

# 2008 Ozone National Ambient Air Quality Standards

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April 29, 2008



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## Briefing Topics

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

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## What is Ozone?

- Formation: VOC + NO<sub>x</sub> +  = 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

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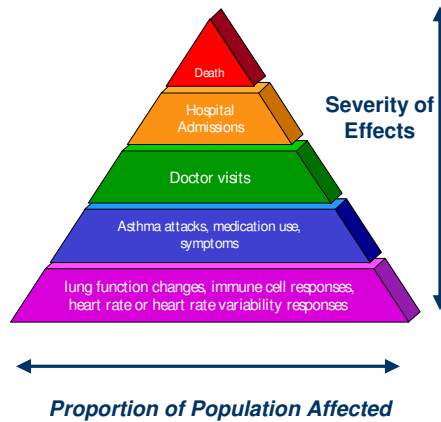
## Ozone Health Effects

- 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

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## Ozone Impacts: Vulnerable Groups

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



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## Ozone Plant Effects

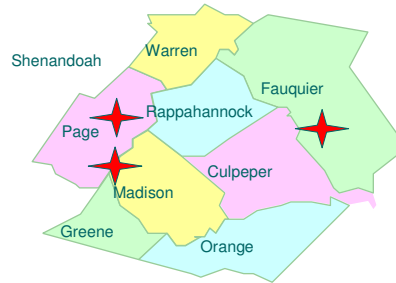
- Interferes with a plant's ability to produce and store food
- Disease, insect, weather, and competition susceptibility
- Injures appearance of vegetation



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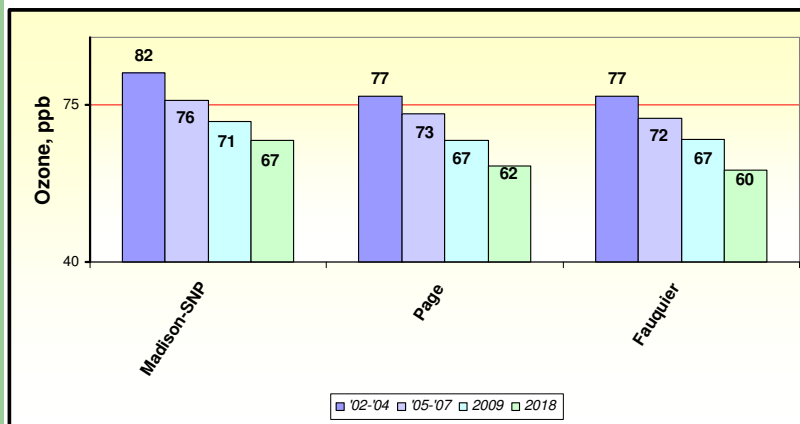
## Local Monitoring Sites

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



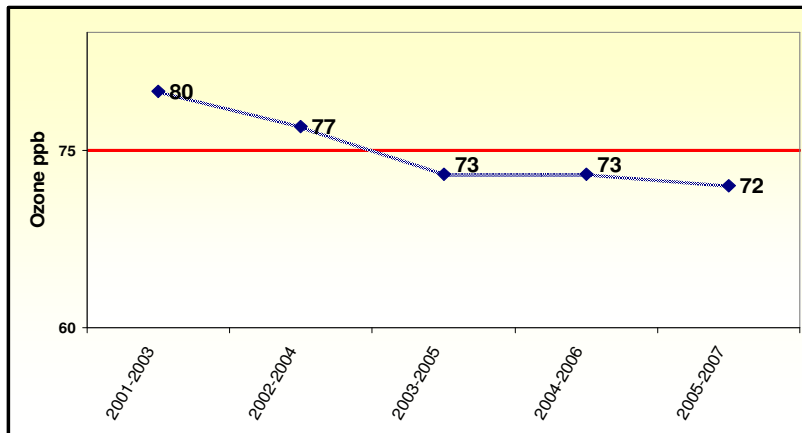
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## Local Air Quality



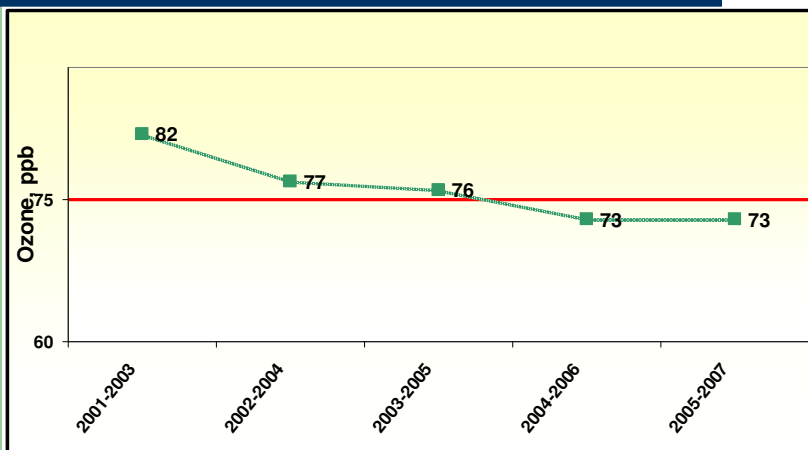
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## Local Air Quality-Trend at Fauquier



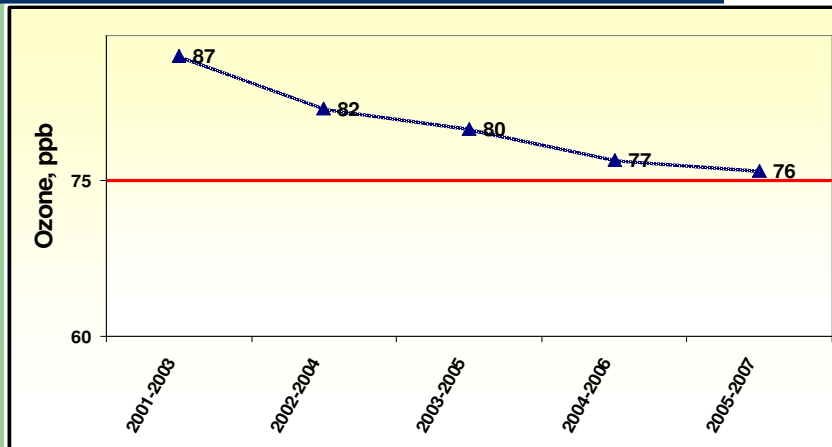
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## Local Air Quality-Trend at Page



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## Local Air Quality-Trend at Madison



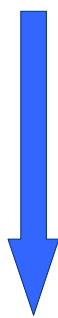
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## 2008 Ozone Standard

- 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

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## 2008 Ozone Standard Planning Timeline

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- 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

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## Questions?

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## Frequently Used Acronyms

- BACT - Best available control technology
- IM - Vehicle inspection & maintenance
- LAER - Lowest achievable emission rate
- NO<sub>x</sub> - 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

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## Contact Information

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