

# North Carolina Local Programs Update



**CAPCA Spring Meeting**  
**April 12, 2007**

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Forsyth County Environmental Affairs Dept.

# North Carolina Local Programs

- ◆ Forsyth County Environmental Affairs Department (FCEAD)
- ◆ Mecklenburg County Air Quality (MCAQ)
- ◆ Western North Carolina Regional Air Quality Agency (WNCRAQA, Buncombe Co.)

# Local Programs - Authority

## §143-215.112. Local air pollution control programs.

(a) The Commission is authorized and directed to review and have general oversight and supervision over all local air pollution control programs and to this end shall review and certify such programs as being adequate to meet the requirements of this Article and Article 21 of this Chapter and any applicable standards and rules adopted pursuant thereto.

# Rule Adoption

- ◆ Normally After Rule Making
- ◆ Minor Changes Made as Necessary
- ◆ MCAQ and FCEAD Operate as County Programs Under County Codes
  - ▶ Board Recommends Rules to Director and Commission
  - ▶ County Commission Adopts Rules
- ◆ WNCRAQA Operates as a Regional Program Under Rules Established By Governing Board
  - ▶ State Rules Adopted by Reference
  - ▶ Board has Rule Making Authority

# Local Permitting Programs

- ◆ Construction/Operation Permits
  - Title V, Synthetic Minor, Minor
- ◆ Stage I Programs (Gas Stations)
  - MCAQ and WNCRAQA Require Stage I Permits
  - FCEAD Registers and Inspects Stage I Facilities
- ◆ Dry Cleaning Facilities
  - DWM and DAQ MOA
  - FCEAD Registers and Inspects Dry Cleaners
  - MCAQ and WNCRAQA Inspect Dry Cleaners

# Title V

## ◆ FCEAD

- 11 Major Facilities - Initial Permits Issued
- All Renewal Permits Issued
- 4 Second Round Renewal Applications Received

## ◆ MCAQ

- 12 Major Facilities - Initial Permits Issued
- 9 Renewal Permits Issued
- 3 Draft Permits In the Public Comment Period

## WNCRAQA

- 9 Major Facilities (6 Initially and 3 New) – 8 Initial Permits Issued
- 6 Renewal Permits Issued

# 112(r) Programs

## ◆ WNCRAQA

- ▶ Full Delegation
- ▶ 3 Affected Facilities

## ◆ FCEAD

- ▶ Full Delegation
- ▶ 1 Affected Facility

## ◆ MCAQ

- ▶ Full Delegation
- ▶ 22 Affected Facilities

# Industry Outreach & Recognition

## ◆ FCEAD

- ▶ Annual and Special Air Quality Awards
- ▶ AiReview Bulletin (via e-mail)
- ▶ Title V e-mail Distribution List

## ◆ MCAQ

- ▶ Newsletter – AirWaves
- ▶ Annual Meetings with Permitted Facilities, Stage I Facilities, and NESHAP Demolition/Renovation Contractors
- ▶ Permit Training Workshop

# Industry Outreach & Recognition

## ◆ WNCRAQA

- ▶ Pat On The Back and Standing Ovation Awards
- ▶ Advisory Committee
- ▶ Quarterly Activities Published on line

# Ozone and PM Attainment Status

## Ozone: 2004 - 2006

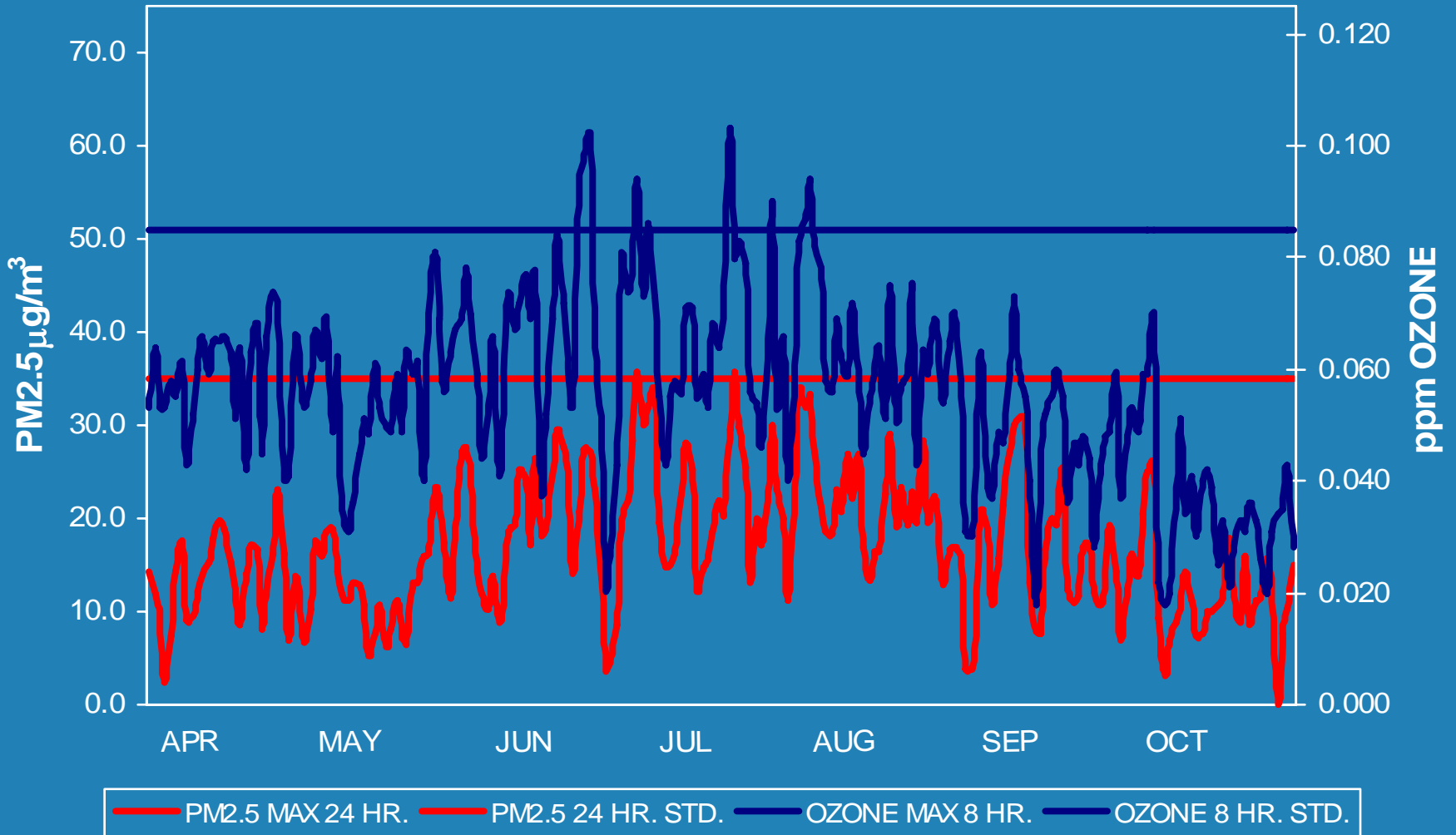
- WNCRAQA - Attainment  
EAC Processes Still Ongoing
- FCEAD – Nonattainment  
EAC Processes Still Ongoing
- MCAQ - Nonattainment

## PM<sub>2.5</sub> : 2004 - 2006

- WNCRAQA – Attainment
- FCEAD - Attainment
- MCAQ - Attainment



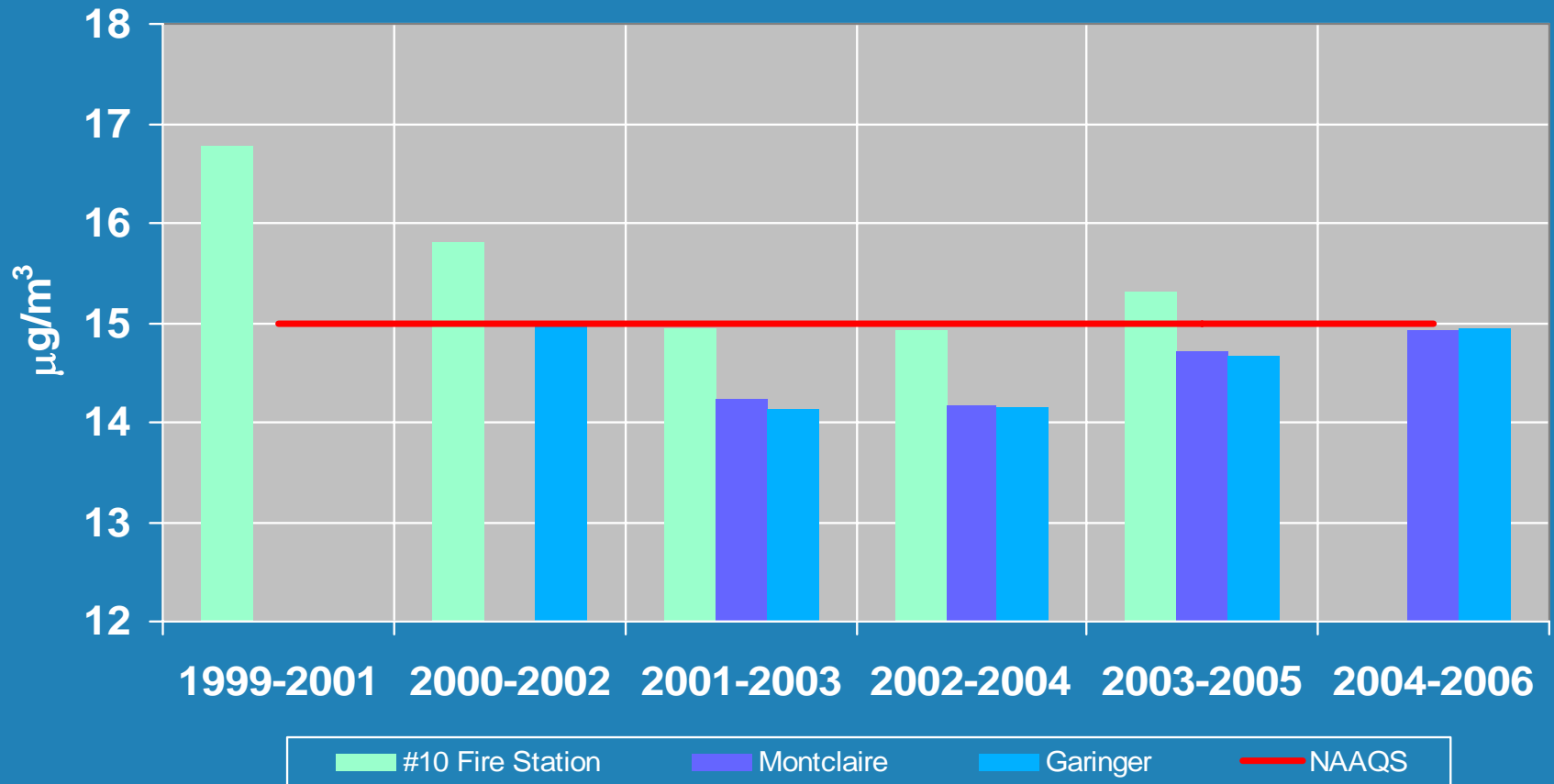
## 2006 Ozone Season Monitoring Data





# Mecklenburg County, North Carolina

PM<sub>2.5</sub> Federal Reference Method  
Three (3) Year Average Concentration  
For Comparison to NAAQS



Mecklenburg County, NC Air Quality GIS - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Mail Print Word Pad Notepad


Address <http://maps.co.mecklenburg.nc.us/website/airquality/> Go Links

## Air Quality Monitoring Sites GIS

Mecklenburg County, NC

**Countywide AQI Value**


Updated: 03/29/07, 1:00 p.m. EST



**Pollutant:** PM2.5  
**Value:** 31  
**Quality:** Good

- View Map
- AQI Summary
- Visibility Camera
- AQI Graphs
- Air Monitoring Sites
- Air Monitoring Data
- Historical Reports
- Air Quality Links
- Help

**Charlotte, NC**



Mecklenburg County LUESA - Air Quality 03/29/07 14:15

Camera Landmarks Map Good Conditions About This Data

Camera Hosted By [Sharon Towers](#)

**Meteorology**

Data Last Updated:  
3/29/2007 12:00

**Wind Speed**  
11.8 mph

**Wind Direction**  
63 Degrees

**Pressure**  
753 mm Hg

**Temperature**  
52.2 F

**Dew Point**  
41.9 F

**Precipitation**  
0.0 mm

**Welcome to  
Mecklenburg County, NC  
Air Quality  
Monitoring Sites GIS**

Click on a site on the map for  
more information.

**Mecklenburg County  
Air Quality Home Page**  
[Click Here](#)

**NC Division of Air Quality**  
[AQ Forecast](#) [AQ Info.](#)

**National Air Quality Info.**  
[Click Here](#)

This application is best  
viewed at 1024x768  
Screen Resolution  
with  
Internet Explorer 5.x or higher,  
Netscape 6.x or higher,  
and Mozilla 1.0 or higher.

The information provided by  
this program is prepared for the  
inventory of real property within  
Mecklenburg County and is

Start 3 Microsoft Offi... Microsoft PowerP... Search Results G:\Labuser\AQ\P... CAPCA Graphs.xls Mecklenburg C... 2:24 PM

**Google "Mecklenburg County AQI" or  
<http://maps.co.mecklenburg.nc.us/website/airquality/>**



- ◆ Pilot project is a three-month research initiative
- ◆ Funding of \$1million for key program elements is being provided by Mecklenburg County and Federal CMAQ funds
- ◆ Recruiting 50+ businesses to participate
- ◆ URS Corporation is the project consultant



Goal: To secure participation by 50 of the largest companies in the 8-county Metrolina Region



## Outcomes

- 52 Employer Partners
- 56,283 Employees Reached

## Finding

- Recruitment by business leaders and Top Down corporate support were critical to success



## Goal: To track worksite/employee participation

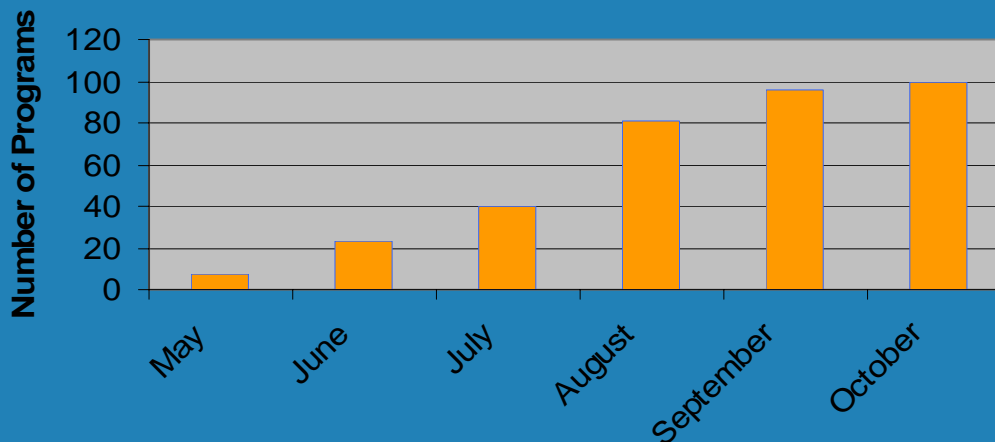
### Outcomes

- 2,821 Commuters reporting commute type (5%)
- 9000 New alternative trips reported

### Findings

- Employee reporting of commute behavior was low without meaningful financial incentives
- Participation increased steadily as the program evolved.

**Worksite Programs Implemented**

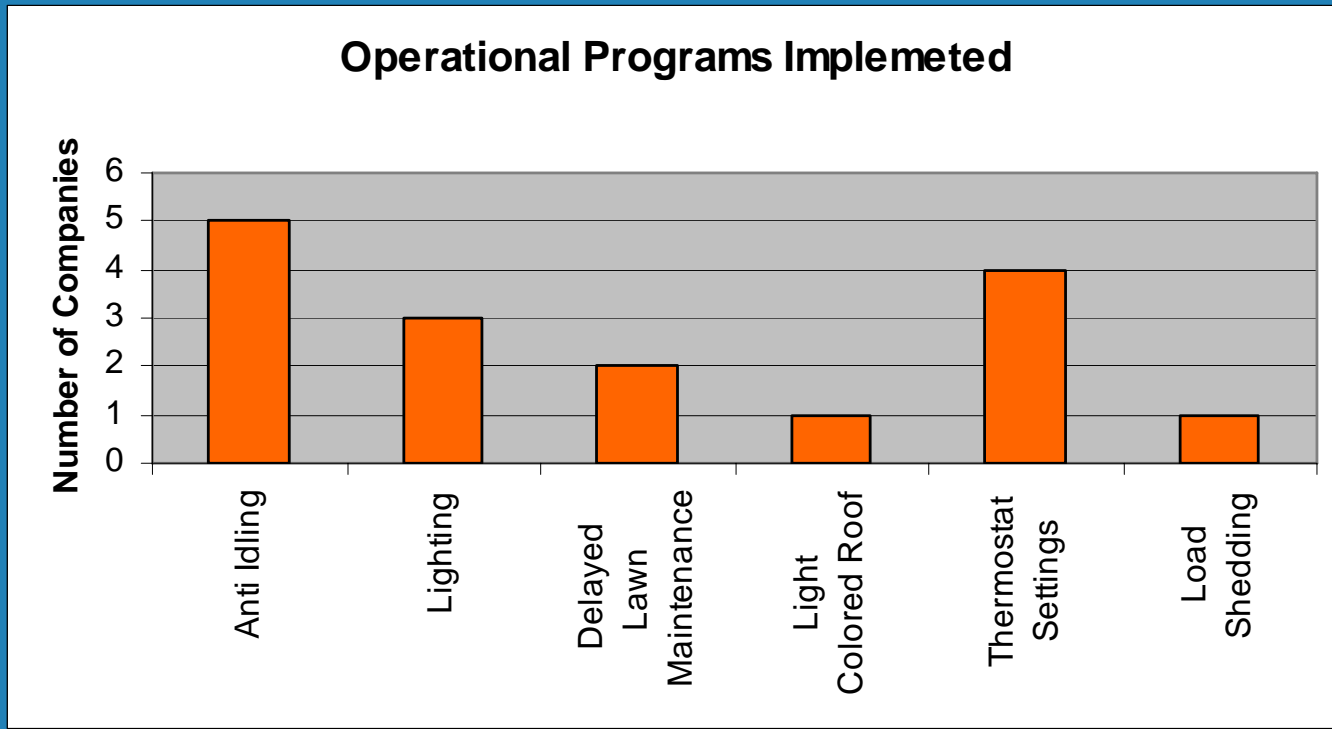




Goal: To motivate employers to change their business practices to lower emissions.

## Finding

- Operational programs made important contributions to the pollution reduced and provided a necessary option for many businesses



# According to the Washington State Department of Ecology's Ecology News "



replacing an old, leaky or missing gas cap will save as much as a gallon of gas every 15 days and keep about 165 pounds of toxic, cancer-causing chemicals per year from getting into the air." "A new gas cap pays for itself in less than three months."

# Mecklenburg County Gas Cap Replacement Project



- ◆ Funded by Congestion Mitigation and Air Quality (CMAQ) program
- ◆ Funding allowed for purchasing testing equipment, replacement gas caps and promotional items.

# MCAQ Gas Cap Replacement Employer Events

- ◆ Events held at 24 area businesses
- ◆ Checked 1,829 vehicles
- ◆ Replaced 86 vehicle gas caps
- ◆ Failure rate of 4.7%



# Public Gas Cap Testing Events

- ◆ Contacted over 350 inspection stations
- ◆ Voluntary testing during inspection
- ◆ 45 Stations will participate
- ◆ Stations will also conduct Gas Cap test only
- ◆ Scheduled events by MCAQ during Ozone Season



# NC Clean Smokestacks Act – Asheville First



# NC CSA – First Scrubber



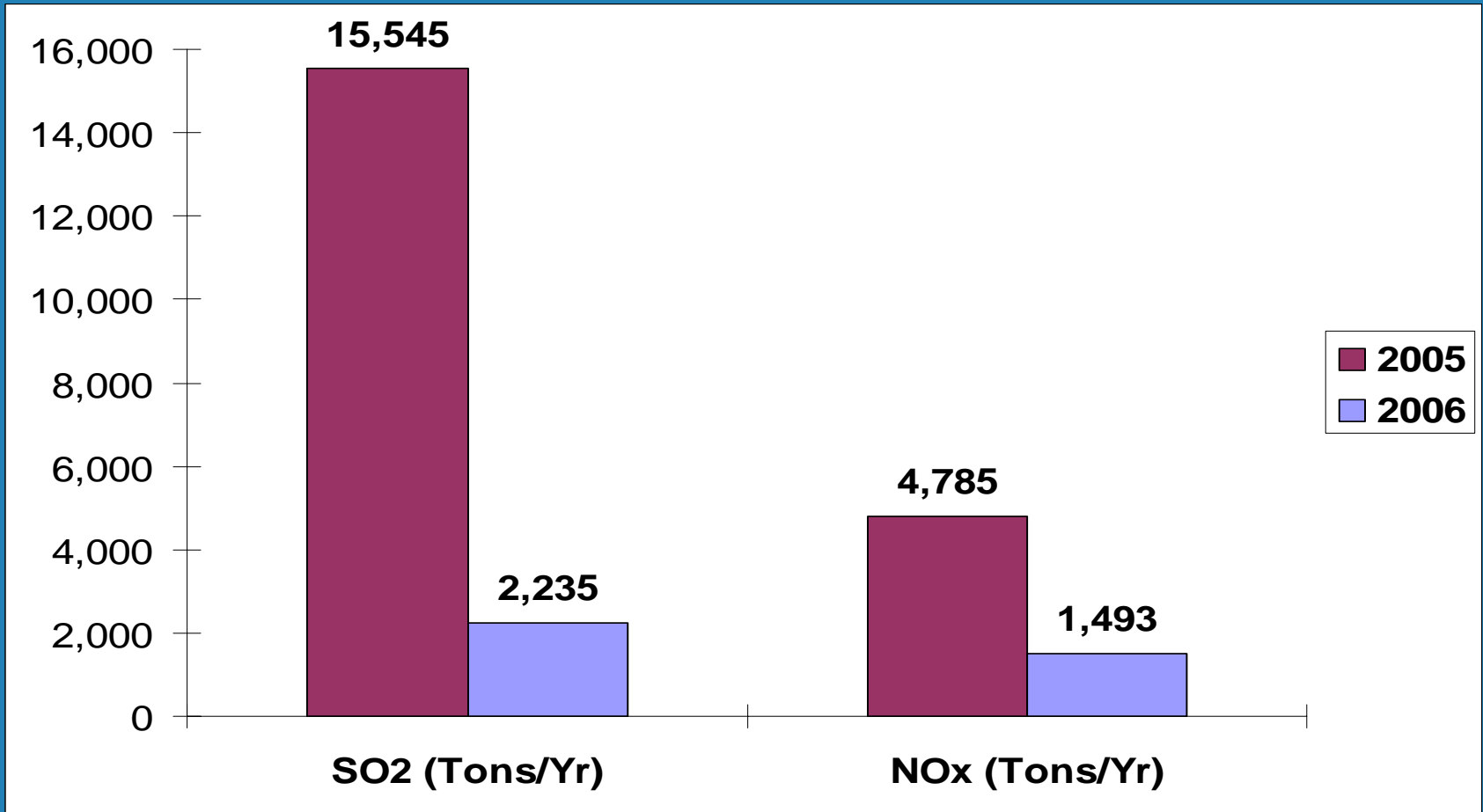


## Emissions Reductions at Progress Energy's Asheville Steam Plant

- ◆ The \$190 million project includes the installation of 2 flue gas desulfurization units and 2 selective catalytic reduction units.
- ◆ Unit 1 - Scrubber began operating in November 2005. SCR to begin operating in April 2007.
- ◆ Unit 2 – Scrubber and SCR began operating in May and June of 2006.



# Emissions Reductions at Progress Energy's Asheville Steam Plant





# Reduction in Title V Revenues

- ◆ Due to a decrease in projected annual Title V funds in 2007 and beyond, the Agency has downsized by leaving 2 open positions unfilled.
- ◆ Permit fees for all source categories will be raised in 2007.
- ◆ No reductions in frequency of inspections or other services are expected to occur.



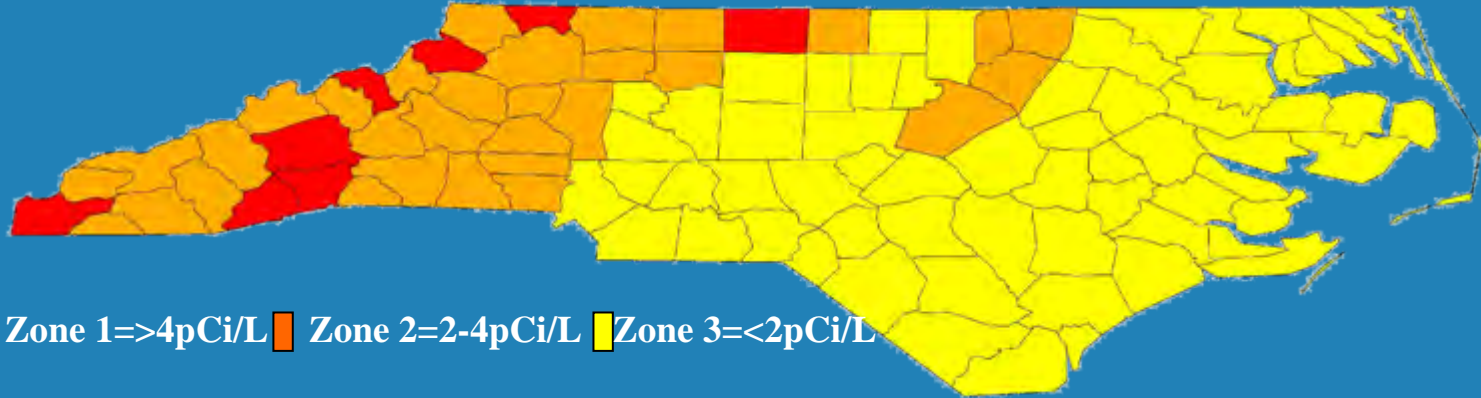
# Diesel Retrofits



- ◆ The WNCRAQA received a 2005 Children's Environmental Health Excellence Award from EPA's Office of Children's Health Protection for outstanding commitment to protecting children from environmental health risks for reducing diesel emissions from school buses in Buncombe, Haywood, Madison, and Transylvania counties. (435 buses – 2003-2004)
- ◆ In 2005, Buncombe Co. and WNCRAQA provided funding to retrofit the remaining 29 buses in Buncombe County's fleet that were not retrofitted in 2003 and 2004 (466 total buses).
- ◆ More retrofits in 2006: 16 Asheville Transit Authority Buses and 2 large Buncombe County Landfill Tractors
  - ▶ Courtesy of The Diesel Technology Forum and Caterpillar, Inc.

# Radon Grant

## Average Radon Levels by County



- ◆ In 2006, the WNCRAQA obtained a grant from NC DENR and gave away over 800 radon test kits to citizens of Buncombe County.
- ◆ Radon is the second leading cause of lung cancer in the U.S. and Buncombe County has some of the highest radon levels in NC.



## ENERGY STAR – Million Monitor Drive



- ◆ Everyone can save energy and money by enabling power-management on their computer monitors.
- ◆ 3,296 computers from 15 different organizations in Buncombe and Madison Counties are powering down as part of the Agency's local Million Monitor Drive campaign.
- ◆ The energy savings are equivalent to lighting over 1,000 homes a year.
- ◆ Annual emissions reductions:
  - ▶ > 9 tons of criteria air pollutants
  - ▶ > 1,000 tons of carbon dioxide

# FCEAD as lead air agency in Conformity

- ◆ FCEAD was the lead agency for emission factor development for PM2.5 during most recent Transportation Conformity analysis for the Triad
- ◆ The MPOs have a local contact for air quality analysis
- ◆ Provides some relief to DAQ staff
- ◆ Helps FCEAD stay involved in conformity and SIP process



# CMAQ and Other Air Resources

- ◆ Local MPOs and RPOs continue their contracts with EAD to provide air quality analysis for various transportation projects
- ◆ Assures accurate and unbiased emission reduction estimates
- ◆ Provides uniform, consistent calculations across region
- ◆ Added Categorical Exclusion Analysis for new / modified transportation projects



# Triad Air Awareness



- **Outreach/Education**

- Air quality and transportation relationship
- Present air quality issues with viable solutions
- Work on regional issues with regional staff

- ◆ Program funding established through Piedmont Authority for Regional Transportation (PART)
- ◆ Also receive some addition funding from DAQ
- ◆ Air Awareness Coordinator hired as Forsyth County employee in 2005

# MESA Air



- ◆ Multi-Ethnic Study of Atherosclerosis – Air
- ◆ Research study conducted through University of Washington
- ◆ Air – portion funded by EPA
- ◆ Study will analyze relationship between air pollution and cardiovascular disease
- ◆ Winston-Salem chosen as one of the cities to investigate long-term health effects of breathing polluted air
- ◆ EAD continues to work with local and regional organizers and helps maintain the monitoring equipment as well as answer technical questions from monitoring staff



# Forecasting



## ◆ Air Quality

- ▶ 2007 will be EAD's 11<sup>th</sup> year in AQI forecasting
- ▶ Current forecasting accuracy about 80%
- ▶ Forecasts issued through email, website, phone recording, podcast, and local media
- ▶ Enhancements include video forecast and regular updates each morning

## ◆ Pollen Forecasting

- ▶ 2007 will be EAD's 11<sup>th</sup> year in pollen forecasting
- ▶ Program featured on local evening TV for content and advancement
- ▶ Daily counts and forecasts issued through email, website, fax, and local media

# TRIAD HAZE CAM

Real Time Air Quality and Weather Information

- Triad Home
- Real Time Movie
- Sponsoring Agencies
- Causes of Poor Visibility
- Behind The Scenes
- Gallery
- Triad AQ Forecast
- Air Quality Links
- Contact

Pilot Mountain, NC

Image Updated Every 30 Minutes



Meteorology  
Data last Updated  
03/03/05 08:00 EST

Temperature	☀
30.2 °F	
Dew Point	💧
15.6 °F	
Pressure	📏
740.4 mm Hg	
Wind Speed	🌬
1.2 mph	
Wind Direc.	🌀
251 °	
Vis. Range	📏
37 mi.	



Cam 1



Landmarks



Cam2



Landmarks



Map it

About These Data

Ozone AQI - Levels of Health Concern

Updated 03/03/05 08:00 EST

Good

20

Detailed Data

Fine Particulate AQI - Levels of Health Concern

Updated 03/03/05 08:00 EST

Good

23

Detailed Data

The Triad Haze Cam site won an Achievement Award from the National Association of Counties (NACo) in 2005 for innovate technology. The combination of air quality data and updated pictures helped others “see air pollution”.

<http://www.SeHazeCam.net>

# For More Information...

## ◆ FCEAD

- ▶ Robert Fulp: (336) 703-2440
- ▶ <http://www.co.forsyth.nc.us/EnvAffairs/>

## ◆ MCAQ

- ▶ Don R. Willard: (704) 336-5500
- ▶ <http://airquality.charmeck.org/>
- ▶ [firstname.lastname@mecklenburgcountync.gov](mailto:firstname.lastname@mecklenburgcountync.gov)

## ◆ WNCRAQA

- ▶ David Brigman: (828) 250-6777
- ▶ <http://www.wncairquality.org/>