

Kansas City Ozone

A photograph of the Kansas City skyline, featuring several prominent skyscrapers, viewed through a hazy atmosphere. In the foreground, a multi-level highway interchange with concrete overpasses is visible. The sky is overcast, and the overall scene suggests a day with poor air quality, consistent with the 'Ozone' theme of the presentation.

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Idle Reduction Conference

May 15, 2007

What's in Store?

- What is ozone?
- Where does it come from?
- What are the health effects?
- Kansas City ozone history
- Emissions
- What's being done to address it?
- Why should I be involved?
- How can I be involved?

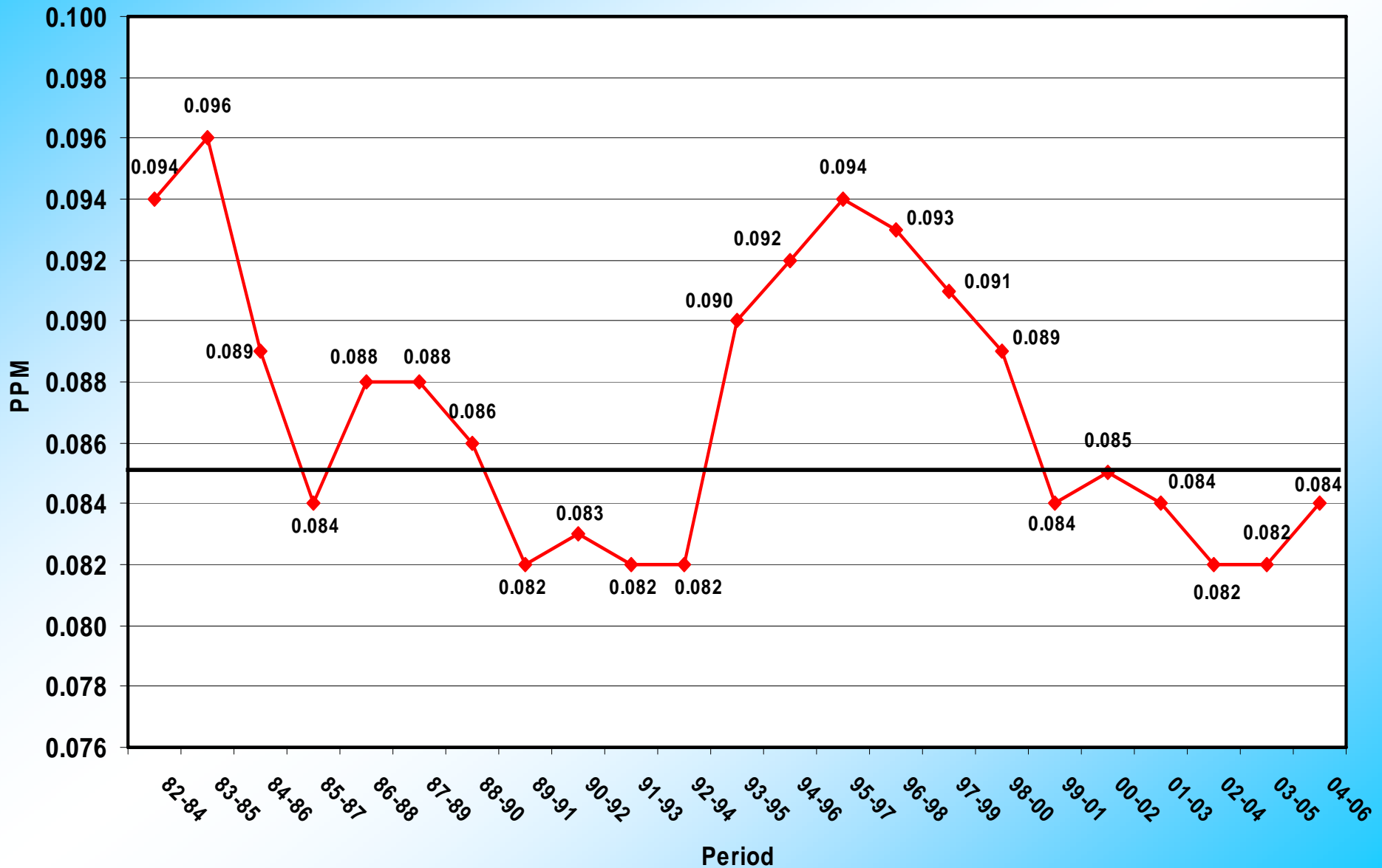
Ground-Level Ozone

- Formed by reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_x)
- VOCs and NO_x come from cars, trucks, homes, businesses, utilities & industry
- Ozone concentrations peak on hot, calm days
- Different issue than hole in ozone layer
- Causes respiratory problems
- Worse for those with asthma, emphysema, heart conditions

8-Hour Ozone Standard

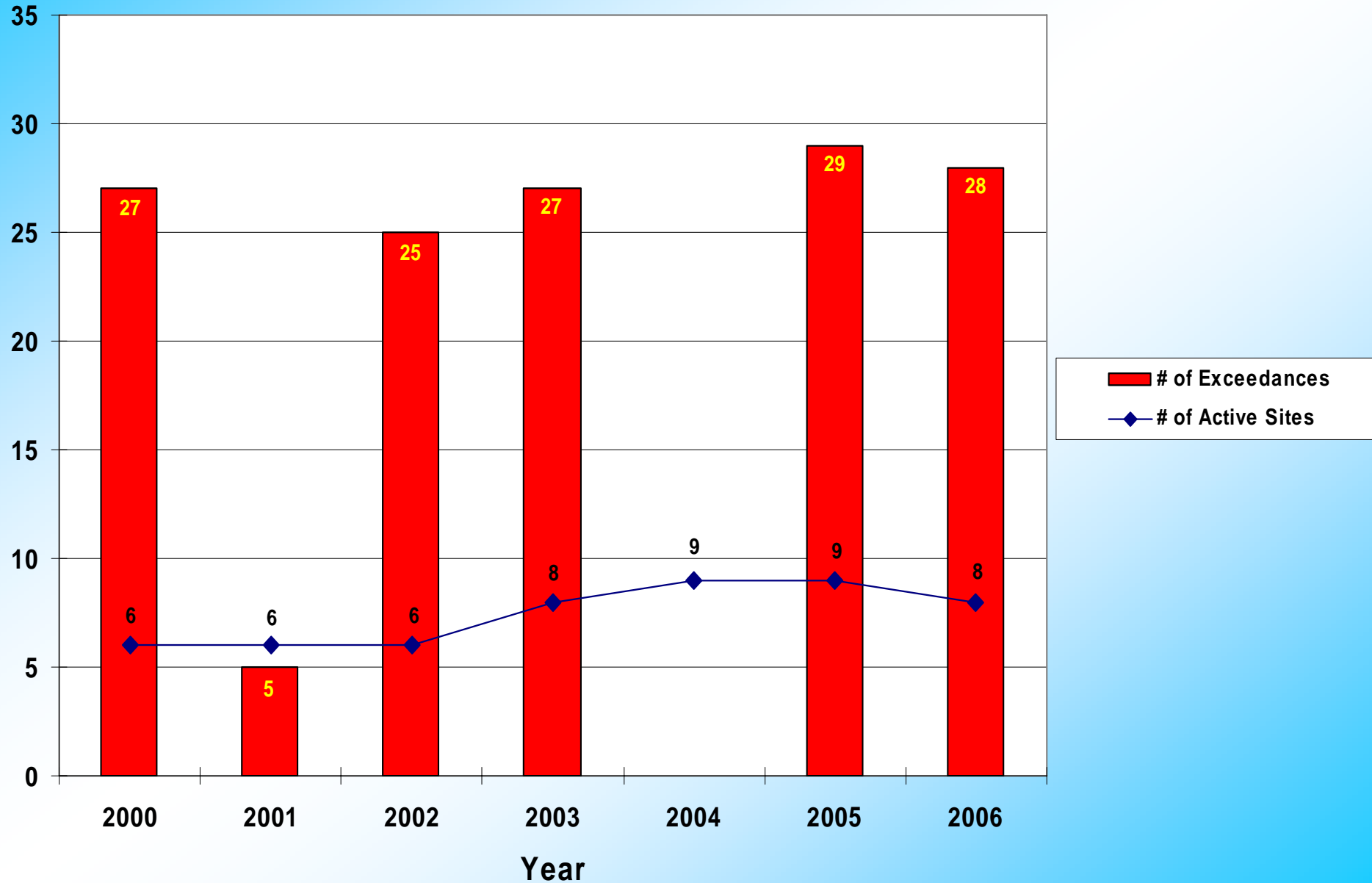
- Violation occurs if three-year average of the fourth high value exceeds 84 ppb
- Use the highest value from any site in KC Planning Area
- Critical value for 2007 is 73 ppb
- KC Monitoring network includes 7 ozone monitors

8-Hour Ozone Design Values Kansas City

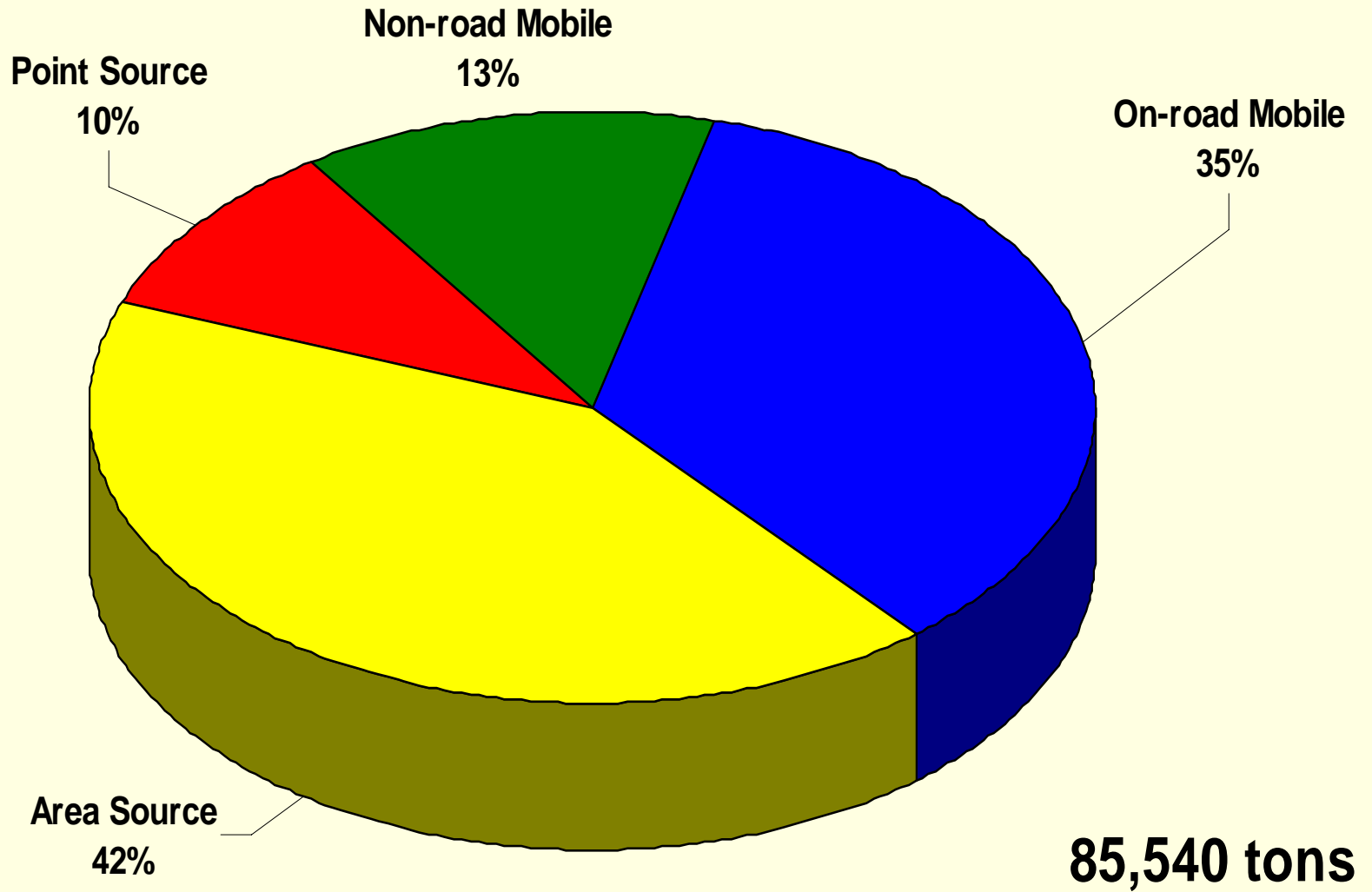


Kansas City

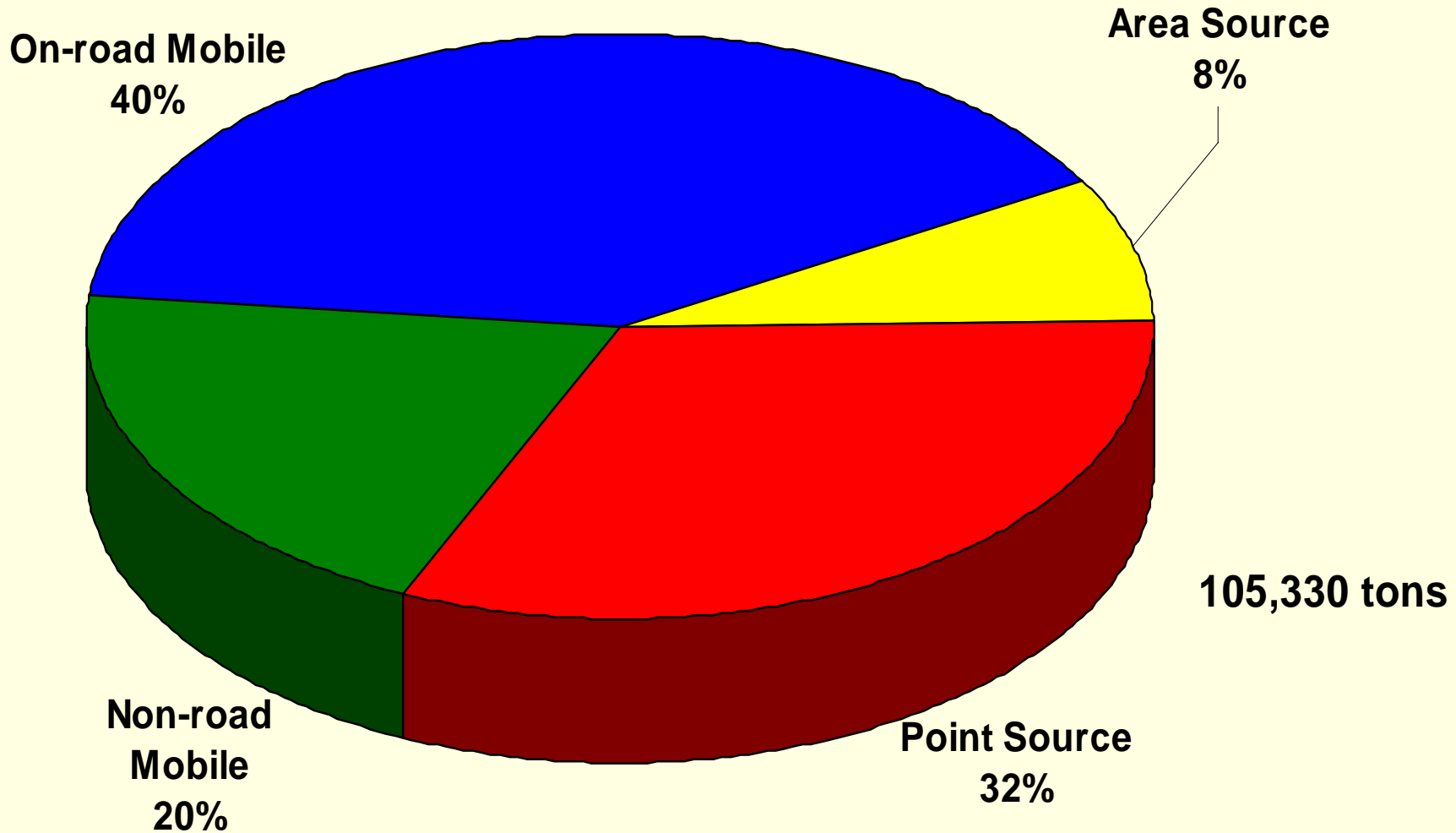
8-Hour Ozone Exceedances



2002 Kansas City VOC Emissions



2002 Kansas City NOx Emissions



So....

What are you doing to
fix this problem.....and
why are you picking on
me?

Industry Regulations

- Printing
- Gasoline Terminals
- Painting
- Chemical processing plants
- Fiberglass manufacturing
- Bakeries....yes, even bakeries

Mobile Source Reduction Programs

- Low vapor pressure gasoline
- Gasoline tank truck testing
- Ozone alerts
- Bus RideShare
- Gas cap testing programs
- Carpool incentive program

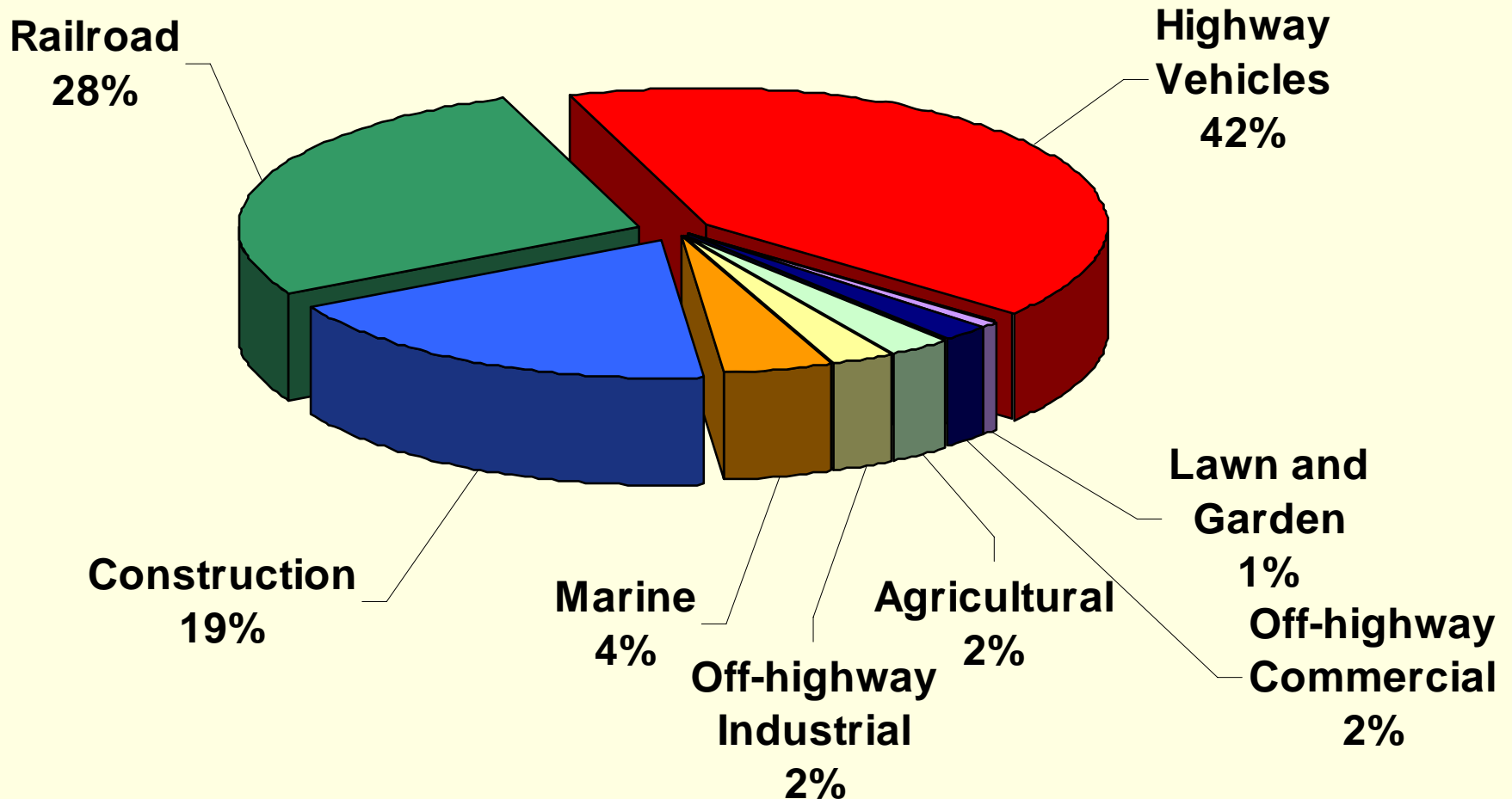
Area Source Reduction Programs

- Solvent metal cleaning rule
- Technical Seminars
 - Lawn and Garden
 - Printing
 - Painting

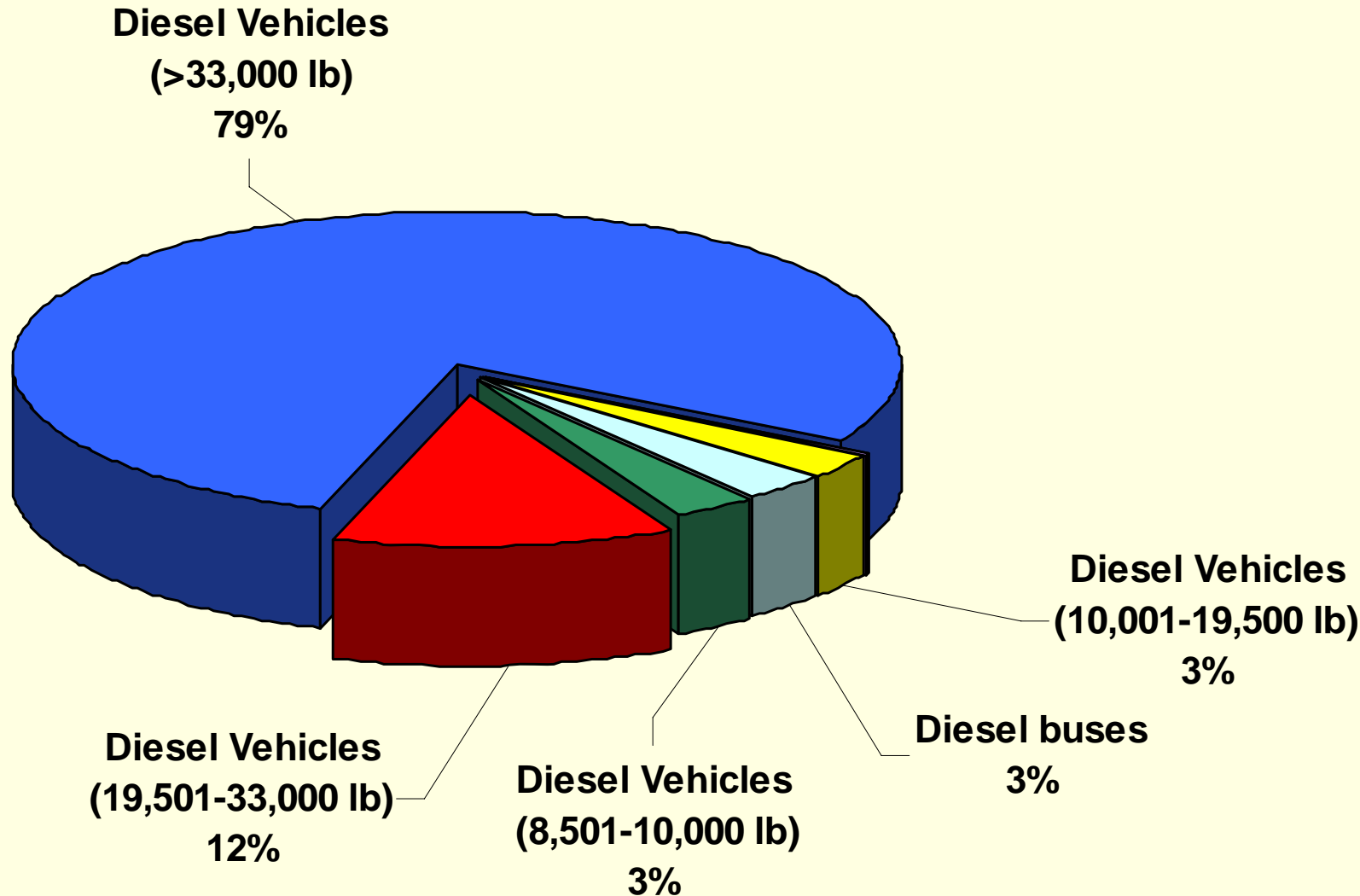
Ozone Maintenance Plan

- Required due to past violations
- Due to EPA by June 15, 2007
- Includes contingency measures
- Phase 1 measures
 - 1000 ton per year NOx sources
 - Idle Reduction
- Phase 2 measures
 - 100 ton per year NOx sources
 - Pick from list of other options
- Better than being designated non-attainment

Kansas City Diesel Emissions



KC On-Road Diesel Emissions



Diesel Emissions Overview

- Major source of NO_x, PM_{2.5}, and CO
- Emissions per vehicle are dropping
 - Cleaner engines
 - Ultra low sulfur diesel
- Miles traveled is increasing
- Older vehicles do not benefit...fleet turnover may take 25 years

Idle Reduction Technologies

- Diesel auxiliary power units
- Battery powered units
- Automatic shutdown/startup systems
- Engine pre-heaters
- Truck Stop Electrification
- Turning the key to the left

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■ Loans

- National Smartway Truck Loan Program
- Small Business Loan Programs

■ Grants

- Small Business Advantage Grants
- Congestion Mitigation and Air Quality

■ Tax Incentives ??

Idle Reduction Ordinances

- EPA Model Rule developed in 2006 after extensive outreach with trucking industry
- Shares responsibility between drivers and warehouses
- More than 20 states and several municipalities have them
- Ordinance parts:
 - Restriction on idle time (3-10 minutes)
 - Minimum weight applicability (8,500-10,000 lbs)
 - Exceptions (extreme weather, emergency vehicles, refrigeration trucks, service/repair vehicles, etc.)

What Can I Do Now

■ Trucking

- Implement idle reduction program
- Maintain your engines
- Tune to factory specs
- Purchase equipment equipped with idle reduction technologies
- Retrofit existing equipment

■ Warehouse

- Accommodate truckers needs
- Decrease wait time



Questions?