



# Ozone Transport & Washington Region Air Quality

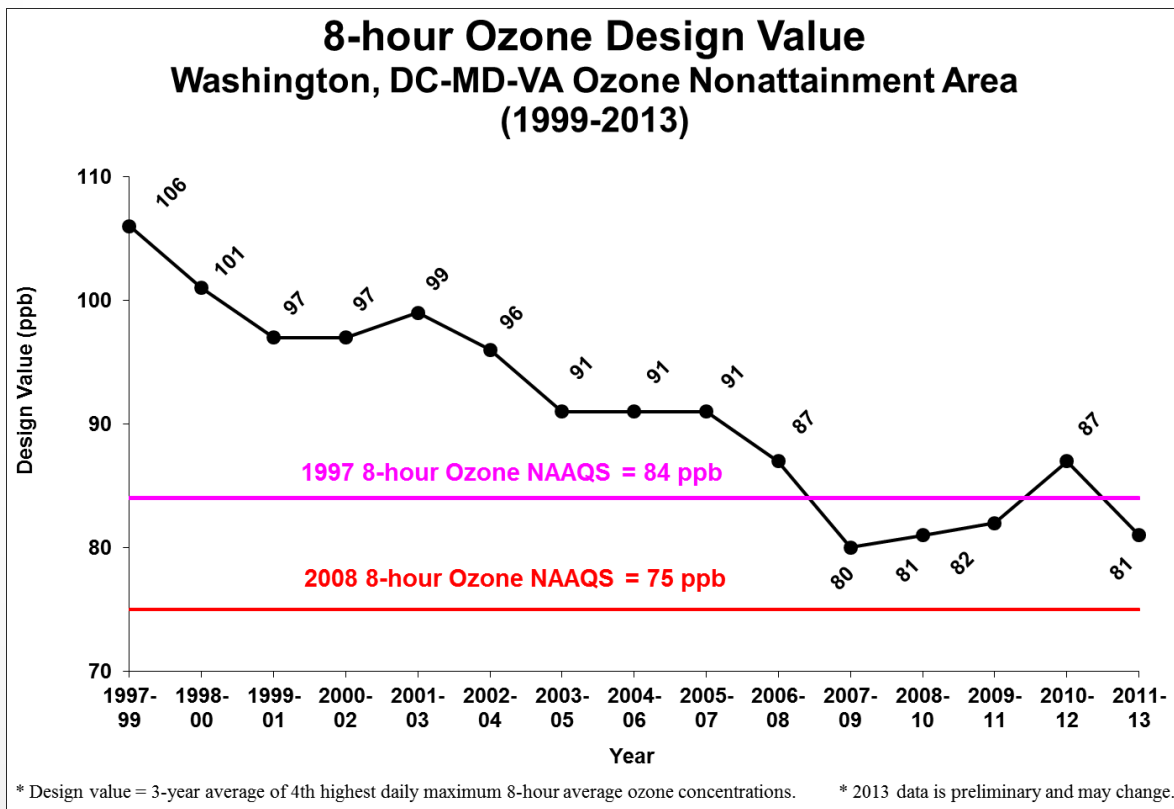
Sunil Kumar

MWAQC Meeting

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# Introduction

- Washington region
  - Marginal Nonattainment Area for current ozone standard (75 ppb)
  - Attainment deadline – December 31, 2015
  - Bump-up to Moderate NAA if std. not met by deadline



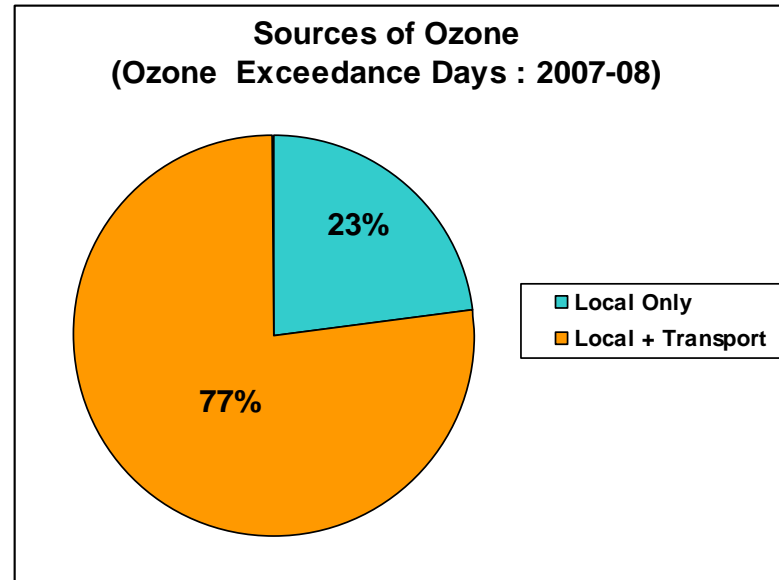


# What is Ozone Transport ?

- Washington region's ozone levels affected by:
  - Local emissions (ozone precursors - VOC & NOx)
    - Vehicles, power plants, others
  - Emissions from outside the region ('transported' ozone & its precursors)
    - Power plant emissions from Ohio
    - Emissions from SE of DC area (Low level jet, transport thro wind aloft)
    - City to city emissions transport
  - Worse Ozone Days - Transported ozone and precursors play important role along with local emissions

# Ozone Sources in DC Area

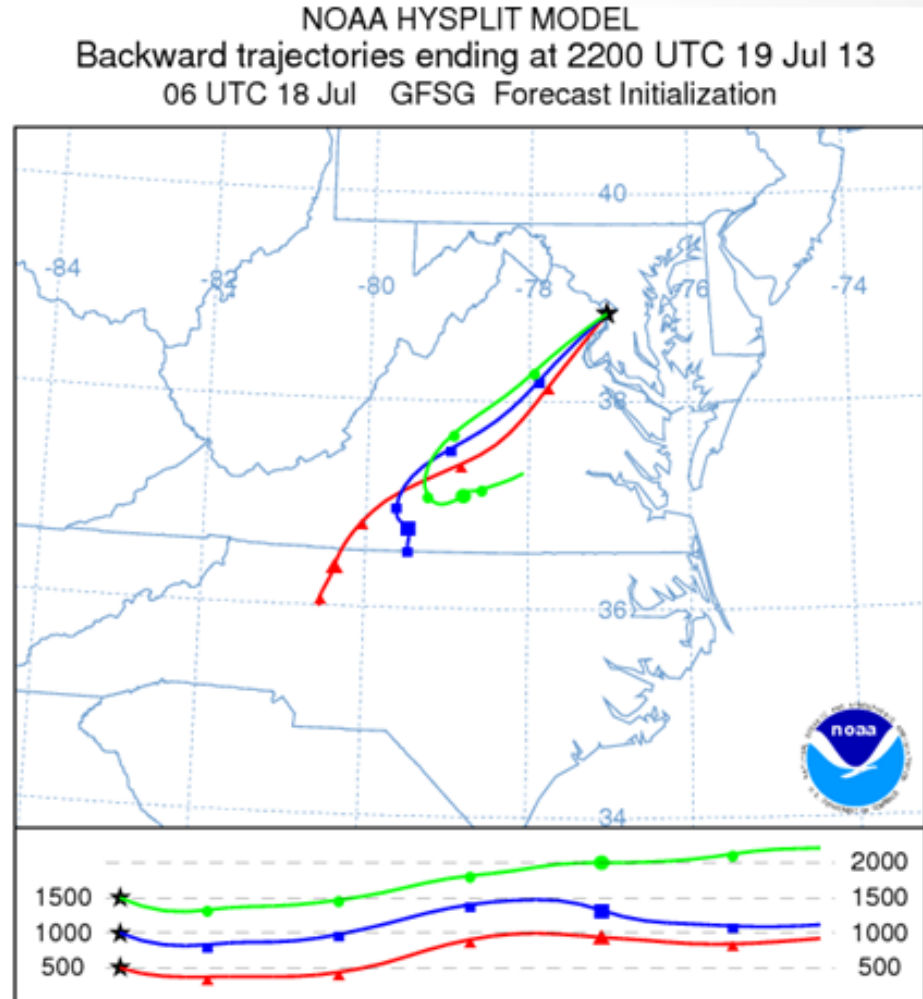
## Local Vs. Outside



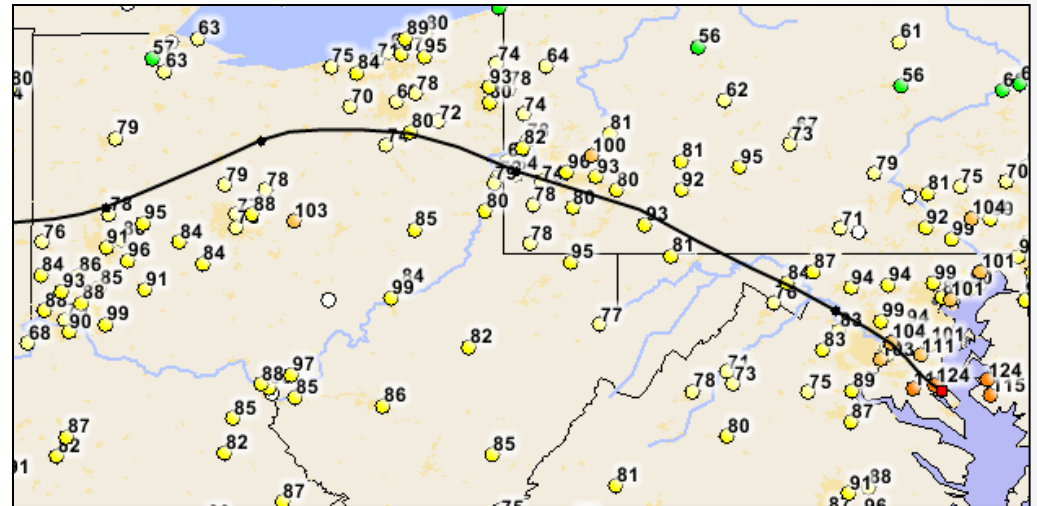
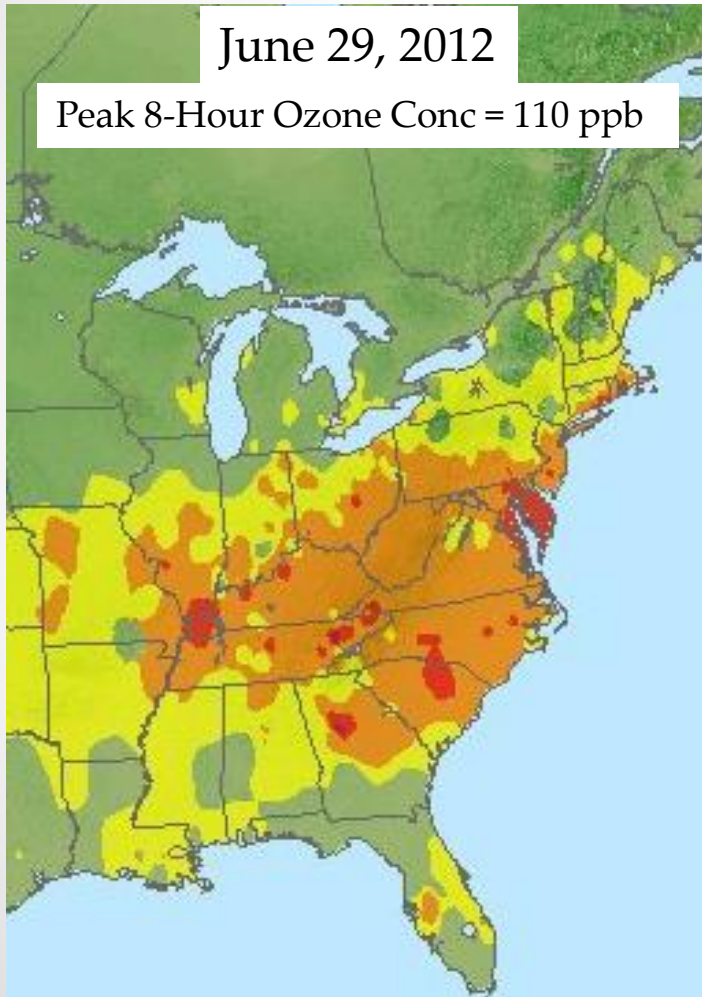
Source: MDE

Analysis is based on total 26 ozone exceedance days (84 ppb) during 2007-08.

# Local emissions sufficient to cause ozone exceedance



# Transported ozone adds to local emissions to make it worse



1-Hour Avg Ozone concentrations at 3:00PM  
(Avg of 2 PM – 3 PM)

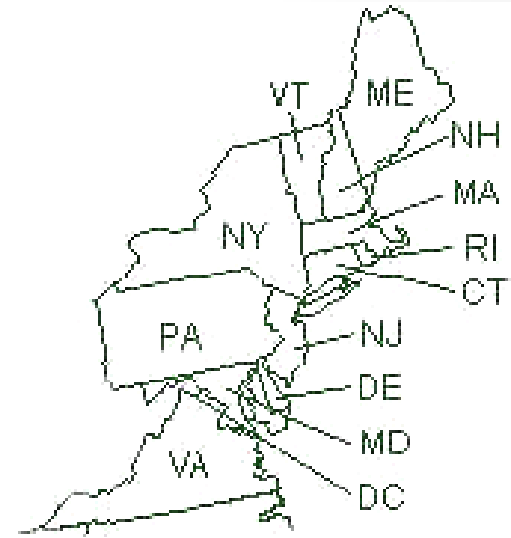


# Addressing Ozone Transport Federal Rules

- NOx SIP Call – 1998
- Clean Air Interstate Rule (CAIR ) - 2005
- Cross State Air Pollution Rule (CSAPR) - 2011
  - Court vacated CSAPR in August 2012
  - EPA appealed vacatur
- CSAPR Replacement Rule
  - EPA also working on a new rule if it loses appeal on CSAPR
- CAIR still in place
- Mercury and Air Toxics (MATS) Rule
  - Nox co-benefits
- Tier 2 & Tier 3 (Proposed)
  - Vehicle engine emission controls and low sulfur gasoline
- Offroad Engine Rules
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# Addressing Ozone Transport OTC Initiatives

- Ozone Transport Commission (OTC)\*
  - Multi-State organization created under CAA for ozone problem in NE/Mid-Atlantic states
  - Develops control measures for ozone control
- OTC Consumer products rule
- OTC currently working on
  - Ship emission control rule
  - Auto catalyst emission standard
  - Diesel I/M program
  - Goods movement
  - Other rules





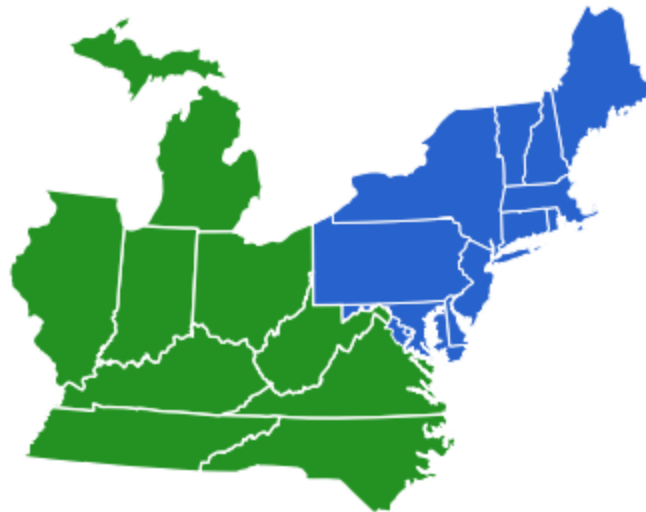


# Addressing Ozone Transport State/Local Initiatives

- State Measures
  - MD – Healthy Air Act (Controls on power plants)
  - DC/VA – Controls on power plants
  - Controls on other source sectors (Vehicle I&M Programs, Anti-Idling program)
- Local Measures
  - Several emission reduction measures (gas can & lawn mower exchanges, low emission fleet purchase, etc)
  - Energy efficiency measures (High performance buildings)
  - Renewable energy measures (Renewable energy portfolio standards)
  - Co-benefits from greenhouse gas emissions control measures
- Market Driven Controls
  - Fuel switch (Coal to natural gas) in power plants & industries
  - Reduces emissions significantly

# Addressing Ozone Transport Other Thoughts

- Petition to extend Ozone Transport Region (OTR)\*



■ Current OTR States  
■ Potential OTR States

Eight downwind states (CT, DE, MD, MA, NH, NY, RI, VT) petitioned EPA under CAA § 176A to add nine upwind states (IL, IN, KY, MI, NC, OH, TN, VA and WV) to OTR

(Source: CT Dept. of Energy & Environmental Protection)

- Petitions under various CAA sections (107, 110A2d, 126, 176A)
- \* Ozone Transport Commission (OTC) Region - DC, MD, NoVA, CT, DE, MA, ME, NJ, NH, NY, PA, RI, VT

# Conclusion

- Ozone transport is an important factor along with local emissions in ozone exceedances in Washington region
- Several initiatives being undertaken and considered for ozone transport
  - Federal, OTC, State, local levels, market driven controls
- Challenges ahead for current 75 ppb std and potentially stricter ozone std (60-70 ppb) likely to be proposed this year