

2008 Ozone National Ambient Air Quality Standards

Doris McLeod
Air Quality Planner
804/698-4197
damcleod@deq.virginia.gov
April 29, 2008



1



Briefing Topics

- What is Ozone?
- Current Air Quality
- 2008 Ozone Standard
- Timelines for Planning

2

What is Ozone?

- Formation: VOC + NO_x +  = Ozone
(volatile organic compounds + oxides of nitrogen + sunlight = ozone)
- Mainly a Summertime Pollutant
- Lung Irritant: Primary Component of Smog
- Regulated by the Clean Air Act

3

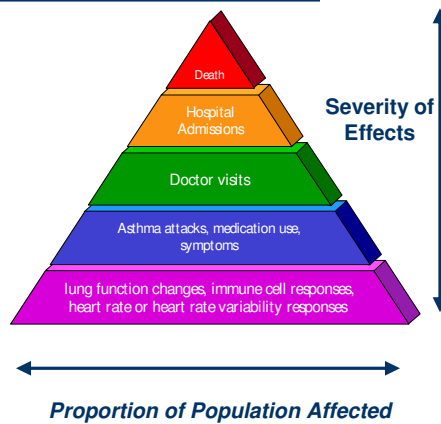
Ozone Health Effects

- Ozone penetrates deeply into lungs:
 - Affects breathing
 - Irritates airways
 - Increases asthmas attacks
 - May inflame and damage lung linings
 - Increases susceptibility to respiratory infections
 - Aggravates chronic lung diseases such as asthma, emphysema, and bronchitis
- Repeated episodes of inflammation may permanently harm lungs

4

Ozone Impacts: Vulnerable Groups

- Asthmatics
- Children
- Older Adults
- People with other lung diseases
- Higher exposures, such as outdoor workers



5

Ozone Plant Effects

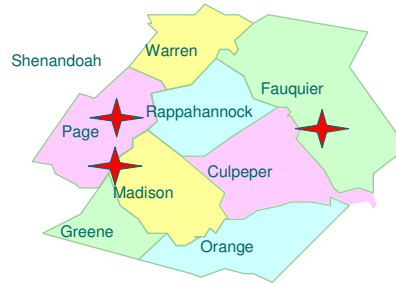
- Interferes with a plant's ability to produce and store food
- Disease, insect, weather, and competition susceptibility
- Injures appearance of vegetation



6

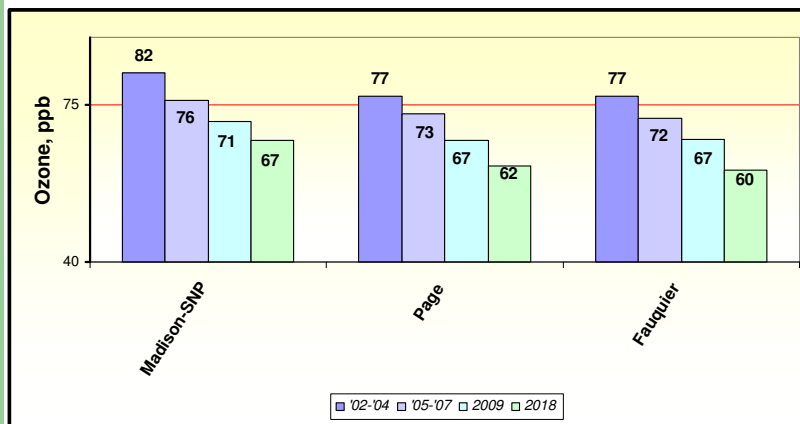
Local Monitoring Sites

- Page County
- Madison County – Shenandoah National Park
- Fauquier County



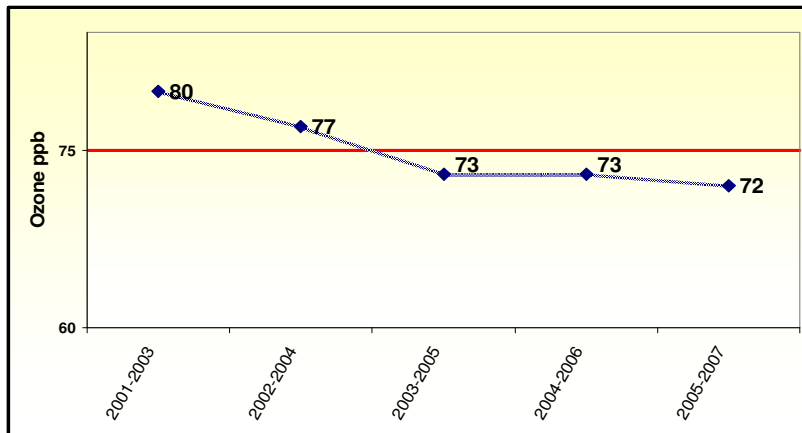
7

Local Air Quality



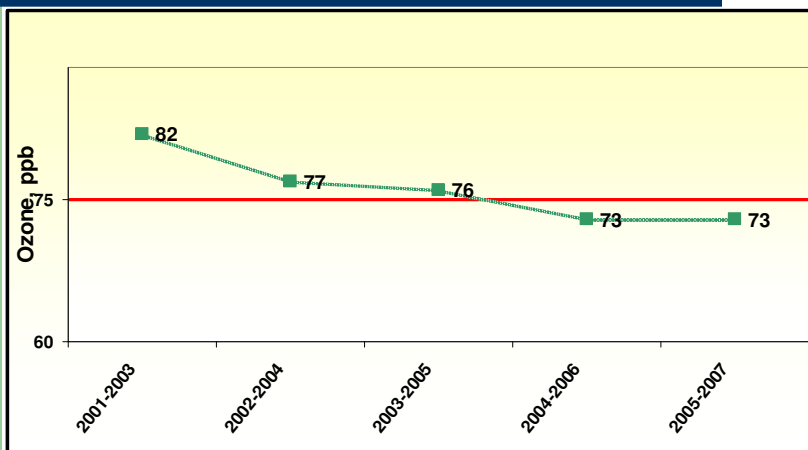
8

Local Air Quality-Trend at Fauquier



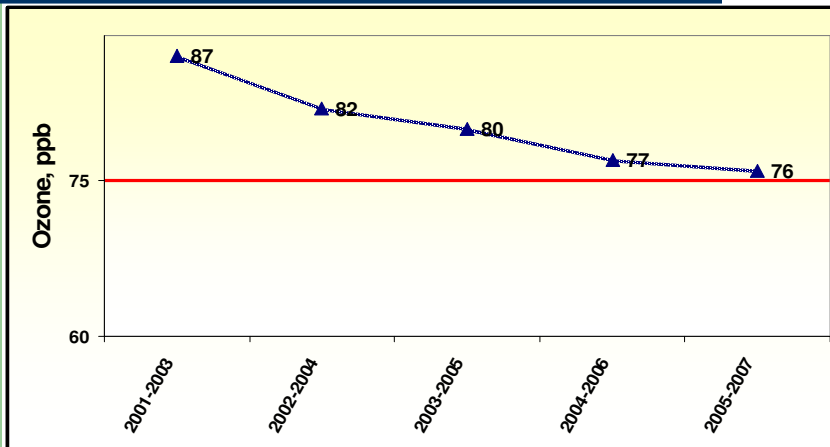
9

Local Air Quality-Trend at Page



10

Local Air Quality-Trend at Madison



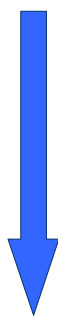
11

2008 Ozone Standard

- 0.075 parts per million ozone on an 8 hour average
- Reflects known accuracy of the ozone monitoring equipment being used.
- Standard revised March 12, 2008
 - 1997 ozone standard was 0.08 ppm on an 8 hour average
 - Effectively 85 ppb ozone, due to rounding

12

2008 Ozone Standard Planning Timeline

- 
- March 12, 2008: 2008 Ozone Standard Signed
 - March 12, 2009: Governor's recommendations regarding designations and classifications due to EPA Administrator
 - March 12, 2010: EPA publishes area designations and classifications (may be delayed to March 12, 2011 if additional data is needed)
 - March 12, 2013: For areas not attaining the 2008 standard, attainment plans are due to EPA
 - 2016-2033: Attainment dates, depending on the severity of the air quality problems

13

Questions?

14

Frequently Used Acronyms

- BACT - Best available control technology
- IM - Vehicle inspection & maintenance
- LAER - Lowest achievable emission rate
- NO_x - Oxides of nitrogen (ozone precursor)
- PPB - Parts per billion (pollution measure)
- RACT - Reasonably available control technology
- RFG - Reformulated gasoline
- Stage II - Gasoline vapor recovery at the pump
- VOC - Volatile organic compounds (ozone precursor)
- OTC - Ozone Transport Commission
- CAAA - Clean Air Act Amendments of 1990
- MRAQC – Metro Richmond Air Quality Committee

15

Contact Information

Stationary Source Permitting Questions	Terry Darton, Air Permitting Manager thdarton@deq.virginia.gov (703) 583-3845
Stationary Source Inspection Questions	Jim LaFratta, Compliance Manager jblafatta@deq.virginia.gov (540) 899-4507
Transportation Conformity	Jim Ponticello, Air Quality Program Manager jim.ponticello@vdot.virginia.gov 804-371-6769
Emissions Inventory	Tom Ballou, Director of Data Analysis trballou@deq.virginia.gov 804-698-4406
Air Quality Planning	Doris McLeod, Air Quality Planner damcleod@deq.virginia.gov 804-698-4197

16