hr
 - Large Water Heaters/Small Boilers
 - Stationary Gas Turbines
- Petroleum Products Production and Distribution
 - Flares
 - Gasoline Bulk Terminals and Plants
 - Marine Loading Operations
 - Organic Liquid Storage Tanks
 - Pressure Relief Devices
 - Wastewater Systems
- Energy Conservation



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Draft Mobile Source Measures

- Diesel Equipment Idling Model Ordinance
- Green Contracting Model Ordinance
- Low Emission Vehicle Incentives
- Vehicle Buy Back Program



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Draft Transportation Control Measures

- Voluntary employer based trip reduction programs
- Local and areawide bus service
- Regional rail service
- Interregional rail service
- Access to rail and ferries
- Ferry service
- Carpool/express bus lanes on freeways
- Bicycle access and facilities
- Youth transportation (includes clean fuel school buses)
- Freeway traffic management
- Arterial management
- Transit use incentives
- Carpool/vanpool services
- Local land use planning and development strategies
- Public education/intermittent controls
- Demonstration projects (includes clean air vehicles)
- Transportation pricing reform
- Pedestrian access and facilities
- Traffic calming



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Further Study Measures – Stationary Sources

- **Industrial/Commercial Processes**
 - Adhesives and sealants
 - Architectural coatings
 - Commercial charbroilers
 - Composting operations
 - Food product manufacture
 - Livestock waste
 - Solvent limitations based on relative reactivity
 - Solvent cleaning and degreasing
- **Petroleum Products Production and Distribution**
 - Emissions from cooling towers
 - Refinery wastewater treatment systems
 - Vacuum trucks
 - Valves and flanges
 - Wastewater from coke cutting
- **Combustion Processes**
 - Cumulative risk
 - NOx reductions from refinery boilers
 - Stationary IC engines



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Further Study Measures – Mobile and Transportation Sources

- Mobile sources
 - Encourage alternative diesel fuels
 - Mitigation fee program for federal sources
- Transportation sources
 - Indirect source mitigation program
 - Free transit on Spare the Air days
- Episodic measures



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Next Steps

- Receive public comment on draft control measures
- Release draft 2004 Ozone Strategy for public review
- Release draft EIR for public review
- Public review and comment
- Prepare final 2004 Ozone strategy and EIR
- Board adoption
- Implement control measures



Bay Area 2004 Ozone Strategy

For more information, visit the District's website:

http://www.baaqmd.gov/pln/plans/ozone/2003_04.asp

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