



Bay Area 2005 Ozone Strategy

Community Meeting
Richmond Memorial Auditorium
Wednesday, October 26, 2005



Bay Area 2005 Ozone Strategy

Presentation

- Ozone background
- Ozone planning process
- Overview of Ozone Strategy document
- Draft control measures and further study measures
- Next steps
- Q & A / Comments



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What is Ozone?

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



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Ozone Health Effects

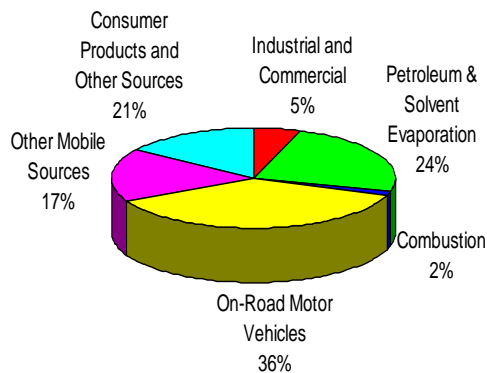
- Irritates nose, throat, respiratory system
- Difficulty breathing, shortness of breath
- Aggravates asthma, bronchitis, emphysema
- Long-term exposure – damages lung tissue
- Children, seniors, people with respiratory illnesses are most at risk



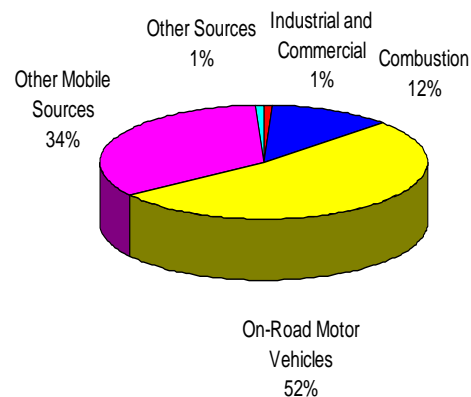
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Sources of Pollutants That Form Ozone

**2005 Ozone Precursors
Reactive Organic Gases (ROG)
400 tons/day**



**2005 Ozone Precursors
Oxides of Nitrogen (NO_x)
544 tons/day**





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Ozone Standards

- California Clean Air Act set health-based standards for ozone in the State
- State standards are stricter than national standards
- District monitoring stations measure air quality conditions



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Regulatory Authority

- **National (US EPA)**
 - Regulate aircraft, ships, trains, construction equipment
- **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
 - ABAG
 - Develops regional projections of population, housing, jobs, and income
 - Regional land use planning activities and programs



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Ozone Strategy Overview

- Bay Area 2005 Ozone Strategy prepared by Air District in cooperation with MTC and ABAG
- Addresses State 1-hour ozone planning requirements
- Public Involvement through Ozone Working Group Meetings, Community Meetings and interagency consultations on-going since March 2003



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California Clean Air Act Requirements:

- Assess progress towards attainment of the State 1-hr ozone standard every 3 years
- Adopt all feasible control measures
- Calculate expected emission reductions and cost effectiveness for each measure

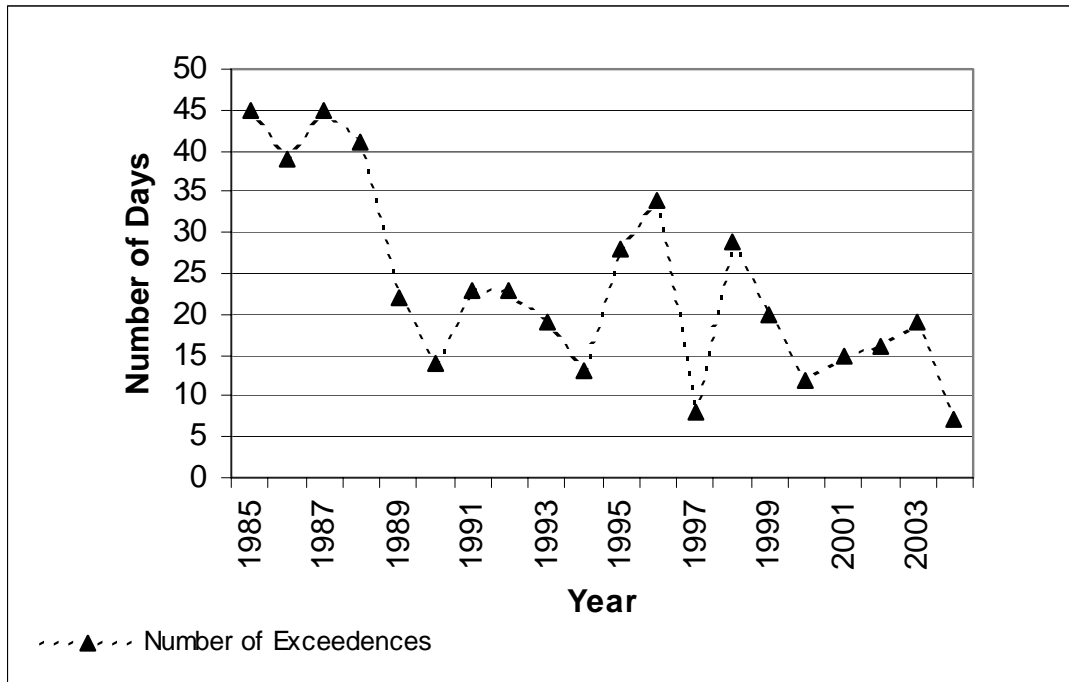
Transport Mitigation Requirements:

- Reduce transport to neighboring regions



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Ozone Trends

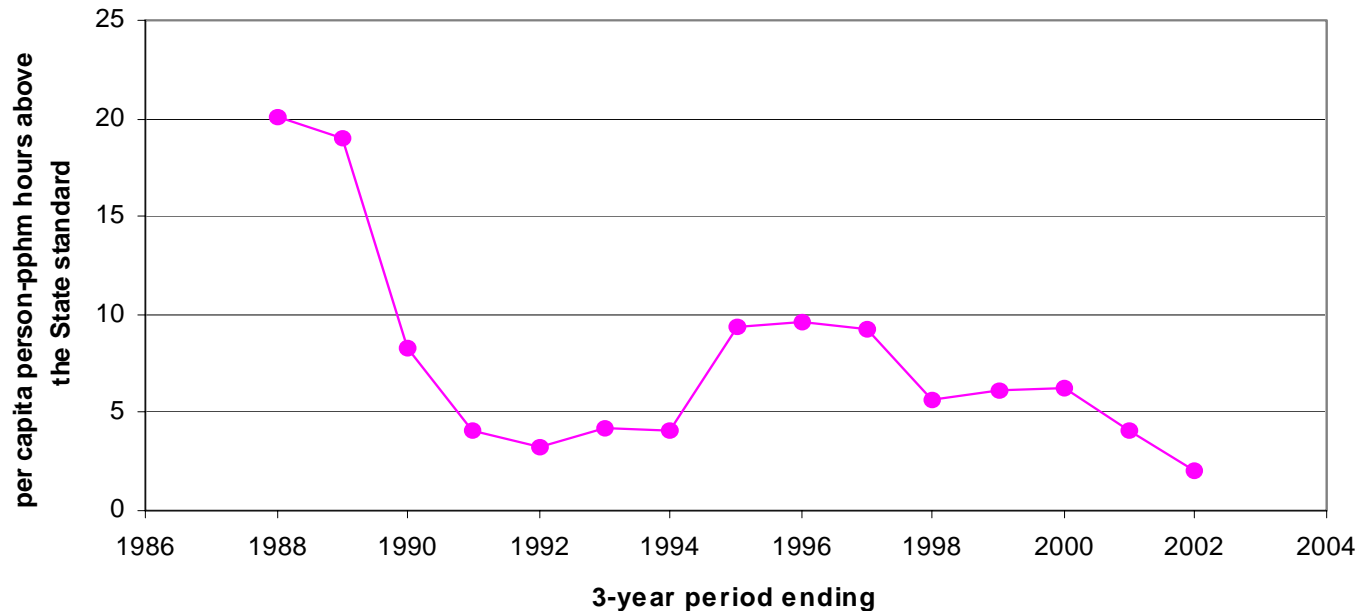


Bay Area Exceedences of the State 1-hr Ozone standard, 1985-2004



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Ozone Trends



**Population Exposure to Unhealthy Ozone Levels
in the Bay Area, 1988-2002**



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2000 Clean Air Plan Control Measure Implementation Status

Stationary and Area Source Measures:

- Four Stationary Source measures were adopted
 - A1 Architectural Coatings
 - A5 Surface Preparation and Clean-Up Solvents
 - B2 Organic Liquid Storage
 - C4 Process Vessel Depressurization
- Two will be carried over in the control strategy for the 2005 Ozone Strategy
 - A21 Automobile Refinishing
 - A22 Wood Products Coating
- Three are proposed for deletion
 - A23 Concrete Coating Operations
 - D8 Improved Residential Water Heater Rule
 - G3 Seasonal Limitations on Organic Liquid Storage Tank and Wastewater Separator Cleaning and Refinery Shutdowns)



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2000 Clean Air Plan Control Measure Implementation Status

Highlights of Air District Mobile Source Incentive Programs, FY 00/01 – FY 02/03:

- 271 school buses purchased or retrofitted
- 9,769 older vehicles retired through the Vehicle Buy-Back program
- 68 bicycle projects funded
- 37 shuttle projects funded
- 58 low emission vehicle projects funded through the Carl Moyer program

TCM implementation is ongoing, and significant progress was made during 2001-2003 in implementing the nineteen TCMs in the 2000 Clean Air Plan.



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Other Issues included in Ozone Strategy:

- Public Involvement Process
- Climate Change
- Fine Particulate Matter
- Community Air Risk Evaluation (CARE) Program
- Local Benefits
- National Ozone Standards
- Photochemical Modeling
- Environmental Review



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Control Strategy

- Set of control measures to reduce emissions
- Control measure suggestions were solicited from a wide range of sources
- Air District staff considered and evaluated 390 potential control measures suggestions (not including TCMs)
- 2005 Draft Control Strategy includes:
 - 15 Stationary and Area Source Control Measures
 - 4 Mobile Source Control Measures
 - 20 Transportation Control Measures



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Stationary Source Measures

•Industrial/Commercial Processes

- Auto Refinishing
- Graphic Arts Operations
- High Emitting Spray Booths
- Polyester Resin Operations
- Wood Products Coating

•Combustion Processes

- Industrial, Institutional and Commercial Boilers
- Large Water Heaters/Small Boilers
- Stationary Gas Turbines

•Petroleum Products Production and Distribution

- Flares (ADOPTED 7/05)
- Gasoline Bulk Terminals and Plants
- Marine Loading Operations
- Organic Liquid Storage Tanks
- Pressure Relief Devices
- Wastewater Systems (ADOPTED 9/04)

•Energy Conservation



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Mobile Source Measures

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



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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**
 - NO_x reductions from refinery boilers
 - Stationary IC engines



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Further Study Measures (continued) – 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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Conclusions

- Air quality in the Bay Area is improving
- Air District and regional partner agencies are proposing “all feasible measures” to reduce ozone precursors with a comprehensive control strategy that includes stationary source measures, mobile source measures and transportation control measures
- The control strategy in the 2005 Ozone Strategy, in combination with State and federal programs are expected to continue to achieve emission reductions in compliance with the CCAA and transport mitigation requirements



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Next Steps

- Receive public comment on Draft Ozone Strategy until 5pm, November 9, 2005
- Prepare Final 2005 Ozone Strategy and EIR
- Final Ozone Strategy and EIR expected to be presented to BAAQMD Board of Directors at public hearing on December 21, 2005.



Bay Area 2005 Ozone Strategy

For more information, visit the District's website:
<http://www.baaqmd.gov/pln/plans/ozone/>

Provide comments

on Draft Ozone Strategy or DEIR to:

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