

**Subject:** FW: ozone non-attainment  
**From:** "David Garrett" <david@davidgarrettpe.com>  
**Date:** Thu, 12 Feb 2009 16:19:30 -0500  
**To:** "Donna Wilson" <Donna.Wilson@ncmail.net>

Donna, please refer to the attached information from Air Quality - this was a power point presentation the DAQ presented in the public meeting on January 20, 2009. After talking with Tom, I don't think the SIP will impact this facility at all. As Tom pointed out, the non-attainment status impacts combustion processes, e.g., coal-fired power plants and vehicle emissions. In addition, the data for Pitt County just barely tipped the threshold that might get them included in a future non-attainment boundary delineation by US-EPA. He said a few months of "good" data might get Pitt County removed from the non-attainment boundary. I discussed this in Section 8.11 of the application report. Please call me if you want to discuss it further. I believe it's a non-issue relative to this permit.

David Garrett, P.G., P.E.  
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Raleigh, NC 27604

Tel. 919-418-4375 (mobile)

-----Original Message-----

From: Tom.Mather [<mailto:Tom.Mather@ncmail.net>]  
Sent: Thursday, February 12, 2009 11:37 AM  
To: [david@davidgarrettpe.com](mailto:david@davidgarrettpe.com)  
Subject: ozone non-attainment

David,

I've attached a PowerPoint presentation on the ozone non-attainment issue that our staff presented at the recent public meetings.

--

\*Tom Mather, Public Information Officer  
N.C. Division of Air Quality\*

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\*Raleigh, NC 27699-1641  
Phone: 919-715-7408\*

\*FAX: 919-715-7175

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**Ozone 2009\_Recommendations-Public\_Meetings.ppt**

**Content-Type:** application/vnd.ms-powerpoint  
**Content-Encoding:** base64



**2008 8-hour Ozone Standard  
And  
Proposed Nonattainment  
Boundary Recommendations**

**Department of Environment &  
Natural Resources  
Division Of Air Quality**



## Public Meeting Overview

- **Introductions**
- **Quick background on ozone as an air pollutant**
- **Revised 2008 8-hour ozone standard**
  - What is the standard
  - What is the timeline / schedule for this revised standard
- **Nonattainment**
  - What is it and what does it mean
  - Process for determining nonattainment boundaries
- **Presumptive nonattainment boundaries**
- **Proposed nonattainment boundaries**
- **Next steps**



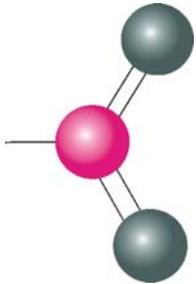
# What Is Ozone?

- **Two types of ozone**
  - **Stratospheric ozone – Blocks UV radiation**
  - **Tropospheric ozone or low level ozone – Causes lung irritation, especially at higher concentrations**
  - **“Good up high, Bad nearby”**
- **Tropospheric ozone forms in the presence of “precursor pollutants” and sunlight**
  - **Highest in the late spring and summer**
  - **Power plants and motor vehicles are the primary man-made sources of precursors for North Carolina and the Eastern US**

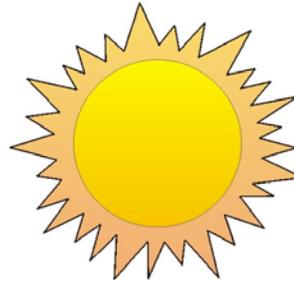
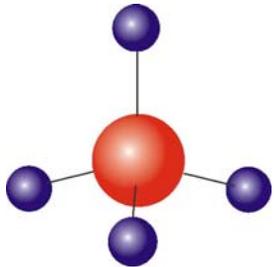


## Formation of Ground-level Ozone

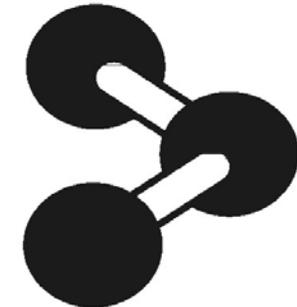
Oxides of Nitrogen (NO<sub>x</sub>)



- AND -



Strong Spring or Summer Sun  
(with low RH & light winds)



Ozone (O<sub>3</sub>)

Volatile Organic  
Compounds (VOCs)



# 2008 8-hour Ozone Standard

- **EPA establishes the National standard**
  - National Ambient Air Quality Standard (NAAQS)
- **0.075 parts per million (ppm)**
  - Also can be stated as 75 parts per billion (ppb)
- **Based on the 3-year average of the annual 4th highest daily maximum 8-hour average**
  - Up to 3 days can exceed per year over a 3 year span before a violation of the NAAQS occurs
- **The older 1997 8-hour Ozone Standard**
  - 0.08 ppm (0.084 ppm due to rounding)
  - Roughly 10% higher than the newly revised standard



## **New Ozone Standard Schedule**

- **March 12, 2008 – Standard promulgated**
- **March 12, 2009 – State recommends boundaries for nonattainment areas based on 2006-2008 monitoring data**
- **March 12, 2010 – EPA designates nonattainment areas**
- **Future attainment dates will be set based on severity of ozone problem**



## What Does Nonattainment Mean?

- **EPA label declaring that air quality does not meet the National standards**
- **Requires State to develop a plan demonstrating what control measures are needed to meet & maintain the standard**
- **Requires transportation conformity**
- **Requires new source review on new major industrial sources & major modification on existing sources**



# Process For Determining Nonattainment Boundaries

- In accordance with the Clean Air Act, the State must submit to EPA its recommendations for nonattainment designation within 1-year of promulgation of the new standard.
- The recommendation will be one of the following:
  - Nonattainment – area violates or contributes to the violation of the standard,
  - Attainment – area is attaining the standard and does not contribute to another areas violation, or
  - Unclassifiable – insufficient data is available to make a determination



## Process For Determining Nonattainment Boundaries

- **Factors EPA says to take into consideration**
  - Air Quality Data
  - Emissions Data
  - Population Density / Degree of Urbanization
  - Traffic / Commuting Patterns
  - Growth Rates
  - Meteorology
  - Geography / Topography
  - Jurisdictional Boundaries
  - Level of Control of Emission Sources

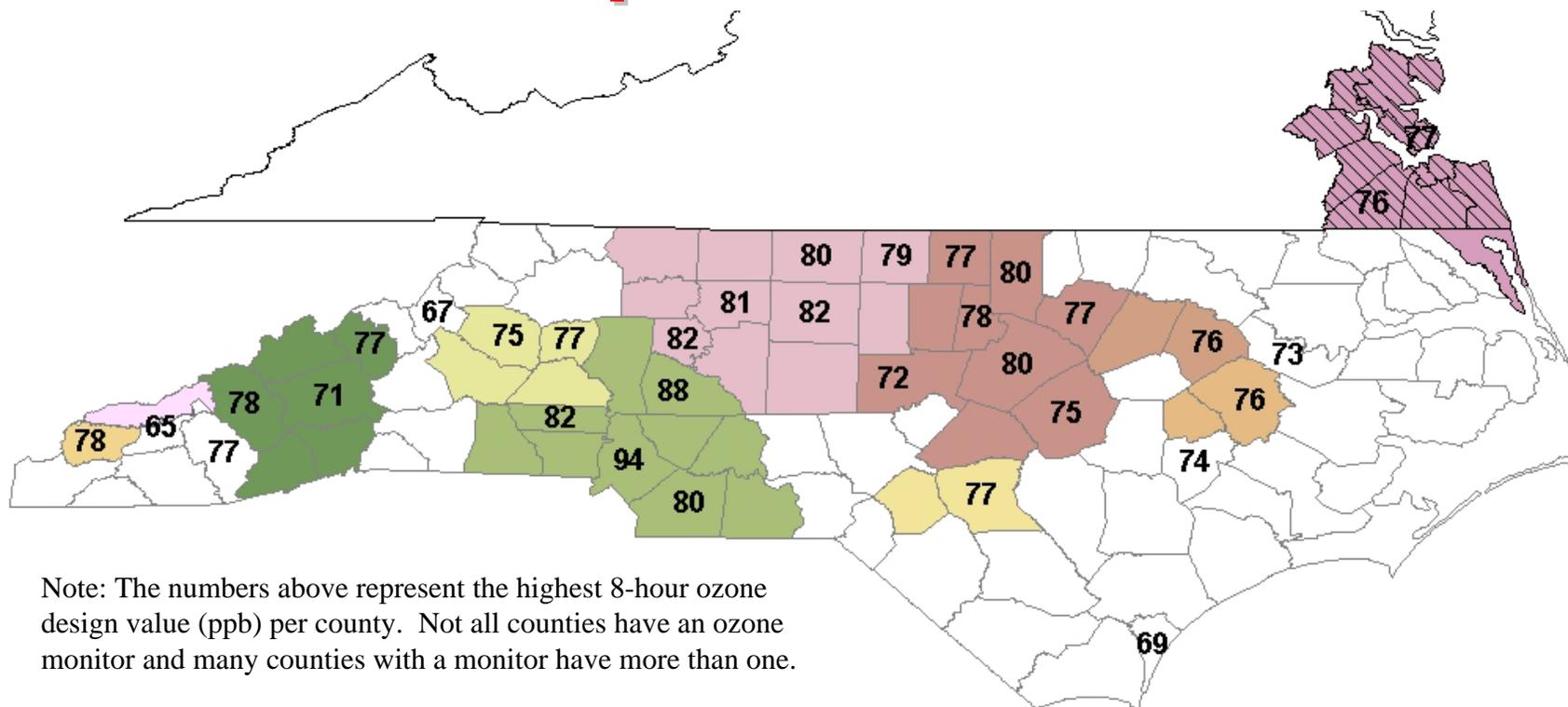


# Potential Nonattainment Boundaries

- **NCDAQ has develop 2 scenarios**
  - EPA's presumptive boundary, represents worse case scenario
  - North Carolina's draft proposed boundaries
- **Coordinate with other agencies impacted by nonattainment designations (NCDOT, NCDOA and NCDOC, Local Governments)**
- **Will be shared at various public meetings across the State and any comments received will be taken into consideration**



## Presumptive Boundaries

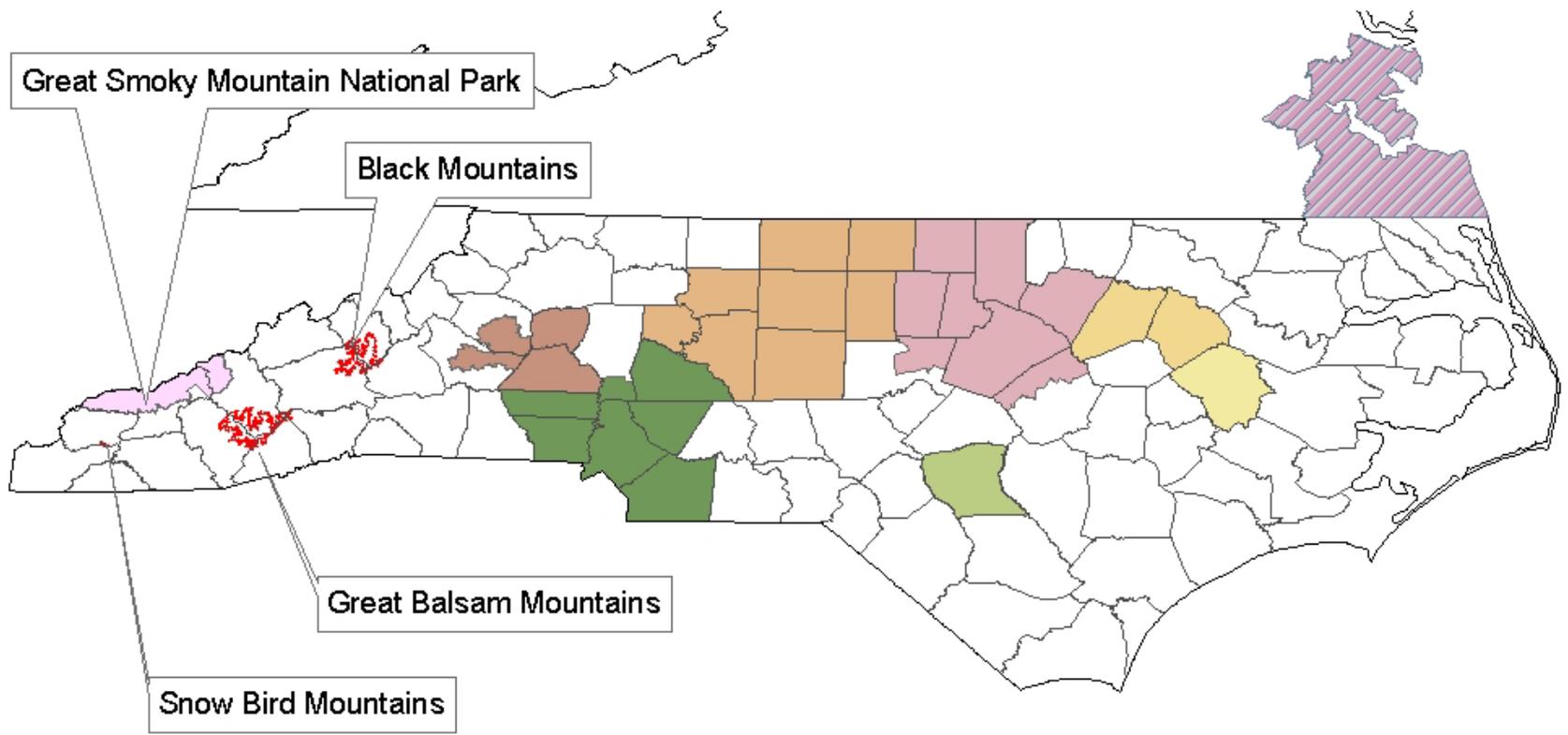


Note: The numbers above represent the highest 8-hour ozone design value (ppb) per county. Not all counties have an ozone monitor and many counties with a monitor have more than one.

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## North Carolina's Proposed Boundaries

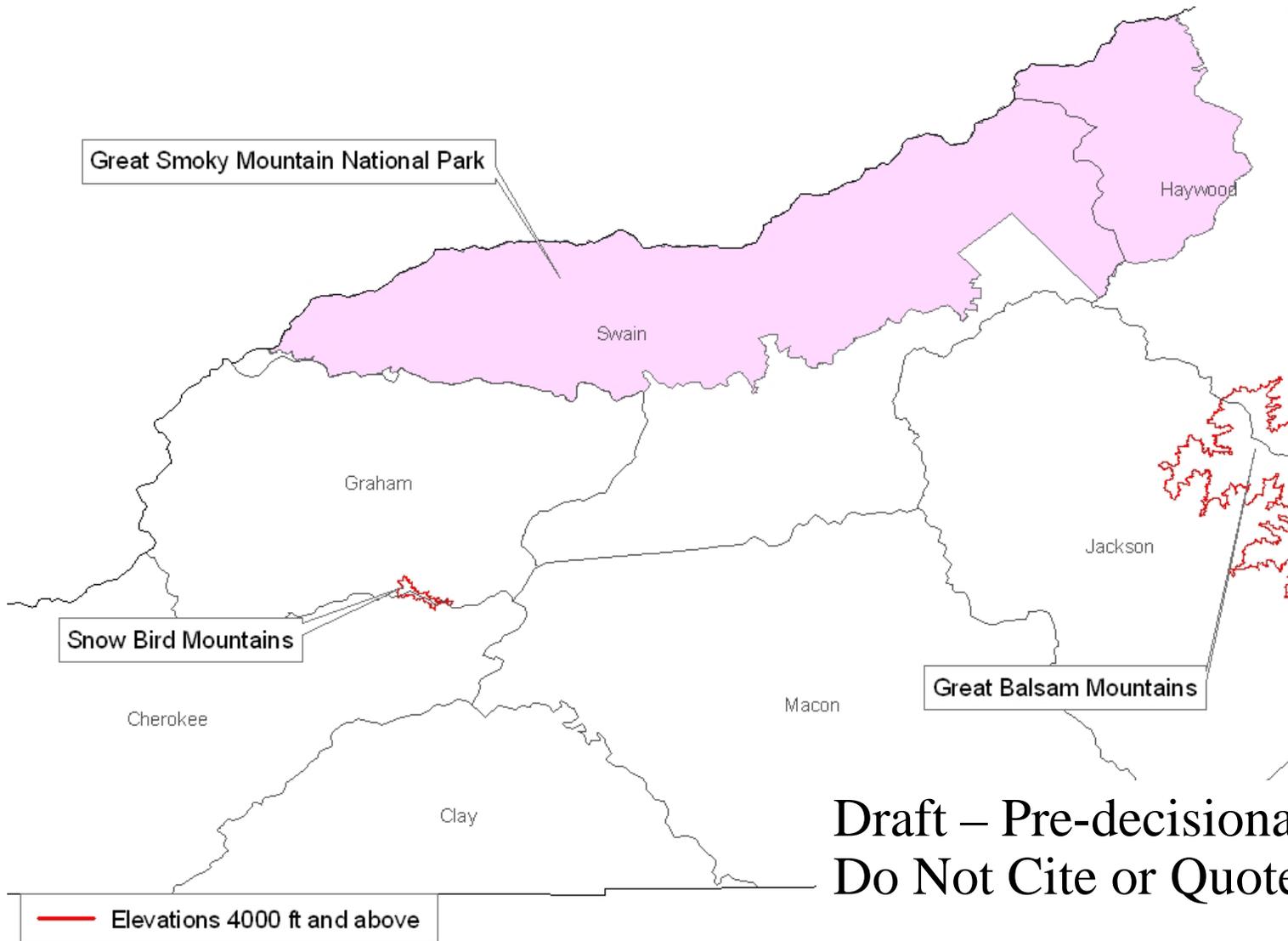


 Elevations 4000 ft and above

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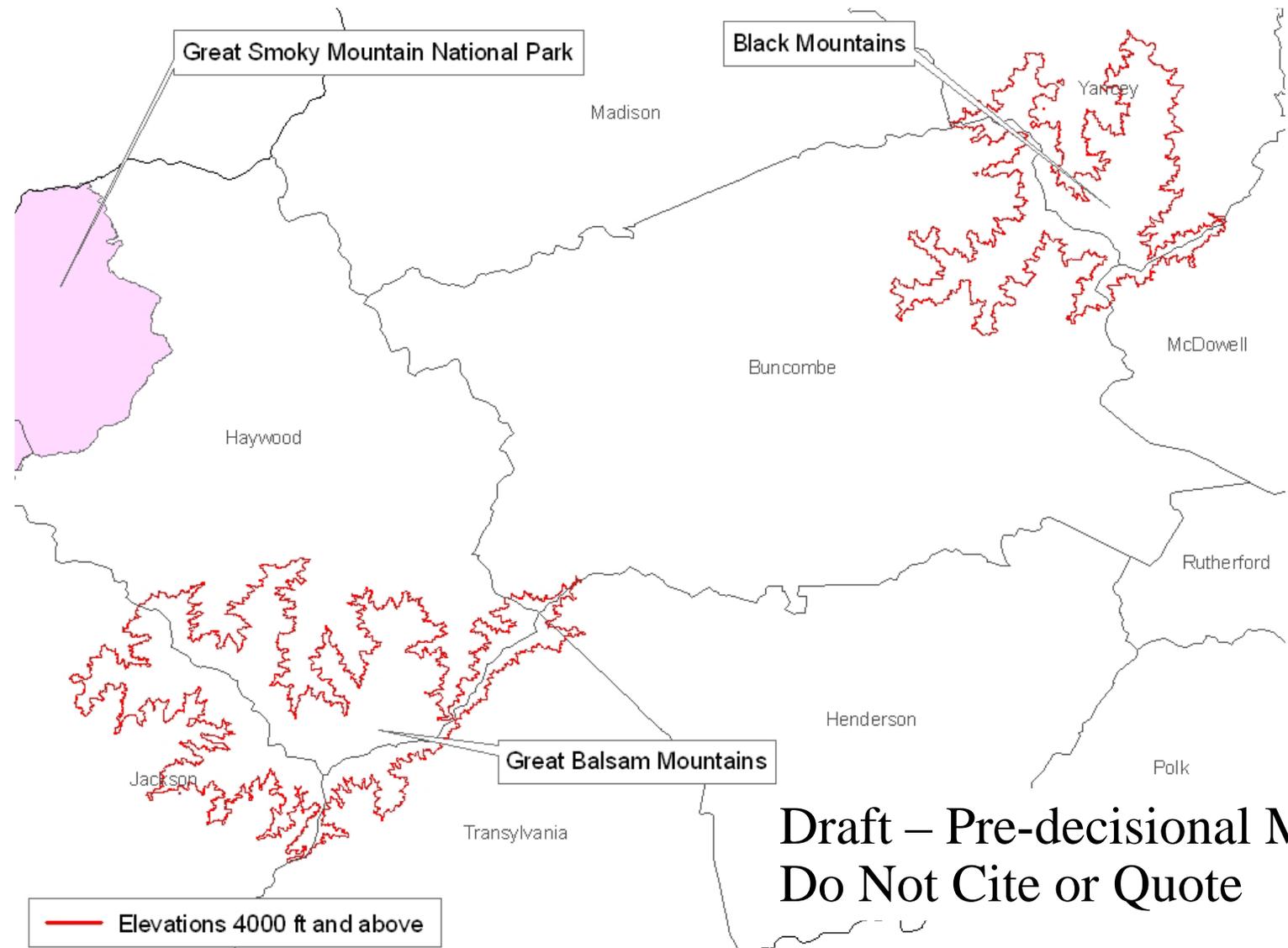
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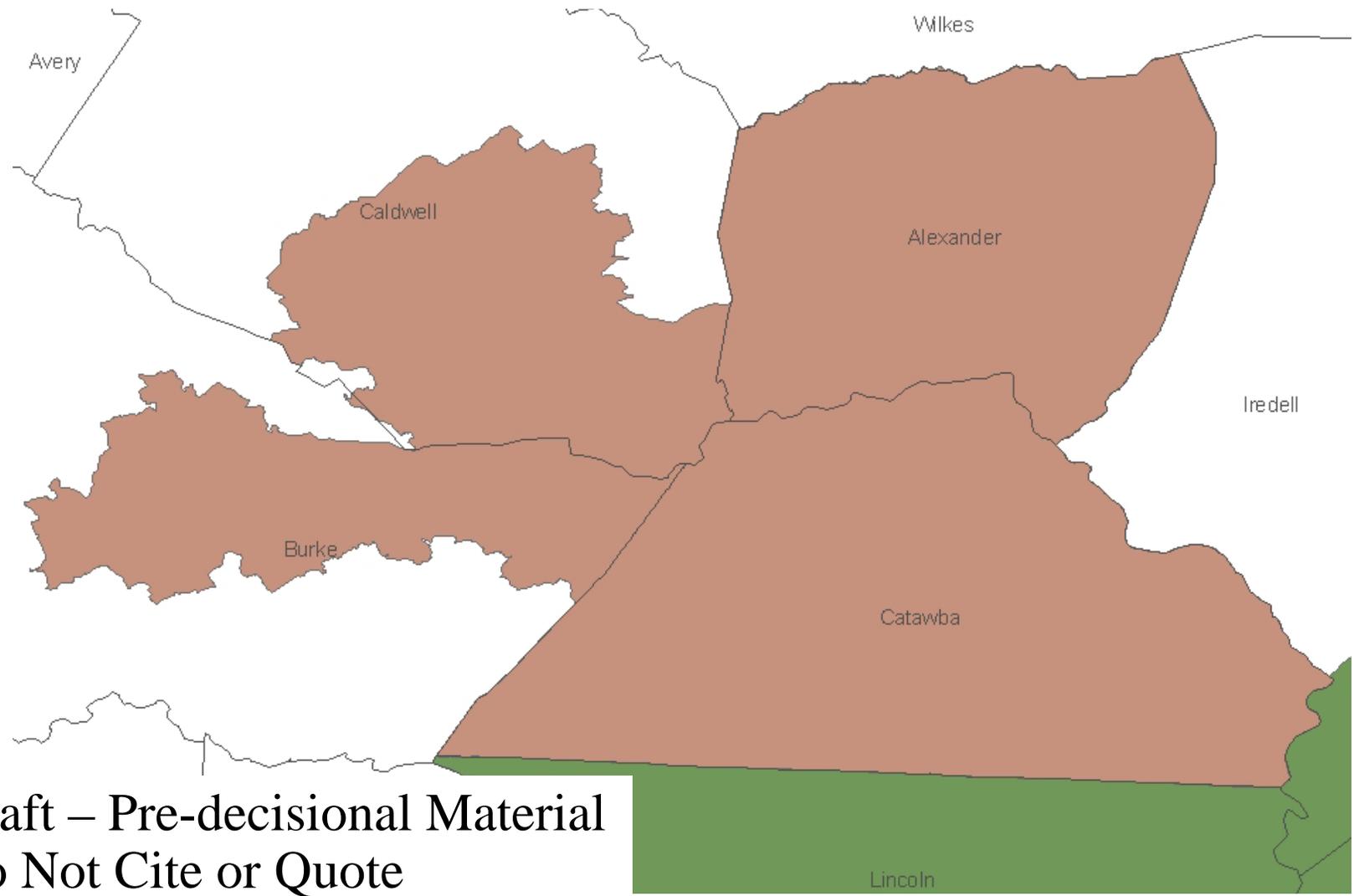
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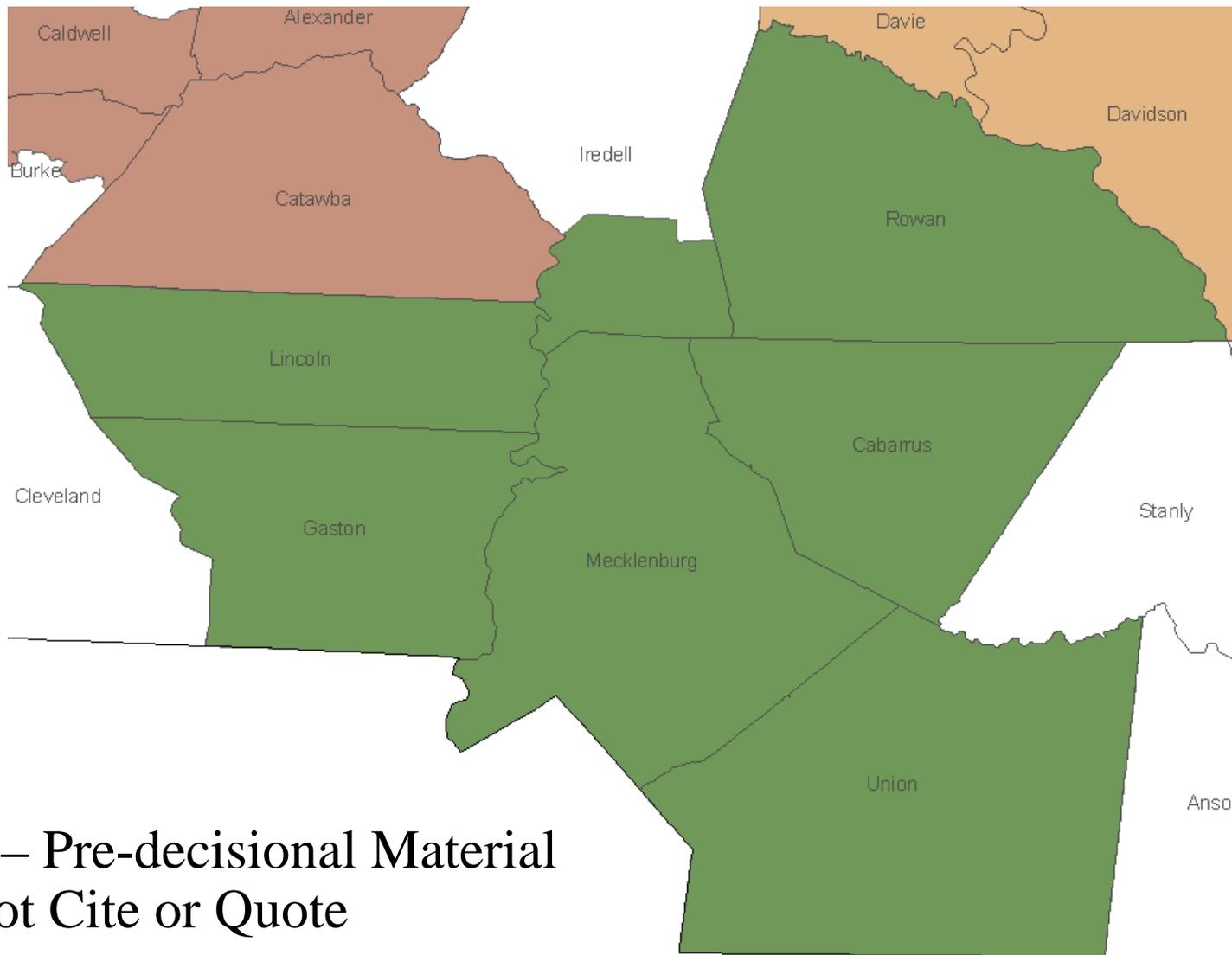
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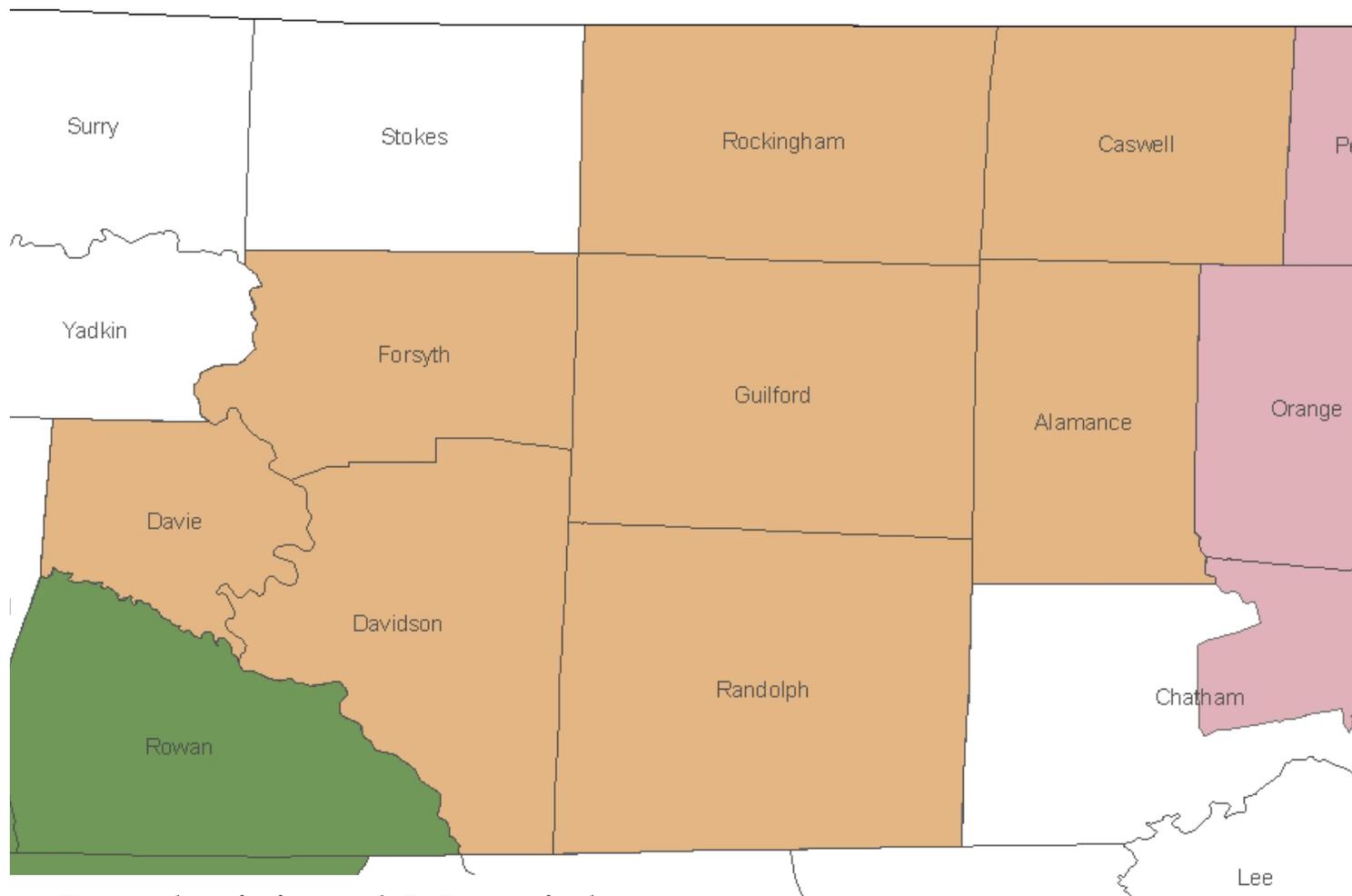
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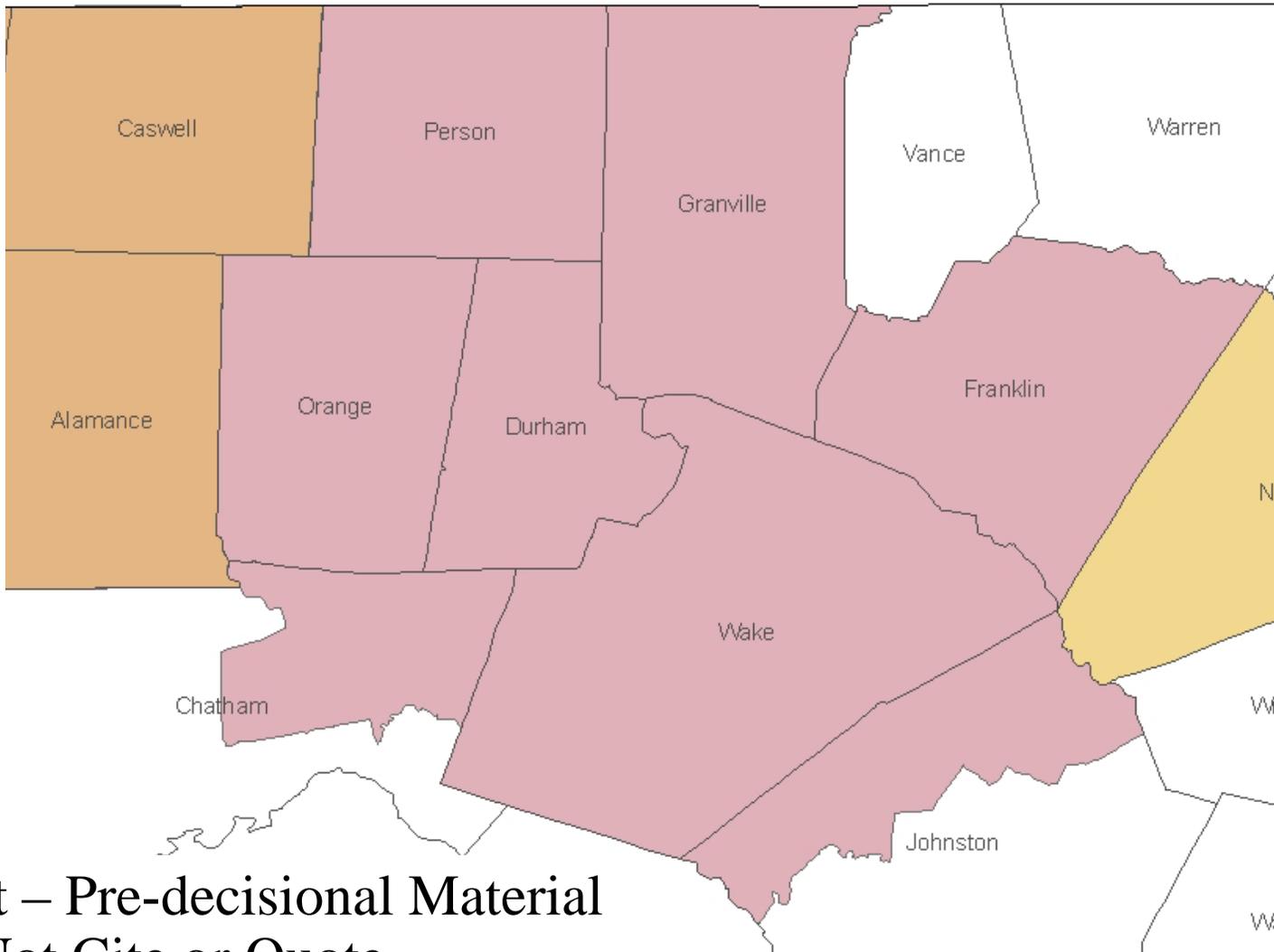
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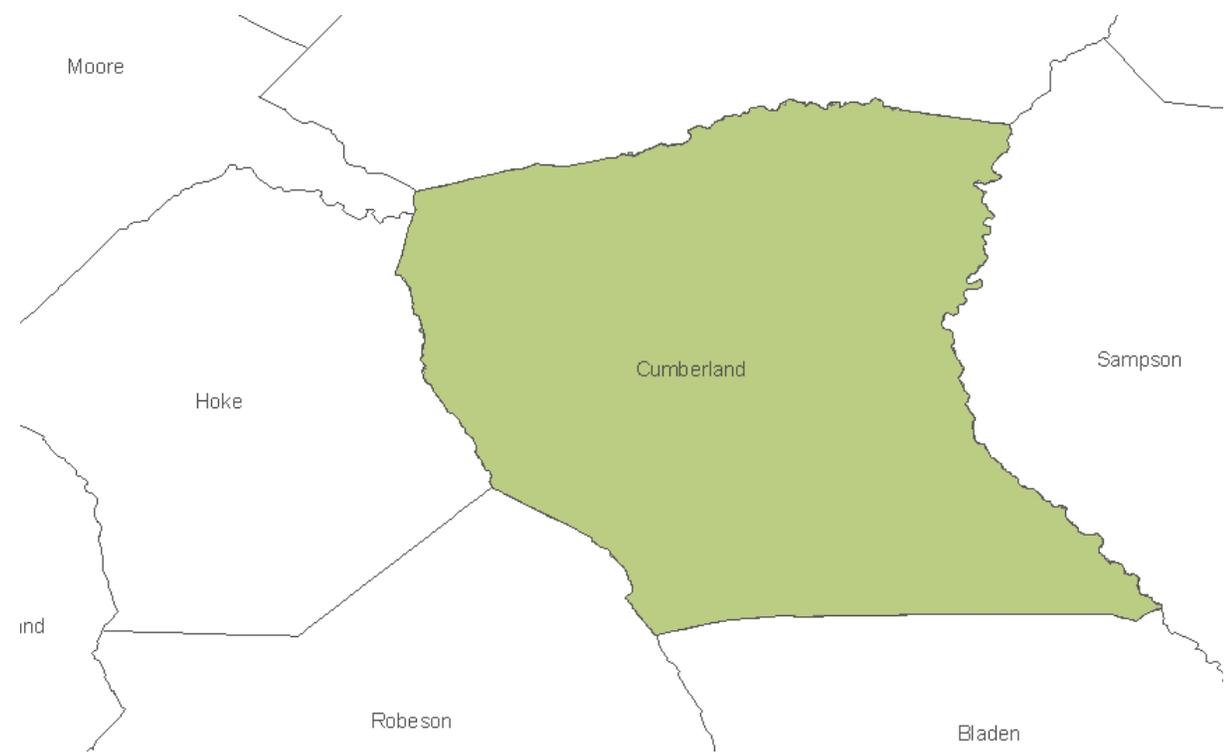
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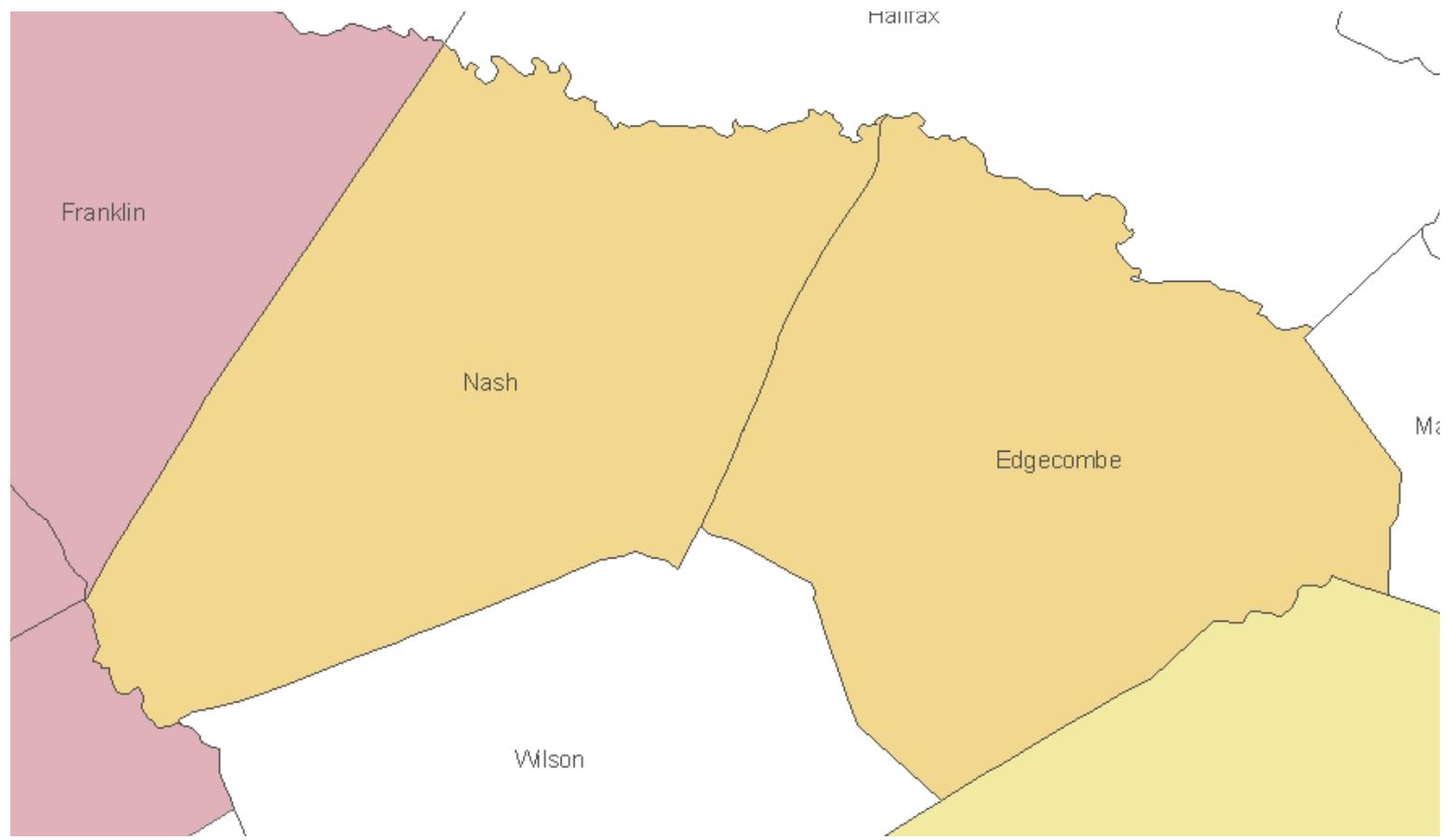
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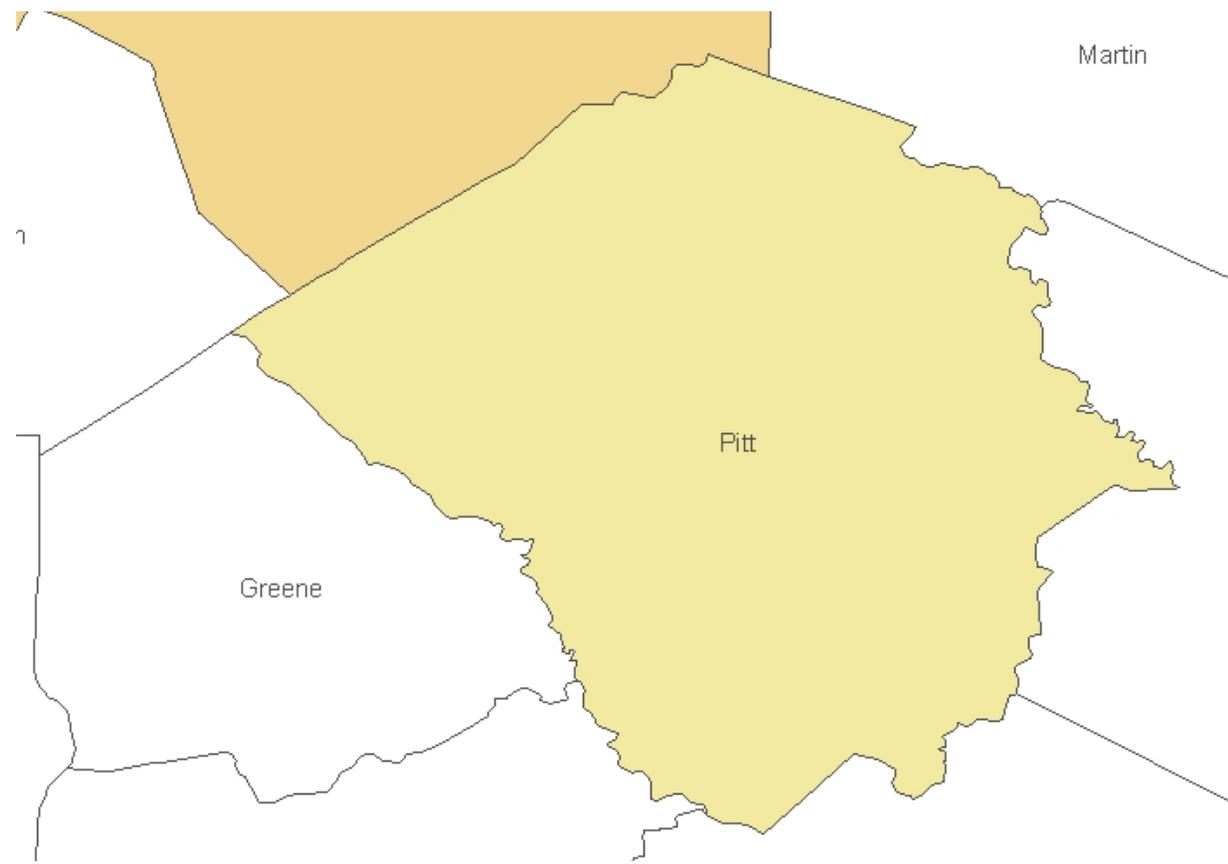
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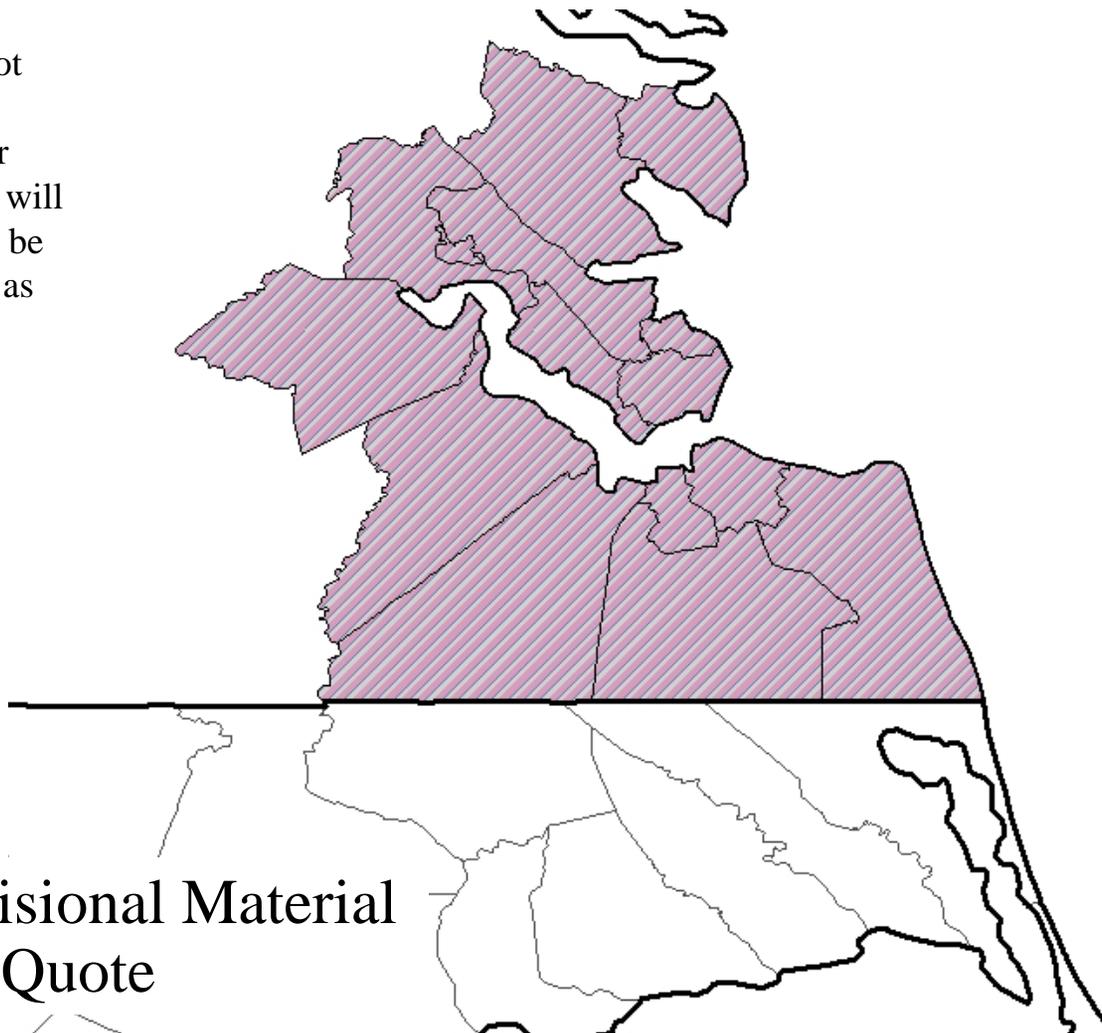


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## North Carolina's Proposed Boundary

Note: North Carolina does not make recommendation of nonattainment areas for other States. Our recommendation will be that Currituck County not be designated as nonattainment as part of the Tide Water MSA.



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Do Not Cite or Quote



## What's Next?

- **We are seeking comments on our proposed nonattainment boundaries by the end of January 2009**
- **By March 12, 2009, North Carolina will submit its recommendation for nonattainment boundaries to EPA**
- **If EPA's initial assessment is different than the State's recommendation they must notify the State within 120 days before designations are made**
  - **Provides the State with an opportunity to argue its case and provide additional documentation if needed**
- **EPA makes final nonattainment designations by March 12, 2010**



# **Contact Information**

**George M. Bridgers**

**NCDAQ Attainment Planning Branch**

**Meteorologist II – Chief Air Quality Meteorologist**

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**[www.ncair.org](http://www.ncair.org)**