

EPA Promulgates new Ozone National Ambient Air Quality Standard (NAAQS)

Environmental Review Commission (ERC)

March 18, 2008

NORTH CAROLINA
DIVISION OF AIR QUALITY



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What is Ozone?

■ Two types of ozone

- Stratospheric ozone – Blocks UV radiation
- Tropospheric ozone or low level ozone – causes lung irritation at higher concentrations

■ It is formed in the presence of “precursor pollutants” and sunlight

- Highest in the summer
- For NC – NO_x is Primary Precursor
- Combustion sources - e.g., power plants and motor vehicles are primary man-made source of precursors

■ EPA establishes national standards

How Ozone Affects You...

- Acute respiratory problems
- Aggravates asthma
- Temporary decrease in lung capacity of 15% to over 20% in some healthy adults
- Inflammation of lung tissue
- Increased hospital admissions and emergency room visits
- Impairs immune system, making people more susceptible to respiratory illness, including bronchitis and pneumonia

Effects of Repeated Ozone Exposures

- Cycles of injury and healing may lead to permanent structural changes - “airway remodeling”
- Children may experience slower lung growth
- Permanent changes may reduce the quality of life

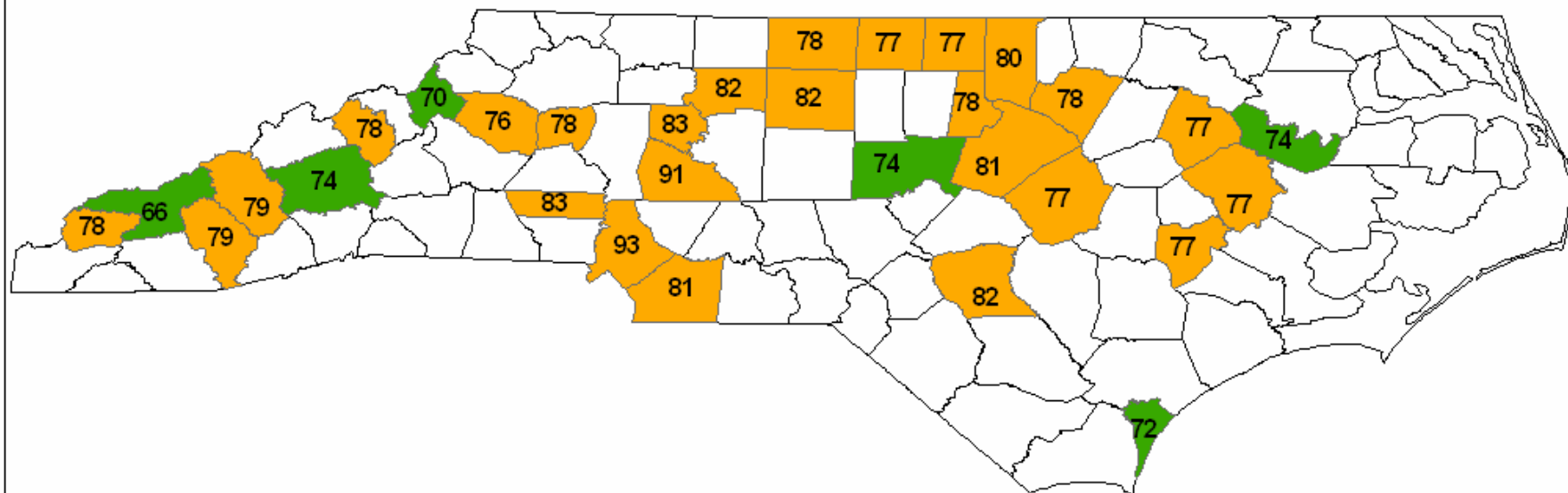
Who is at Greatest Risk?

- **Children and adults who are active outdoors**
 - People who are active outdoors are more likely to be exposed – Even healthy persons
 - Children's lungs are growing, children breathe more air per pound of body weight, and they are less likely to notice symptoms
- **People who are unusually sensitive to ozone and those with respiratory disease, such as asthma or bronchitis**

Current 8-hour Ozone Standard

- **0.08 parts per million (ppm)**
- **Based on the 3-year average of the annual 4th highest daily maximum 8-hour average**
- **0.09 ppm is a violation of the standard**
 - 0.084 ppm rounds down to 0.08 ppm
 - 0.085 ppm rounds up to 0.09 ppm

2005-2007 Preliminary Ozone Design Values as of 10/20/2007



This map displays counties with monitors only and does not represent potential nonattainment area boundaries.

This map is based on historic data for 2005-2007. Designations will be based on 2007-2009 ambient data.

Legend

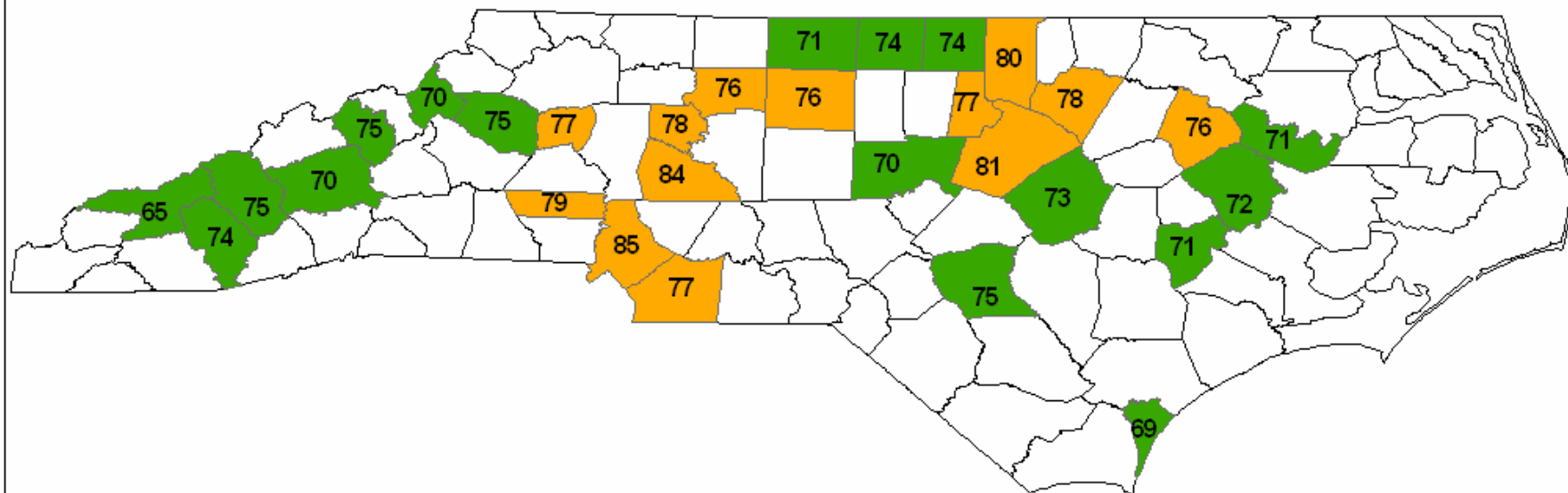
Design Values

2005 - 2007

66 - 75

76 - 93

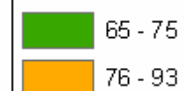
2009 Ozone Projections from VISTAS/ASIP Modeling.



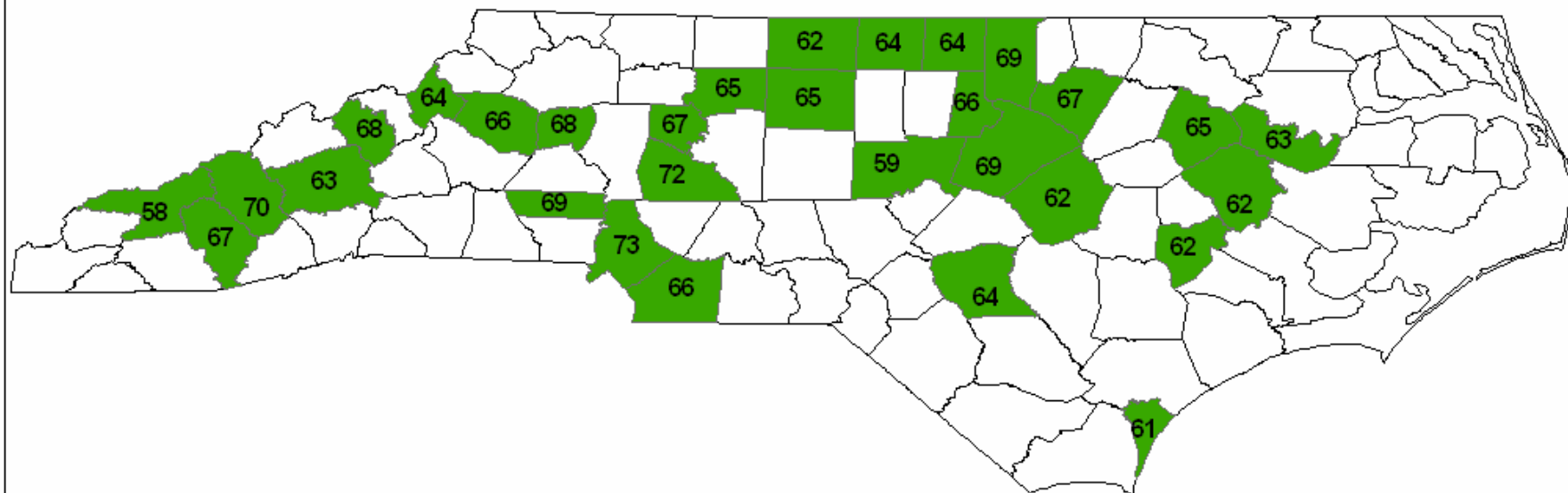
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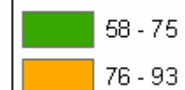
2018 Ozone Projections from VISTAS/ASIP Modeling.



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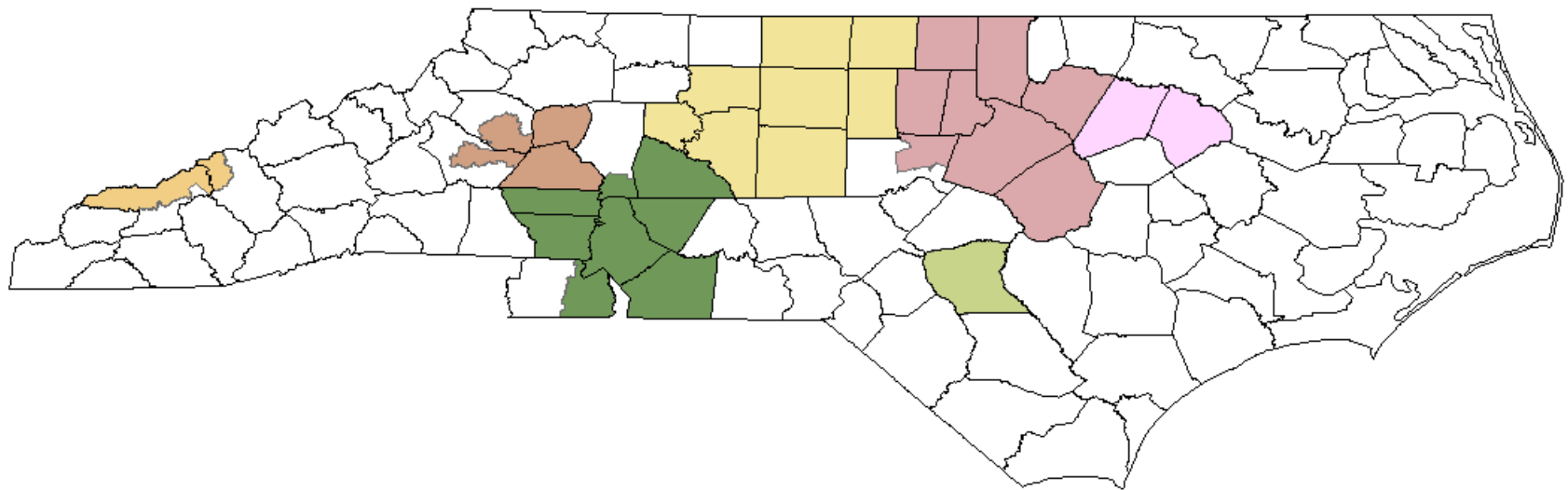
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Expected Implementation Timeline for Revised Ozone NAAQS

Milestone	Date
Signature—Final Rule	March 12, 2008
Effective Day of Rule	March 12, 2008
State Designation Recommendations to EPA	No later than March 12, 2009
Final Designations	No later than March 12, 2010*
Attainment Demonstration SIPs Due	March 12, 2013*
Attainment Dates	2013-2030 (depending on severity of problem)



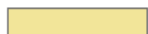
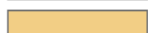



Areas Designated Under Current 8-hour Ozone Standard

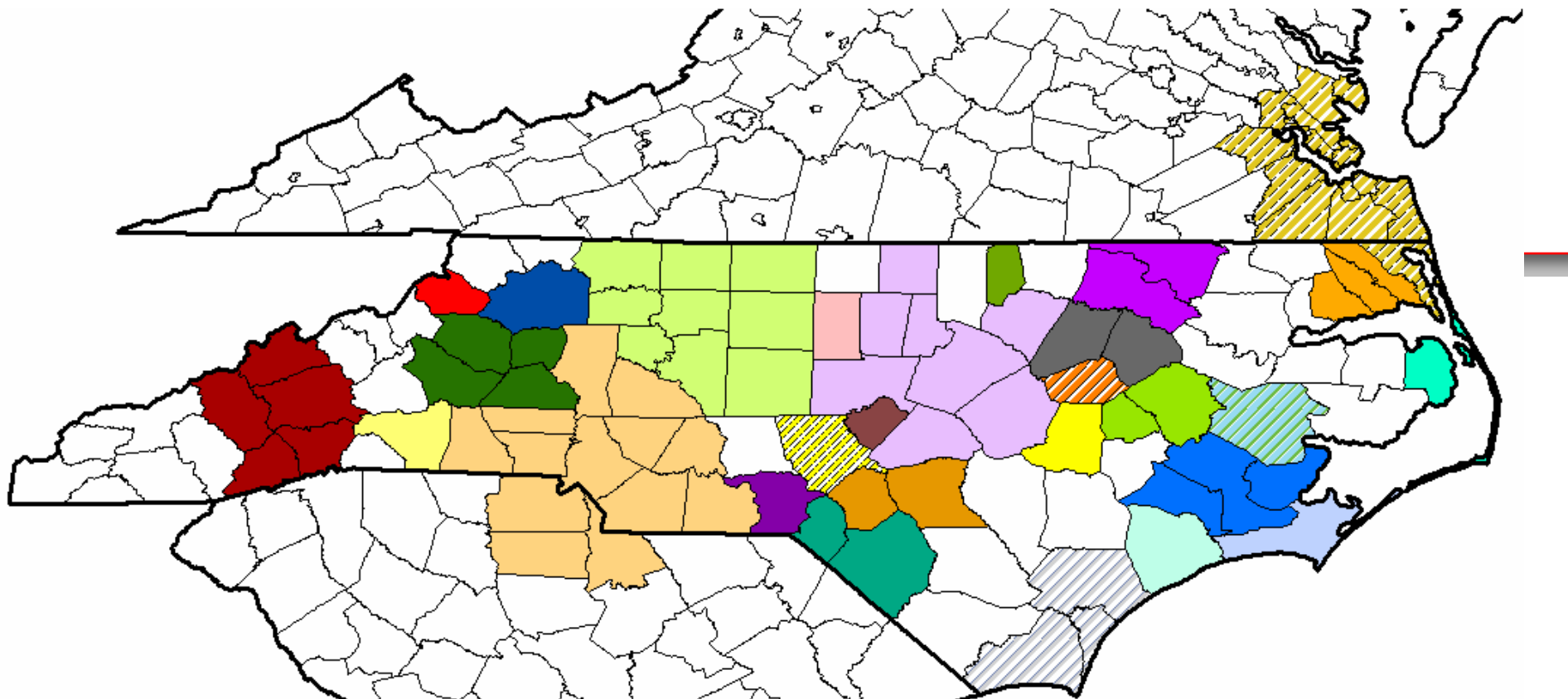


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EPA Ozone Designations selection

Area Name, Status (EAC/Nonattainment), Classification

	Charlotte-Gastonia-Rock Hill, NC-SC, Nonattainment, Moderate
	Fayetteville, NC, EAC, Basic
	Greensboro-Winston Salem-High Point, NC, EAC, Marginal
	Haywood and Swain Counties (Great Smoky Mountain NP), NC, Nonattainment, Basic
	Hickory-Morgantown-Lenoir, NC, EAC, Basic
	Raleigh-Durham-Chapel Hill, NC, Nonattainment, Basic
	Rocky Mount, NC, Nonattainment, Basic



Legend

NC_CSAa

CSA_MSE

Asheville-Brevard, NC

Boone, NC

Burlington, NC

Charlotte-Gastonia-Salisbury, NC-SC

Elizabeth City, NC

Fayetteville, NC

Forest City, NC

Goldsboro, NC

Greensboro-Winston Salem-High Point,

Greenville, NC

Henderson, NC

Hickory, NC

Jacksonville, NC

Kill Devil Hills, NC

Lumberton-Laurinburg, NC

Morehead City, NC

New Bern, NC

North Wilkesboro, NC

Raleigh-Durham_Cary, NC

Roanoke Rapids, NC

Rockingham, NC

Rocky Mount, NC

Sanford, NC

Souther Pines, NC

Virginia Beach-Norfolk-Newport News,

Washington, NC

Wilmington, NC

Wilson, NC

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