

# An Overview of MANE VU Regional Air Quality and Emissions

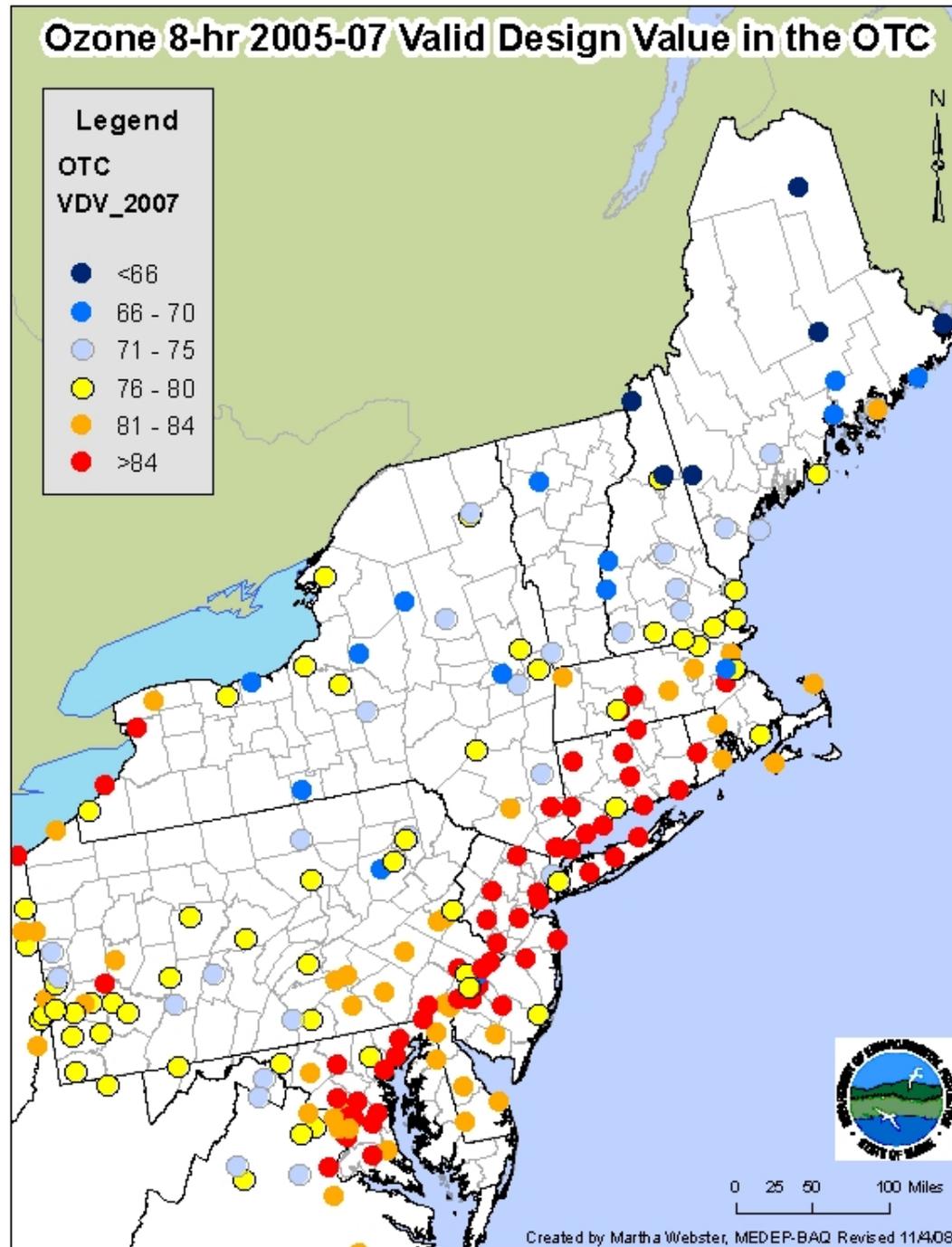


**USEPA 2009 Emission Inventory  
Conference - Baltimore**

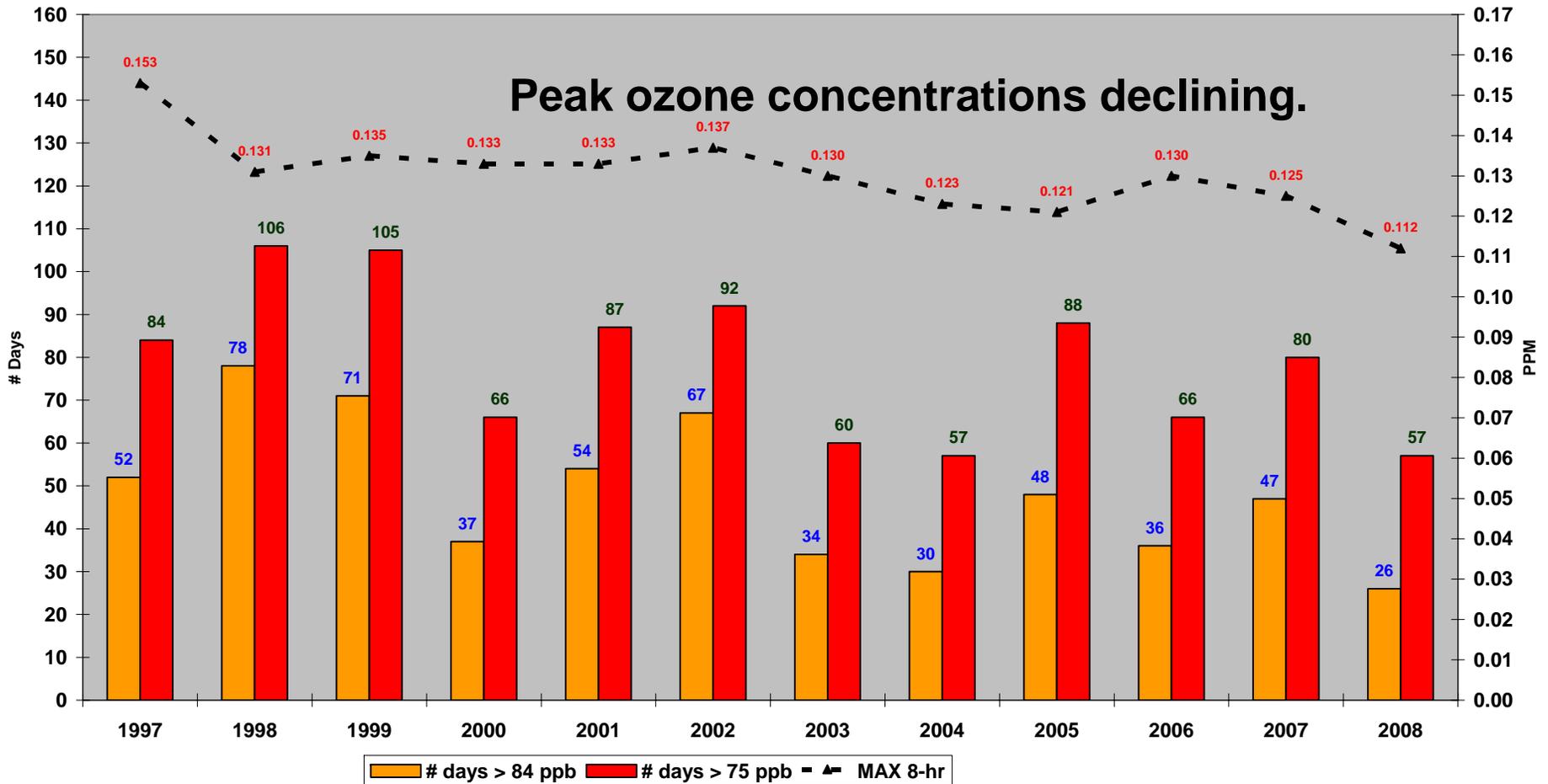
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**2005-2007 data show Ozone pollution is widespread in the corridor from Washington to Boston, in Pittsburgh, and along the Great Lakes**



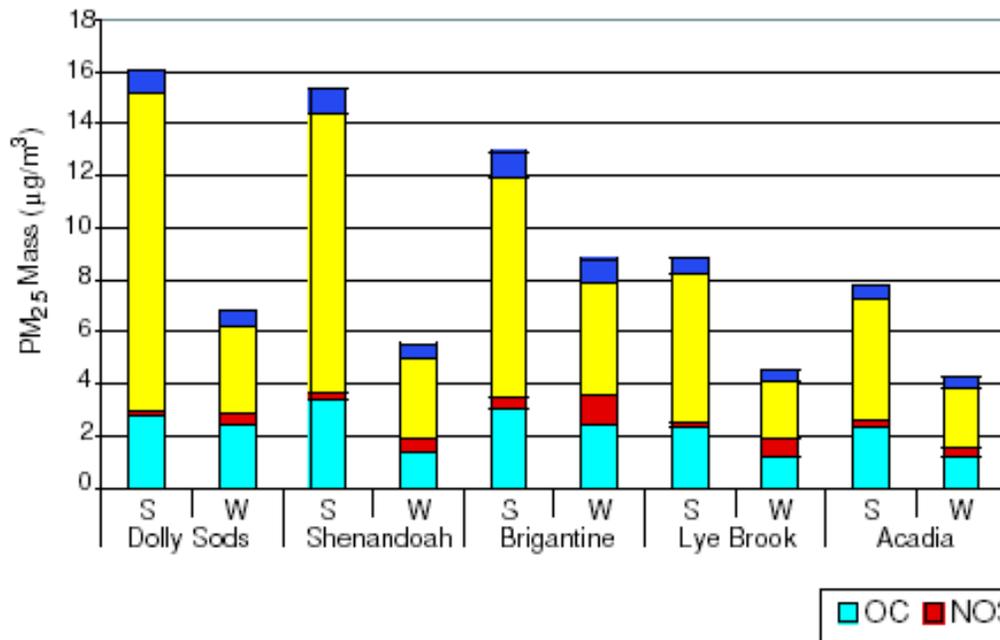
## OTR High Ozone Day TRENDS (2008 preliminary data)



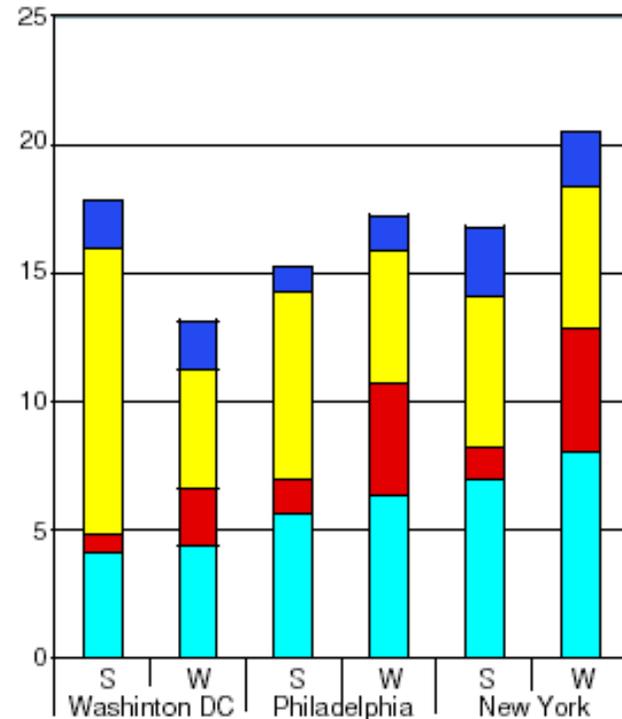
**Many days still exceed old (orange) & new (red) NAAQS in OTR.**

Chart and next two maps courtesy of Tom Downs of Maine DEQ

## Rural areas Predominately sulfate



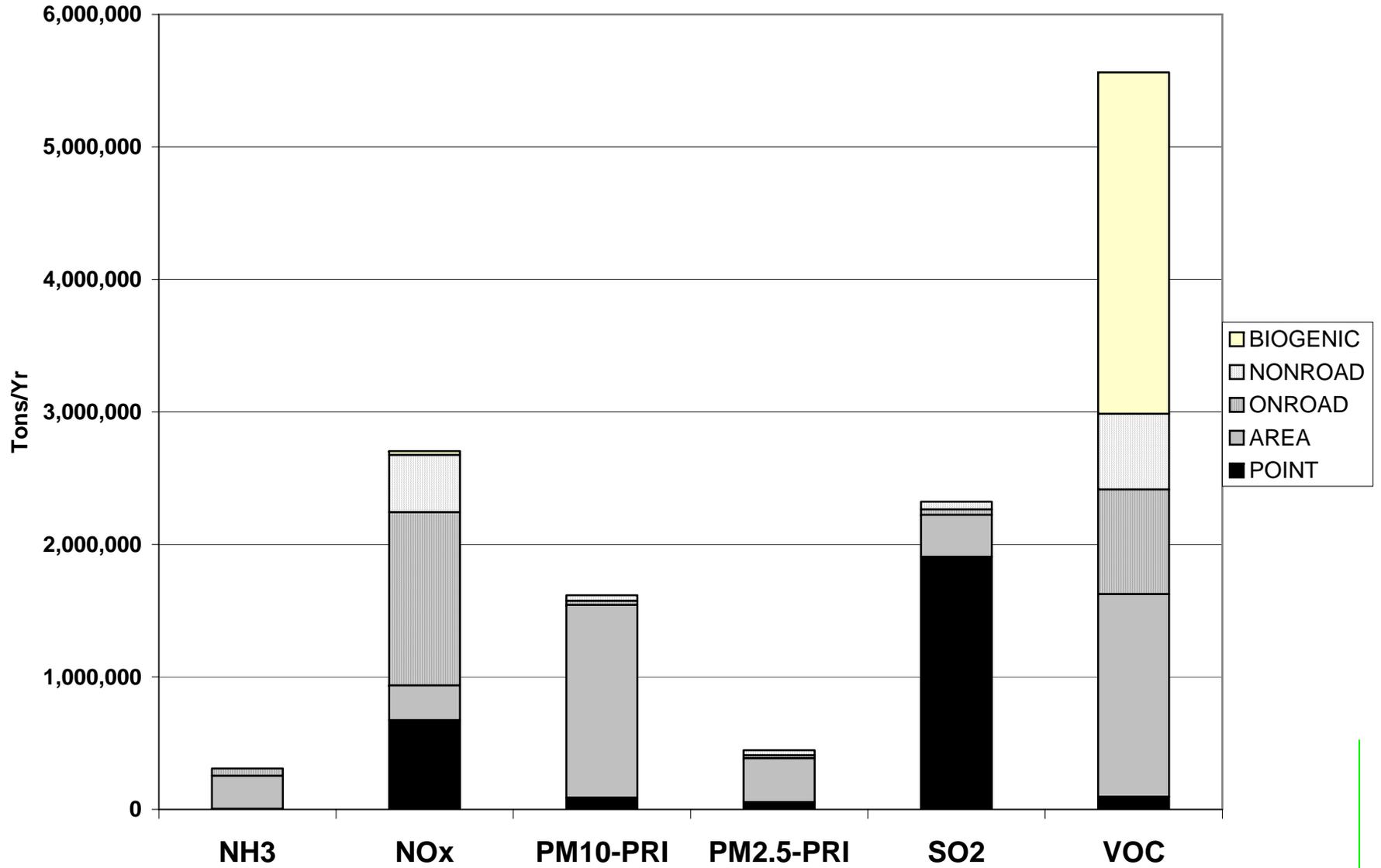
## Urban areas



**Rural particle pollution is higher in the summer than winter.  
Urban areas have higher particle pollution, esp. in winter.**

Particle Composition—From the NARSTO Particulate Matter Assessment

# 2002 Version 3 MANE-VU Annual Source Comparison

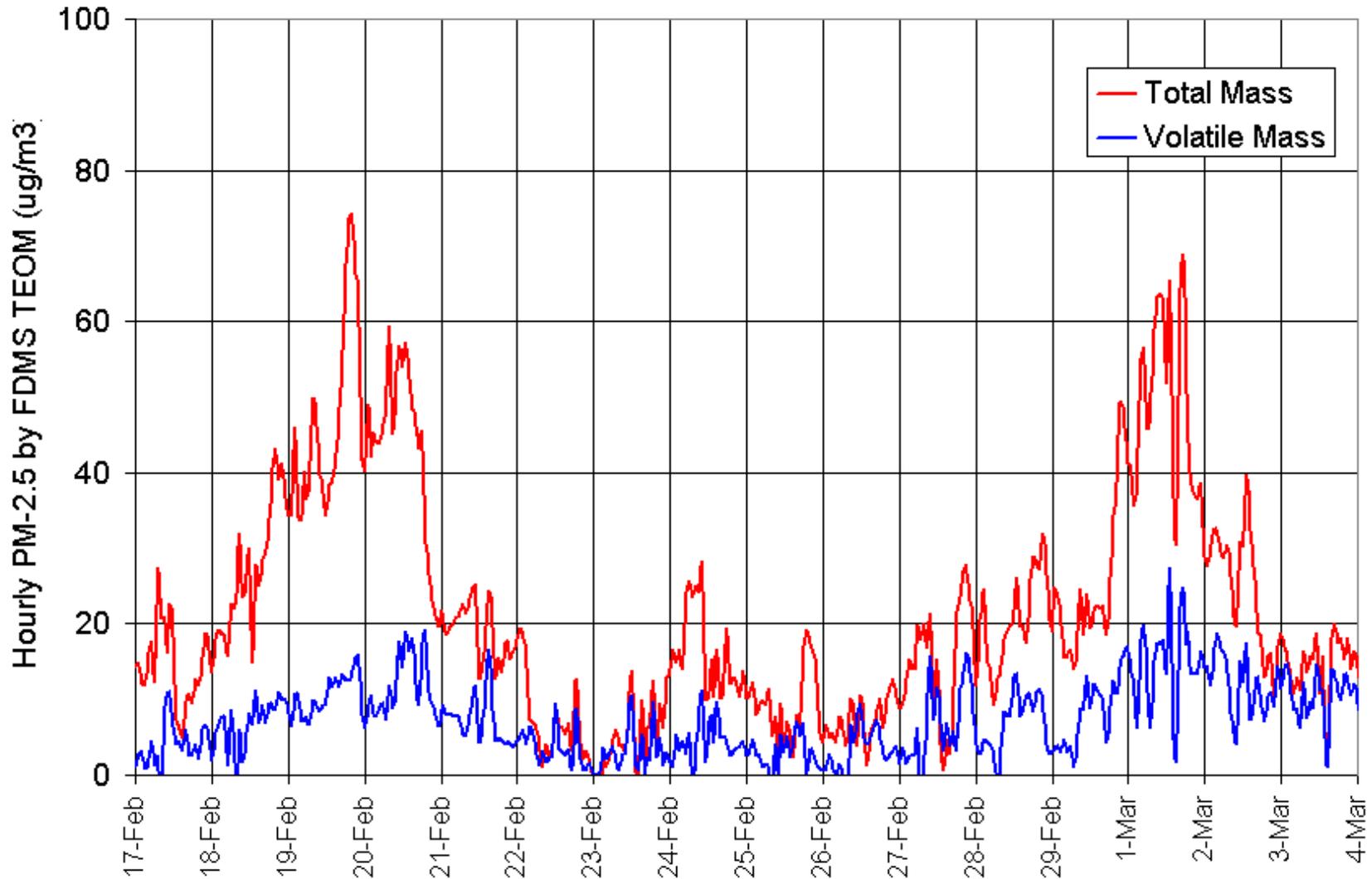


Hand-drawn lines in green and red at the bottom right of the chart area.

# AMMONIUM NITRATE PM2.5 EVENT

2004 Burlington, VT on 2/19-20/04 & 3/1/04

Total & Volatile Fine Mass Concentrations in Burlington, VT: 2/17/04 - 3/4/04

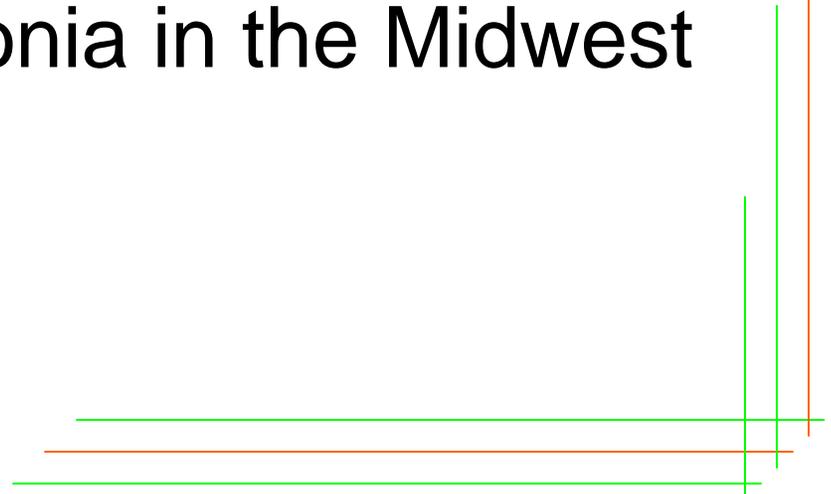


# Inter-RPO Collaboration in the SIP Inventory Preparation

- Common Base and future years
- Canadian Boundary Conditions
- Common method to project EGU emissions and contracted for a single a common IPM modeling run
- Development of the CMU model to predict ammonia emissions
- Shared Inventories
- FLM coordination
- Inter-RPO committees
- Industrial/Commercial/Institutional (ICI) Boiler Strategy Development (ongoing)

# Inter-RPO Primary Issues Resulted in a Variable Approach

- LADCO shifted to 2005
- Fires and dust were more important in the West
- Eastern States had the CAIR trading program
- Greater focus on ammonia in the Midwest



# Emission Inventory Progress in 2008

- **Inter RPO / EPA Collaborative Projects:**
  - Eastern Regional Technical Advisory Committee (ERTAC)
    - Rail
    - Area Source Calculation Methods
  - Mobile source Organic Carbon Emission Factor revision
  - Residential Wood Combustion ACCESS Calculation tool (EPA)
  - 2007 CEM data for EGU emissions analysis
  - Inter-RPO Post-CAIR 2005 inventory for modeling analysis
- **MANE VU Projects**
  - Documentation of Future Year EGU Growth Methodology
  - Condensable EGU Emission Factor revision
  - Ongoing Emission Inventory Committee
  - IPM Analysis Paper @ 2008 Emission Inventory Conference
  - Sponsored regional Emission Inventory Workshop in Albany

## **Focus for 2009-2010 –**

Regional modeling to support our state's  
SIPs:

Ozone,  
PM2.5, and  
Visibility 5 year look back.

MARAMA coordinates development of the  
regional modeling emissions inventory

QA and Oversight

Key to success

Time consuming for state personnel

# Key Inventory Issues:

- Base year? 2007
- Future years?  
1, 2 or 3 years? TBD
- Inventory development  
schedule? Complete by  
September 2010
- Inventory development  
approach? Work Plan Complete for  
Base Year
- High Electricity Demand  
Days (HEDD) Is a separate  
inventory needed?
- Mobile source: MOVES vs MOBILE?
- Utility growth: Use of IPM vs AEO
- Reductions  
to meet NAAQS? (Prelim) 40% NOx reduction required!!!

# Base Year Selection: National Look At 2008 Ozone

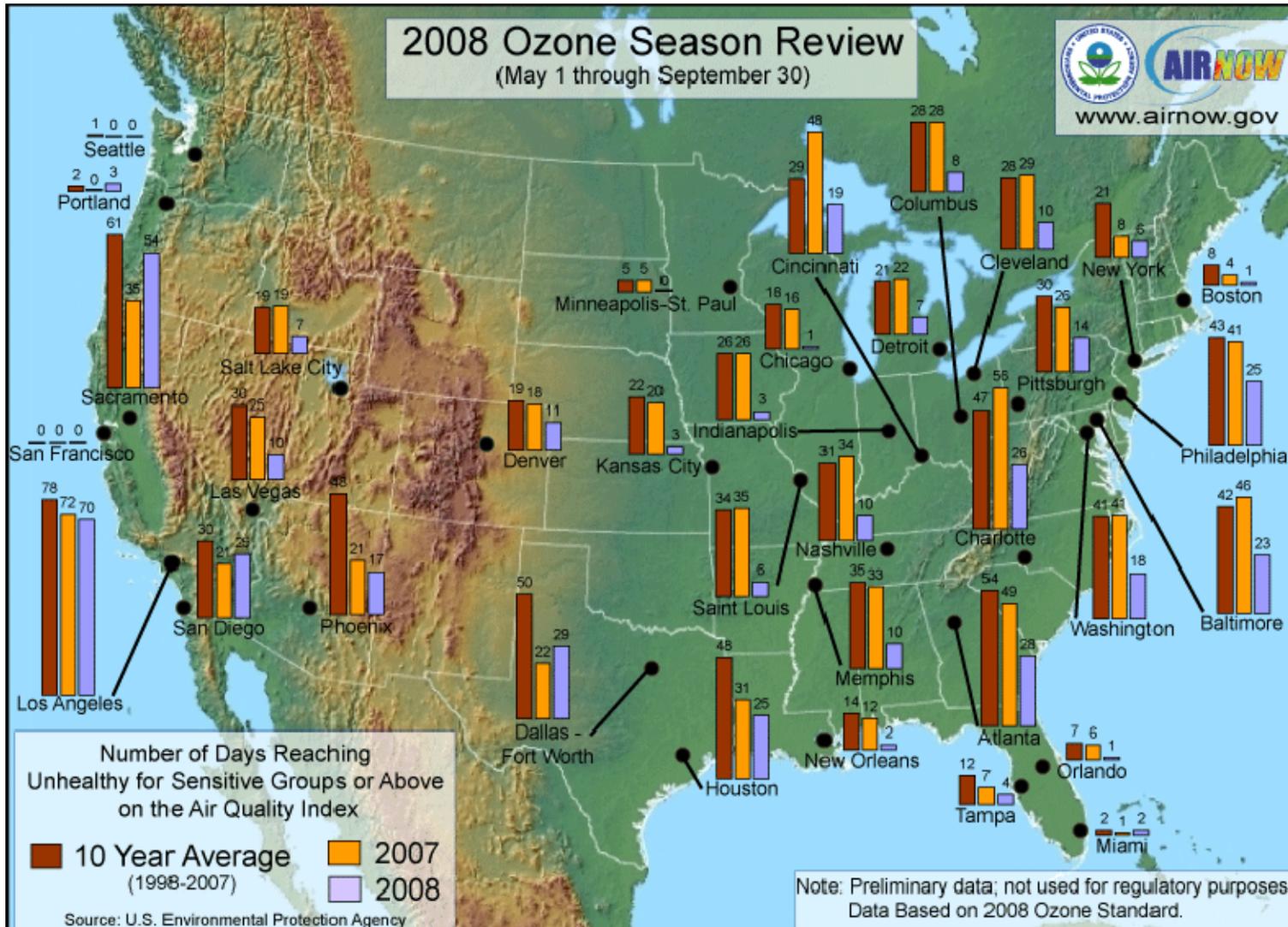


Figure courtesy of EPA AirNow, Scott Jackson

# Code Purple O<sub>3</sub> Cases in Philadelphia

