

2008 Ozone National Ambient Air Quality Standard

Doris McLeod
VDEQ Air Quality Planner
804-698-4197
damcleod@deq.virginia.gov
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Hampton Roads Metropolitan Planning
Organization

Briefing Topics

- What is Ozone?
- New 2008 Ozone Standard
- VA and HR Designation Recommendations
- 2008 Wildfires
- What's Next?

What is Ozone?

- Formation: $\text{VOC} + \text{NO}_x + \text{Sunlight} = \text{Ozone}$
(volatile organic compounds + oxides of nitrogen + sunlight = ozone)
- Mainly a summertime pollutant
- Lung irritant: primary component of smog
- Ozone penetrates deeply into the lungs:
 - Affects breathing, irritates airways, increases asthma attacks
 - May inflame and damage lung linings
 - Aggravates chronic lung diseases such as asthma, emphysema, and bronchitis
 - Repeated episodes of inflammation may permanently harm lungs
- Regulated by the Clean Air Act

2008 Ozone Standard

- 1997 Ozone Standard
 - 0.08 parts per million ozone on an 8 hour average (effectively 85 ppb on an 8 hour average)
 - Hampton Roads originally classified “marginal”; redesignated “attainment” in 2007
- 2008 Ozone Standard
 - 0.075 parts per million ozone on an 8 hour average (75 ppb on an 8 hour average)
 - Reflects known accuracy of the monitoring equipment
 - Standard revised March 12, 2008
 - Under review by new administration

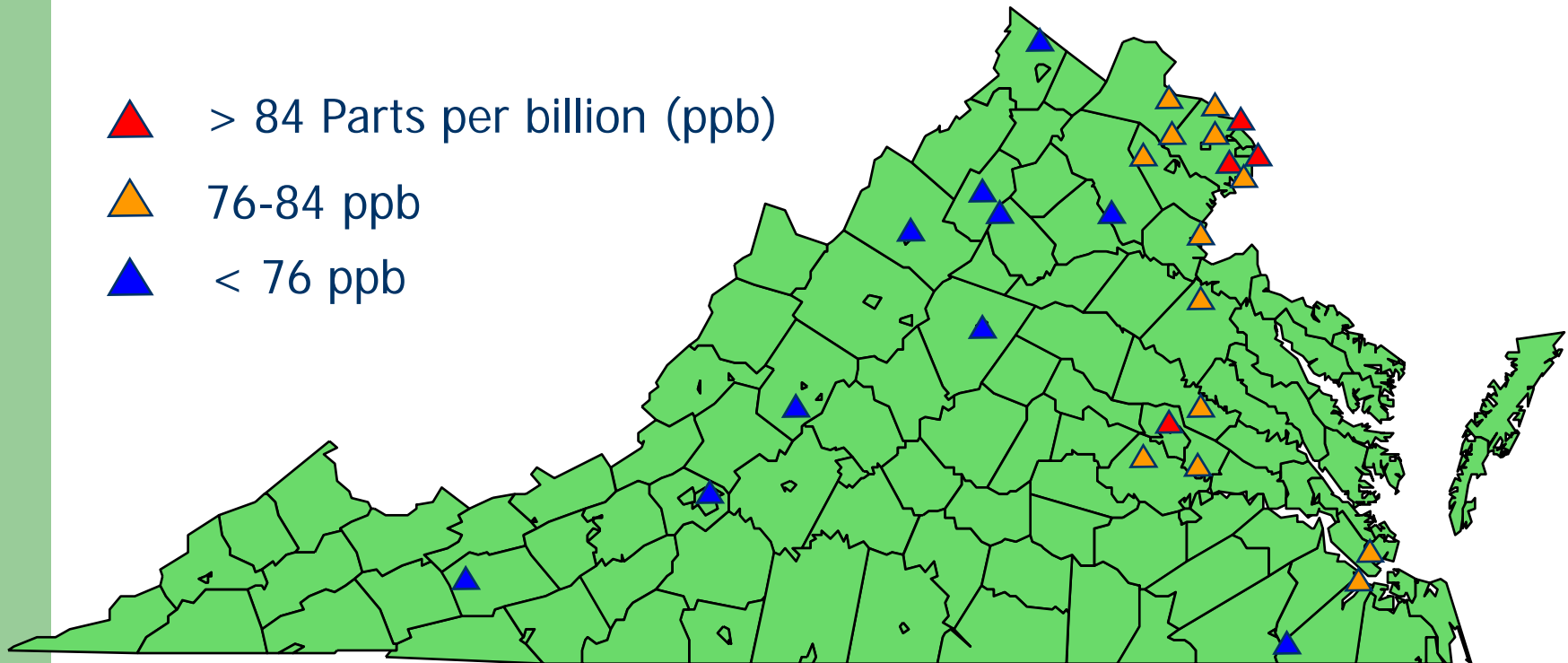
EPA Designation Guidance

- Use of most recent air quality data (2006-2008)
- Requests for exceptional events allowed – 2008 wildfire events in Hampton Roads
- Presumptive boundary – Core Based Statistical Area (CBSA)
- Modifications are allowed based on a “nine” factor analysis:
 1. Air quality data
 2. Emissions data
 3. Population
 4. Commuting patterns
 5. Growth rates
 6. Meteorology
 7. Geography
 8. Existing planning boundaries
 9. Current control levels

Proposed Designations for the 2008 Ozone NAAQS

- VA recommendations for area designations submitted to EPA 3/11/2009
- Current data shows the following areas not attaining the new standard
 - Northern Virginia (part of metro DC)
 - Richmond-Petersburg
 - Hampton Roads
 - Fredericksburg (includes part of Caroline Co.)

Ozone Monitor Levels (2006-2008)



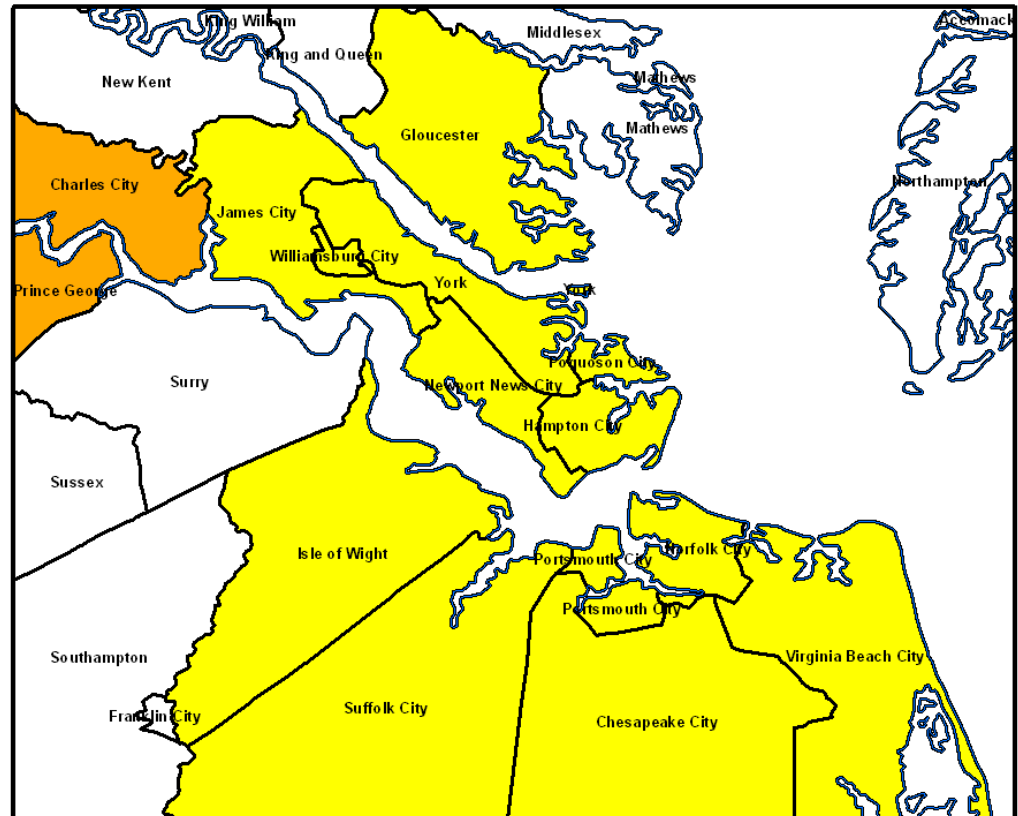
Hampton Roads Area

- Current monitored value for 2006-2008 in VA monitoring network is **77 ppb** at Hampton
- Value may decrease due to exceptional events submittal (forest fires)
- No expansion of area was recommended

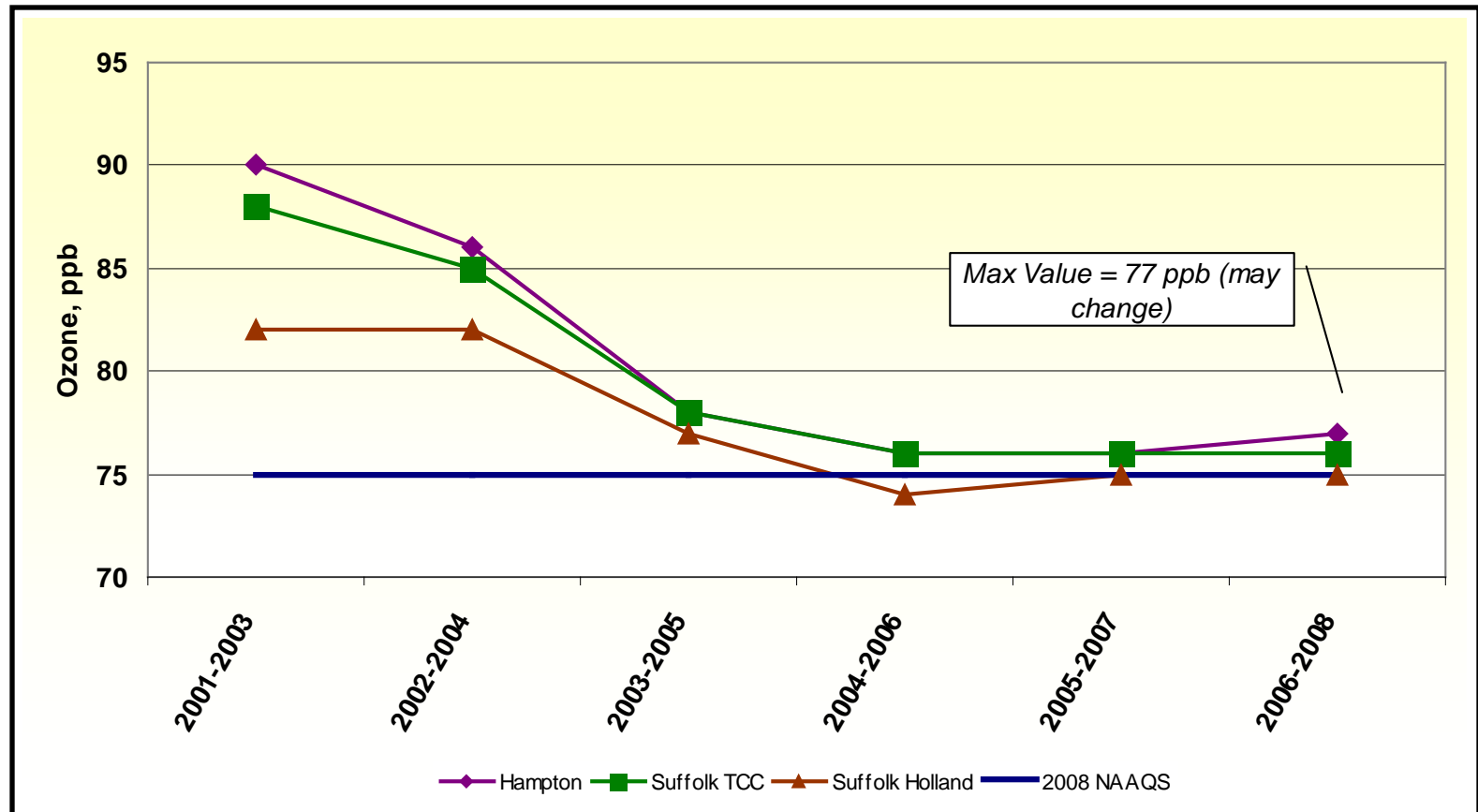


Hampton Roads Nonattainment Area

- Gloucester
- Isle of Wight
- James City
- York
- Chesapeake
- Hampton
- Newport News
- Norfolk
- Poquoson
- Portsmouth
- Suffolk
- Virginia Beach
- Williamsburg



Hampton Roads Ozone Historical Trend – Three Year Averages

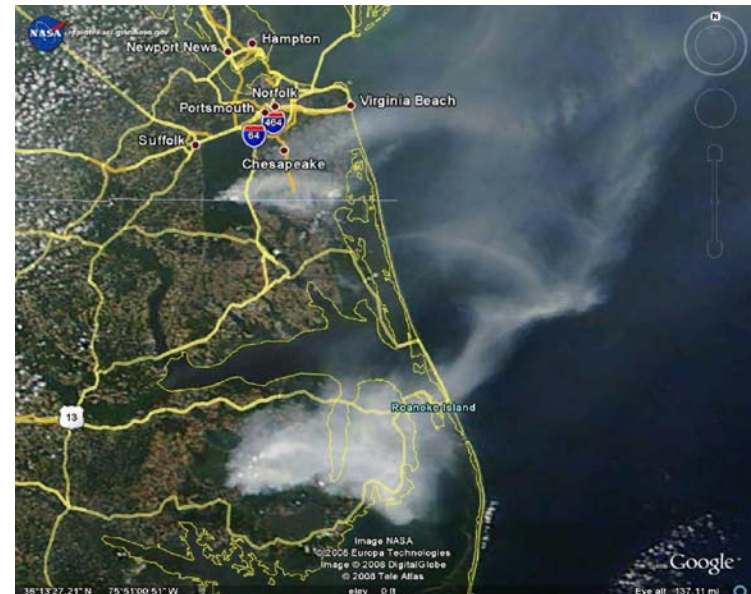


Impacts of 2008 Wildfires on Air Quality

- Evans Road Fire (Hyde County, NC)
- South 1 Fire (Suffolk, VA)



James River Bridge, 6/20/08



NASA Photo, 6/14/08

Fire Data and HR Ozone Designations

- States may request that data affected by exceptional events, like wildfires, be excluded from designation consideration
- State must submit a significant amount of data to justify request
- VDEQ submitted all documentation in March, 2009
 - Significant impact on both ozone values and fine particulate values
 - Highest 24-hr fine particulate measurement ever recorded in Virginia during this timeframe (85.7 ug/m³)
- Awaiting word from EPA on status/approval/denial
- Likely will not impact ozone designation (77 ppb → 76 ppb)

What's Next - Moving Forward

Milestone	Date
State Designation Recommendations	Submitted March 2009
EPA Response to State Recommendations	November 2009
30 Public Comment Period	Nov-Dec 2009
Final EPA Designations	March 2010
SIPs Due to EPA	2013
Attainment Dates	2013 to 2030

Questions?



James River Bridge (Newport News, VA) midday, 6/16/2008