



# STUDY TO DETERMINE AND IMPLEMENT STRATEGIES TO MINIMIZE OZONE NONATTAINMENT IMPLICATIONS BY CONTROLLING EMISSIONS FROM MOBILE SOURCES

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Sean Bragan  
PPM Consultants, Inc.



# Report Documentation Page

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# DISCUSSION POINTS

Purpose and Need

Regulatory Background

Demonstration Installation

Probable Nonattainment Designations

Regulatory Drivers

DoD and Other Drivers

Study Overview/Deliverables

No Action Implications

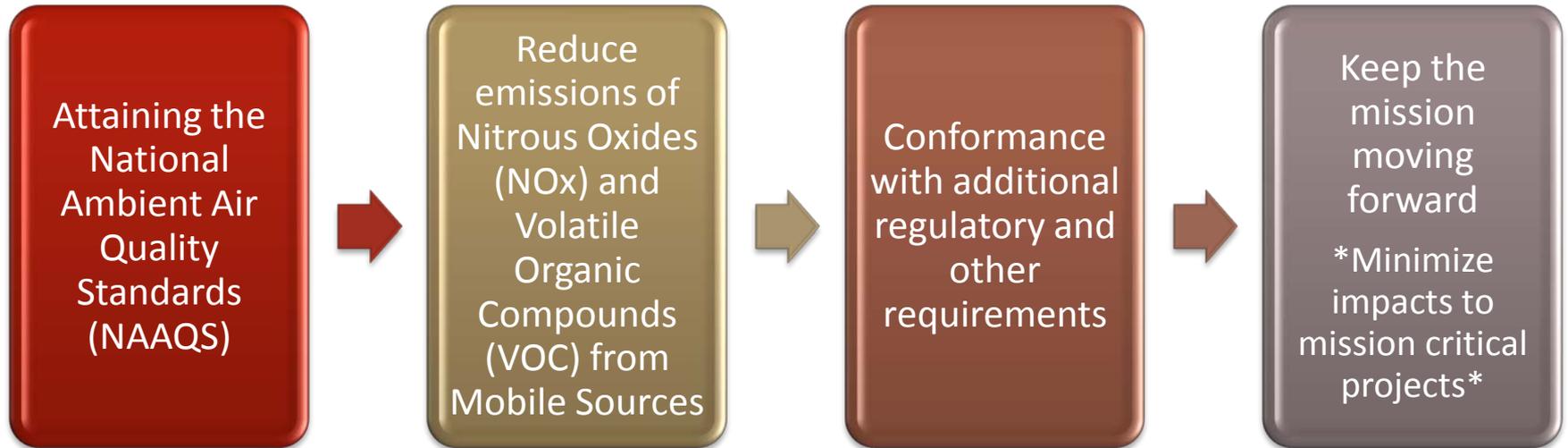
So What?

The Bigger Picture





# PURPOSE AND NEED





# REGULATORY BACKGROUND

## National Ambient Air Quality Standards (NAAQS)

Standards set by EPA for 6 common (criteria) air pollutants as required by the Clean Air Act (CAA)

Ozone is primary criteria pollutant of concern for most areas facing nonattainment designation

Ozone is formed by the combination of NO<sub>x</sub> and VOCs in the presence of sunlight

1997: Primary ozone standard set at 0.08 parts per million (ppm)

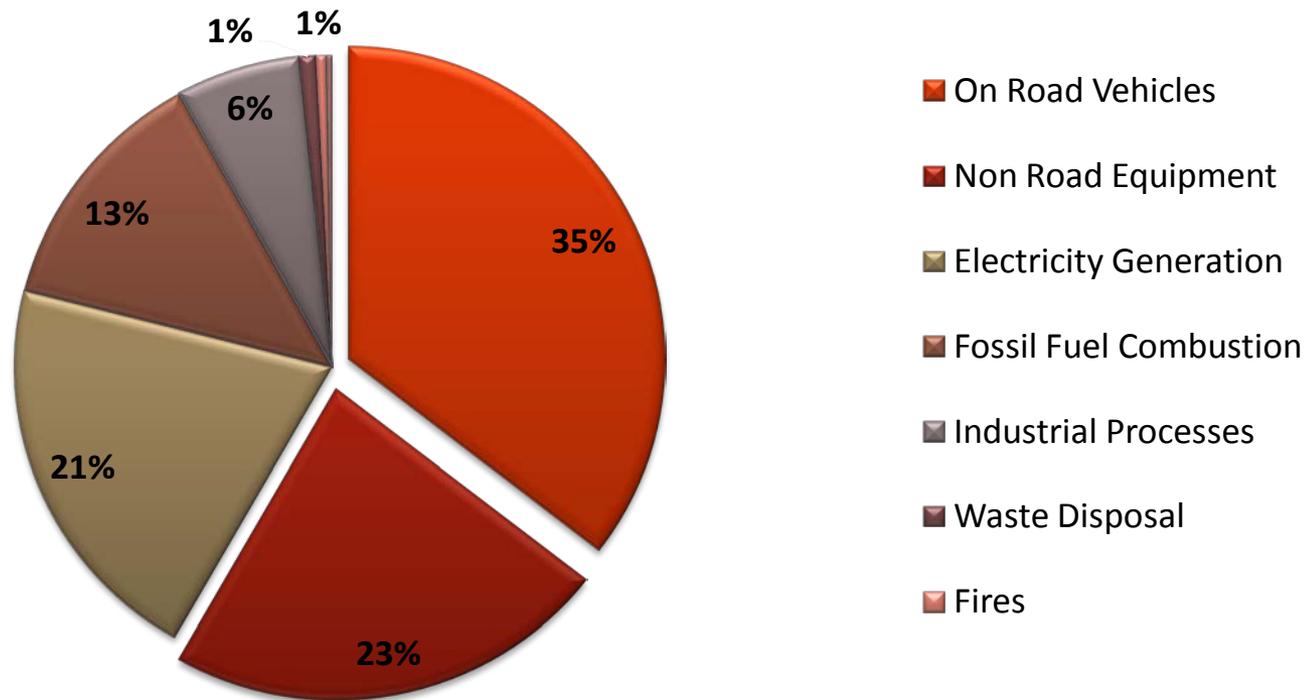
2008: EPA revised primary ozone standard to 0.075 ppm (Stayed)



# REGULATORY BACKGROUND



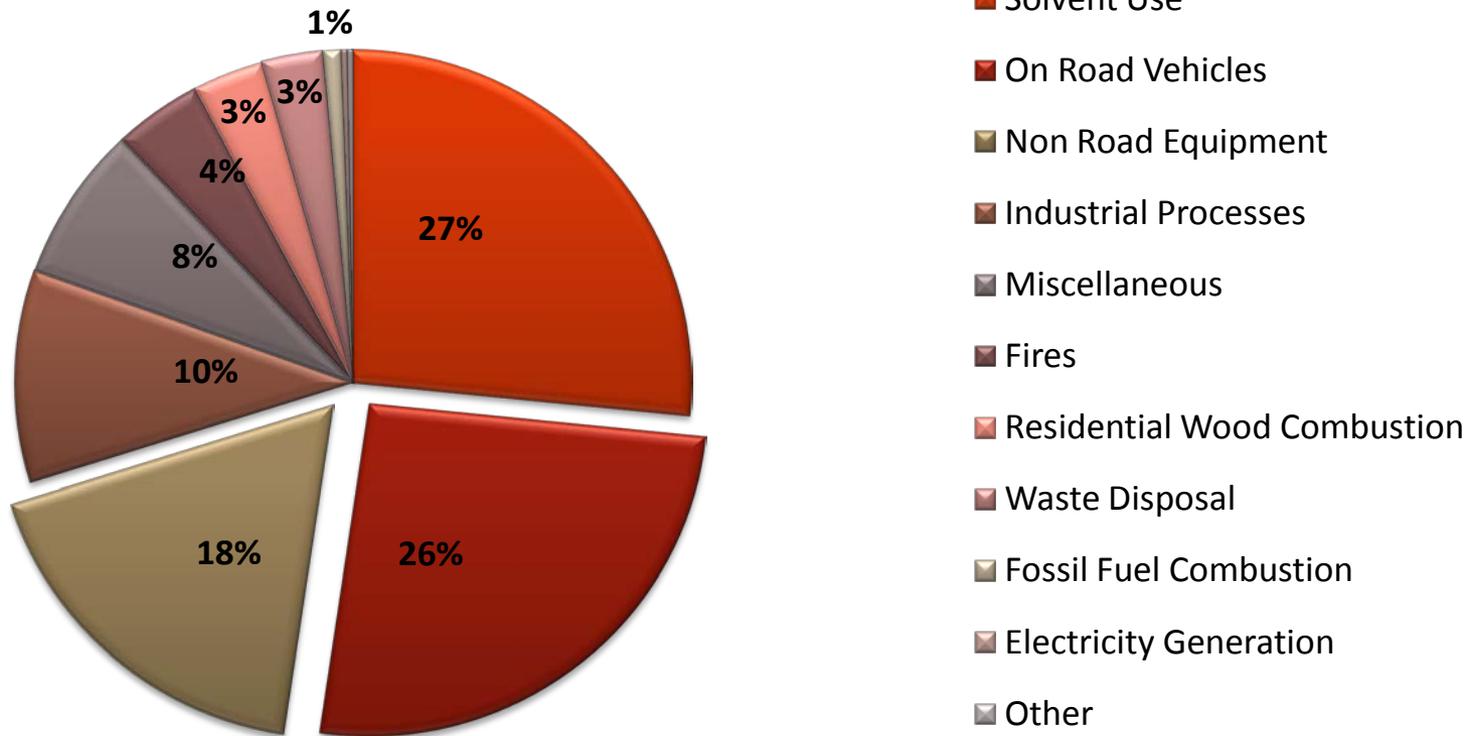
## National NOx Emissions By Source Sector 2005



# REGULATORY BACKGROUND



National Volatile Organic Compounds Emissions by Source Sector  
2005





# DEMONSTRATION INSTALLATION - FORT BENNING

## Project Examples

Residential  
Communities  
Initiative

Improvements to  
Training Ranges and  
other Training Areas

Digital Multi-  
Purpose Range  
Complex

Consolidated  
Maintenance  
Facility

Range Control and  
Maintenance  
Complex

Training Barracks  
Complex

Classrooms and  
Dual Battalion  
Dining Facilities

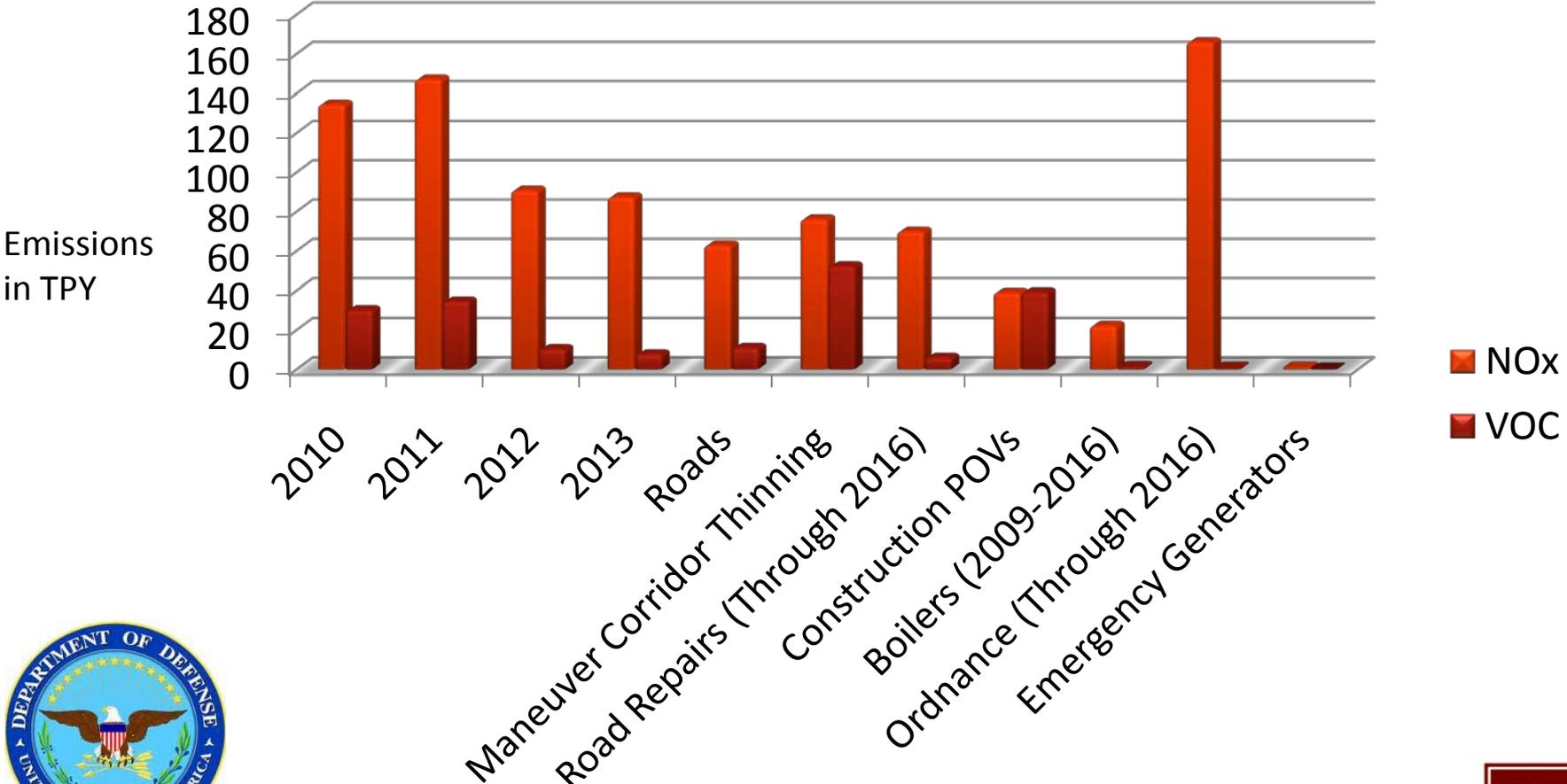
Chapel





# DEMONSTRATION INSTALLATION

**Fort Benning Construction Related Emissions Increases**



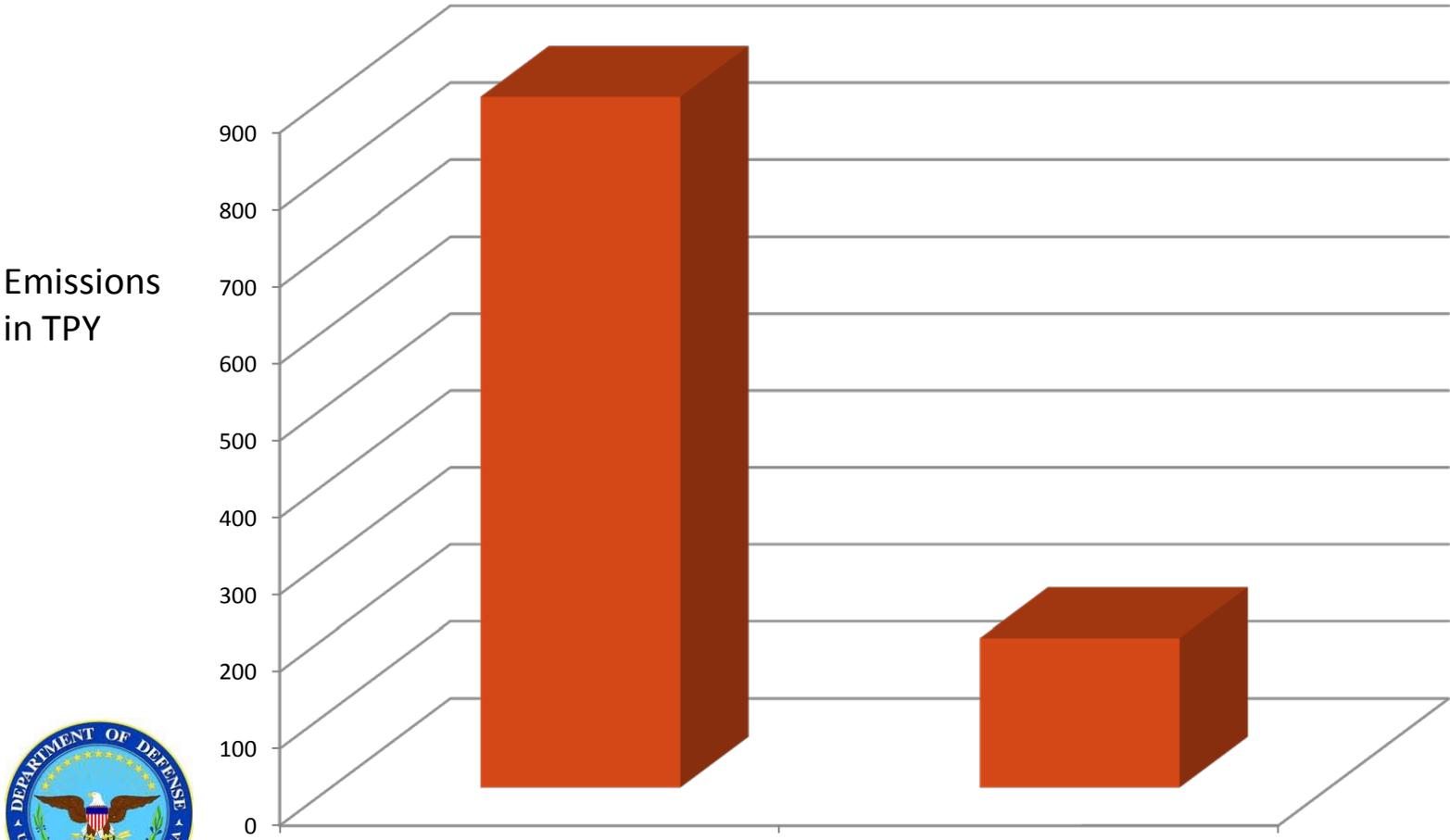
\*2007 USACE EIS Data





# DEMONSTRATION INSTALLATION

### Fort Benning Construction Related Emissions Increases



Emissions  
in TPY



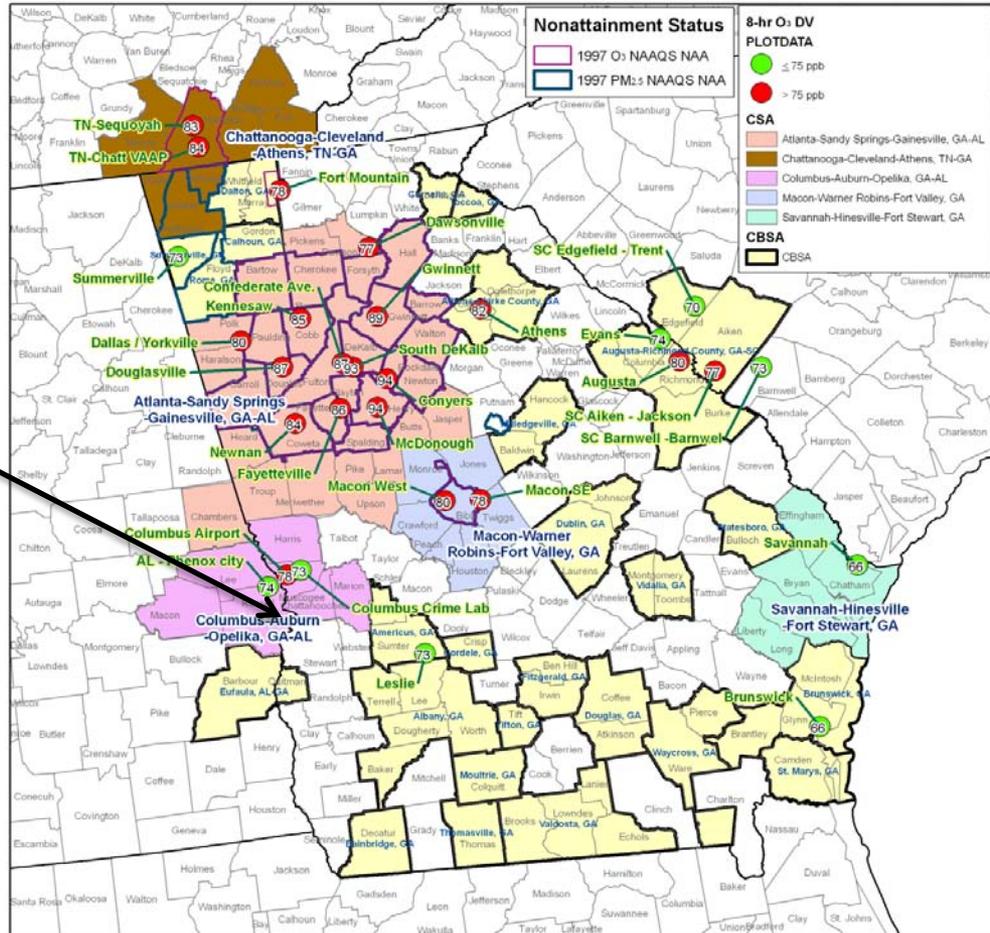
\*2007 USACE EIS Data





# PROBABLE NONATTAINMENT DESIGNATIONS - GEORGIA

Fort Benning



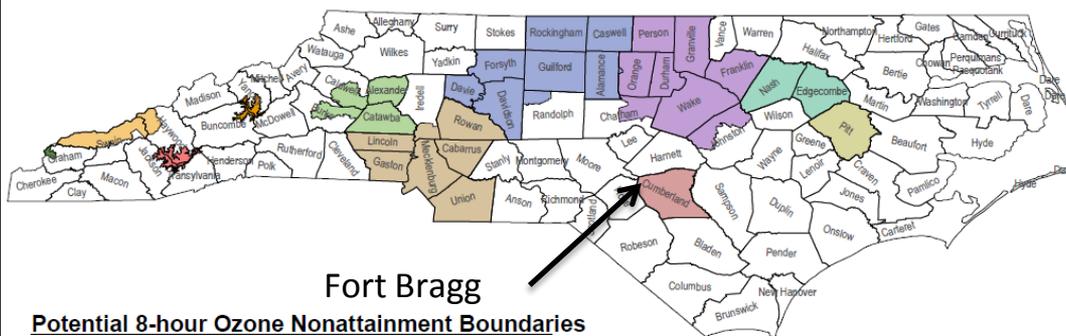
\*Source: Georgia EPD





# PROBABLE NONATTAINMENT DESIGNATIONS - NORTH CAROLINA

## North Carolina's Recommendation On 8-Hour Ozone Nonattainment Area Boundaries



### Potential 8-hour Ozone Nonattainment Boundaries

- Snow Bird Mountains (4000 feet & greater) - Joyce Kilmer-Slickrock Wilderness, Nonattainment
- Great Smoky Mountains National Park, Nonattainment
- Great Balsam Mountains (4000 feet & greater) - Shining Rock Wilderness Area, Nonattainment
- Black Mountains (4000 feet & greater), Nonattainment
- Hickory-Lenoir-Morganton, Nonattainment
- Charlotte-Gastonia-Salisbury, Nonattainment
- Greensboro-Winston-Salem-High Point, Nonattainment
- Raleigh-Durham-Cary, Nonattainment
- Fayetteville, Nonattainment
- Rocky Mount, Nonattainment
- Greenville, Unclassifiable

Map Drawn To Approximate Scale  
North Is Represented As Up  
Map Valid: 03-12-2009

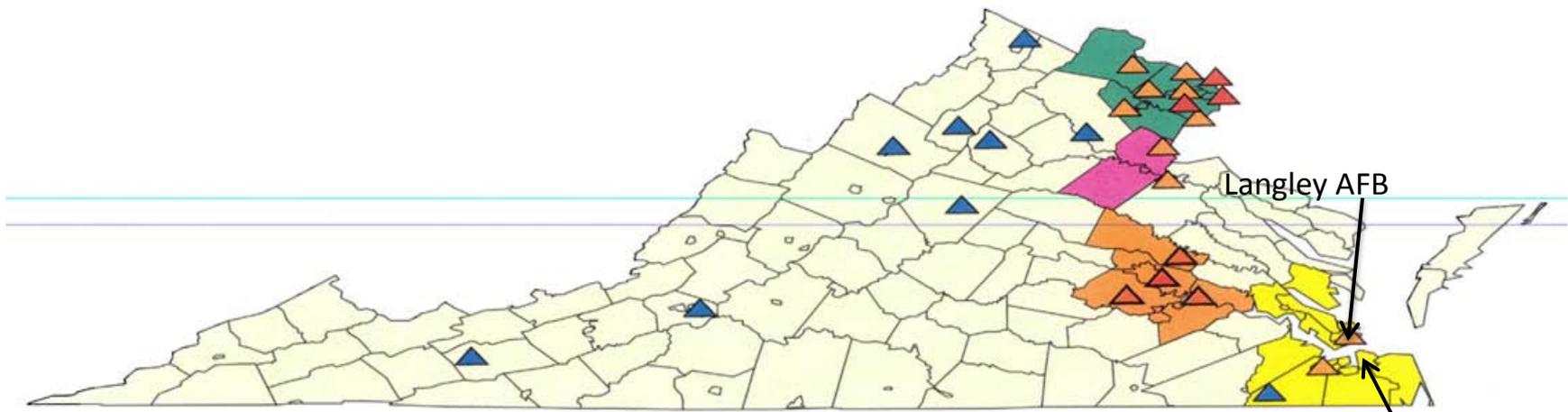


\*Source: North Carolina DENR





# PROBABLE NONATTAINMENT DESIGNATIONS - VIRGINIA



### Monitor Station Design Values

- ▲ > 84 ppb
- ▲ 76 – 84 ppb
- ▲ < 76 ppb

- Northern VA Nonattainment Area
- Fredericksburg Nonattainment Area
- Richmond Nonattainment Area
- Hampton Roads Nonattainment Area

Langley AFB  
 Naval Station Norfolk

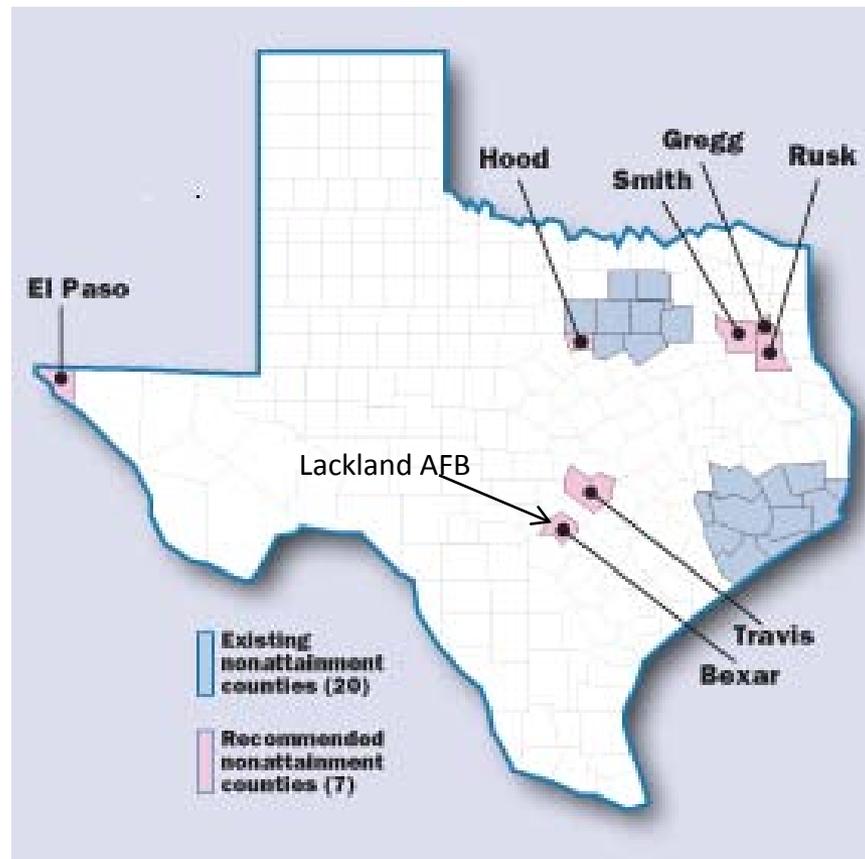


\*Source: Virginia DEQ





# PROBABLE NONATTAINMENT DESIGNATIONS - TEXAS



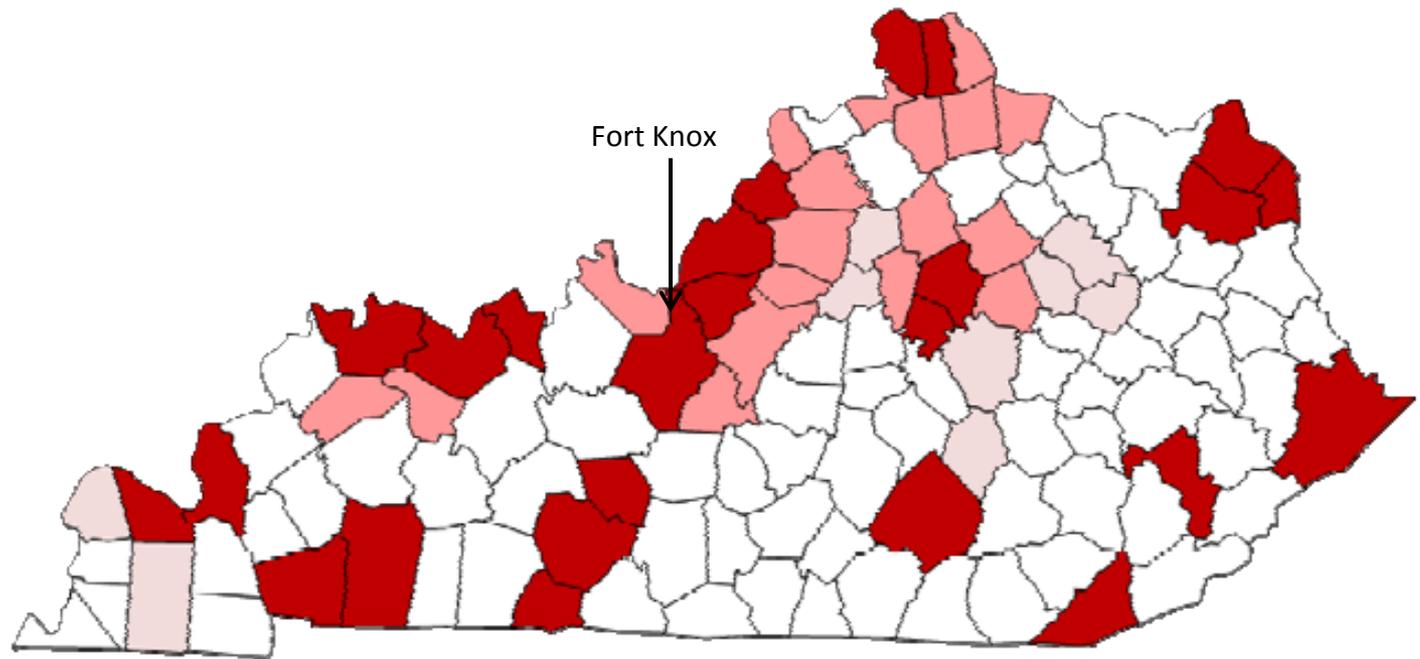
\*Source: Texas CEQ





# PROBABLE NONATTAINMENT DESIGNATIONS - KENTUCKY

	Violating monitors
	In MSA with violating monitors
	In CSA or Micropolitan SA with violating monitors



\*Source: Kentucky DEP





# REGULATORY DRIVERS

## Implications of Nonattainment

Has the potential/ability to halt construction installation wide

Section 176(c) of the CAA prohibits Federal entities from taking actions in nonattainment areas which do not conform to the SIP

- Federal agencies are required to determine, prior to taking action, that such action, when taken, will conform to the SIP

Increased regulatory requirements for DoD Components

Increased regulatory based project delays





# REGULATORY DRIVERS

## State Implementation Plan (SIP)

Developed pursuant to CAA Section 110

Regulatory requirements identified in 40 CFR part 51

The State's plan identifying how that State will attain/maintain the NAAQS

Federally-enforceable

Contains criteria and procedures for assessing the conformity of Federal actions consistent with 40 CFR parts 51, subpart W, and 93, subpart B





# REGULATORY DRIVERS

## General Conformity

Required by CAA Section 176(c)

Applies to all Federal actions that take place in nonattainment or maintenance areas

- Does not include Federal highway and transit projects developed, funded or approved under U.S.C. Title 23 or 49; or FHWA/FTA projects as defined in 40 CFR 93.101

Requires all Federal actions be consistent with the State's air quality goals

Allows for State to provide emissions budgets within the SIP for planned projects





# REGULATORY DRIVERS

# Transportation Conformity

Required by CAA Section 176(c)

Applies to projects funded under U.S.C. Title 23 or 49 and those which require (to any degree) FHWA or FTA approval (40 CFR 93.101)

Submitted by the State to the EPA pursuant to 40 CFR parts 51, subpart T, and 93, subpart A

SIP revision contains criteria and procedures to assess the regulatory conformity of transportation plans, programs, and projects

- Ensures that federally supported transportation actions are consistent with that State's SIP

Actions not consistent with the SIP are not eligible to receive Federal funding



# DOD AND OTHER DRIVERS (PARTIAL LIST)



National Environmental Policy Act

Federal Agency Strategic Sustainability Performance Plans

Department of Defense, Base Redevelopment and Realignment Manual

Executive Order 12088

Executive Order 13327

Executive Order 13423

Executive Order 13514

DoD/DOE MOU

Air Force Instruction (AFI) 32-7040, Air Quality Compliance and Resource Management

Army Regulation (AR) 200-1, Environmental Protection and Enhancement

- BRAC05, Realignment & Transition Actions, and Other Growth





# STUDY DELIVERABLES

Technical  
Report

Formal  
Action Plan





# TECHNICAL REPORT

## General Overview

A discussion of the contribution of each mobile source category and the significance of each categories emissions

An analysis and discussion of ambient air quality data and its relationship with the current and proposed ambient air quality standards

Detailed analysis of the impacts of installation growth resulting from BRAC 2005 and Transformation Actions and other project growth





# TECHNICAL REPORT





# FORMAL ACTION PLAN

## General Overview

An overview of the data acquisition and analysis

Analysis of potential impacts to ambient air quality from planned actions

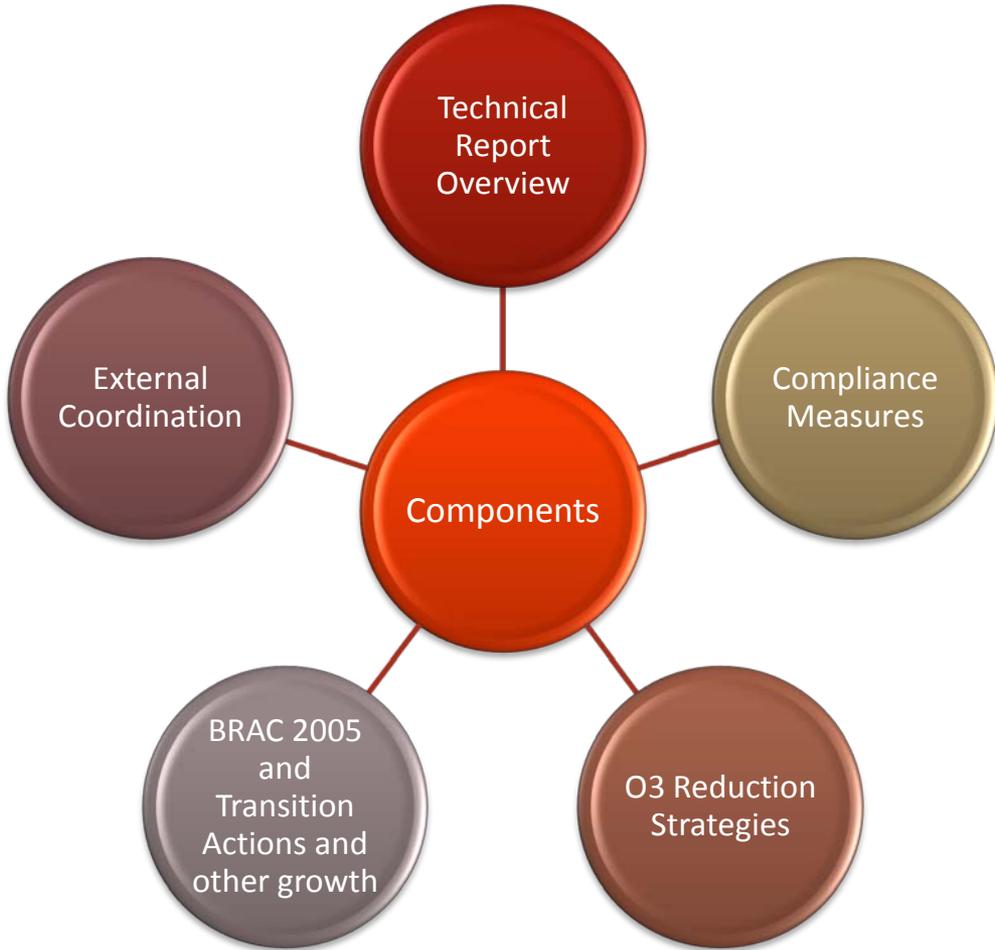
Detailed discussions and strategies related to the implementation of available and viable options for reducing NOx and VOC emissions

Collaboration with surrounding cities and organizations





# FORMAL ACTION PLAN





# NO ACTION IMPLICATIONS



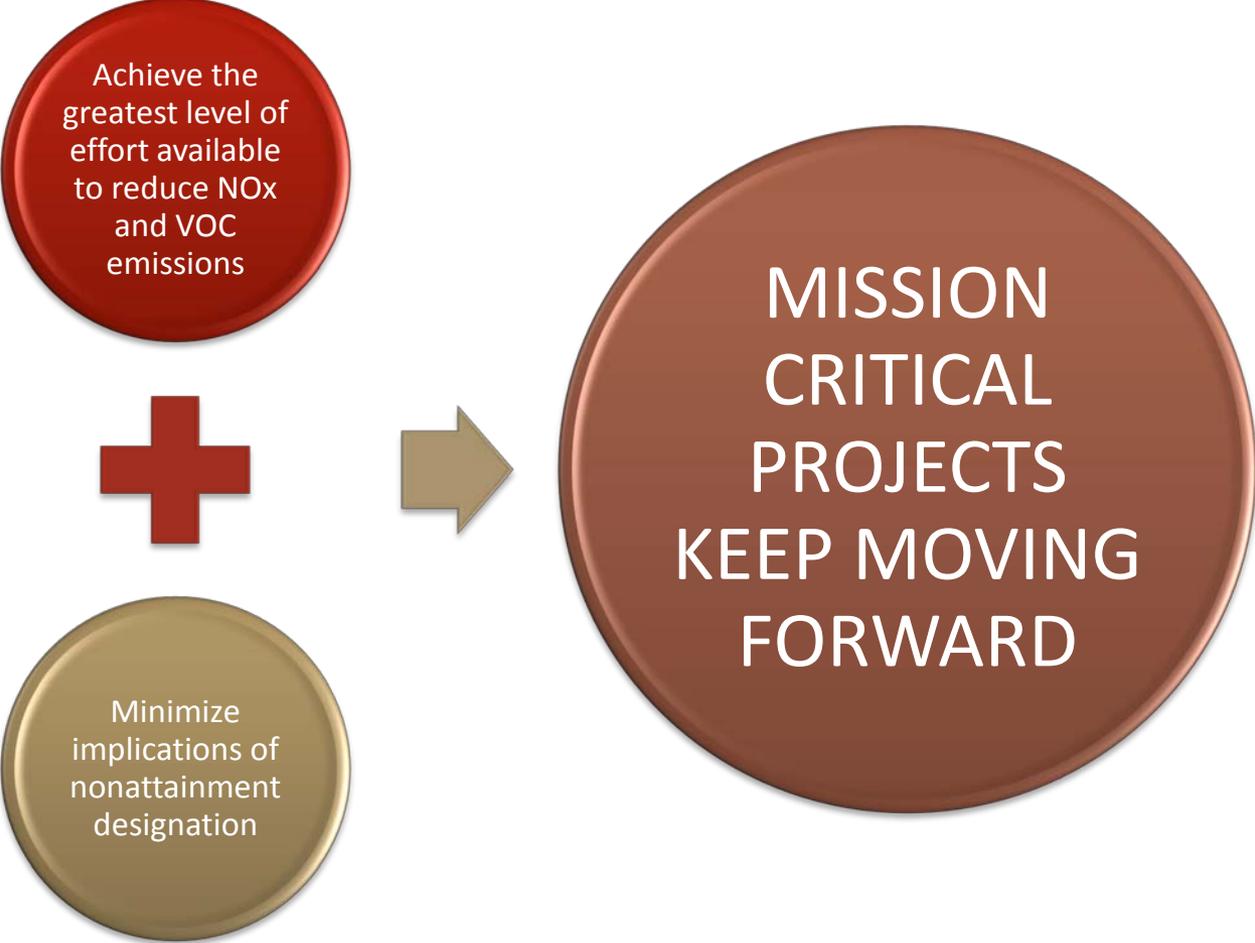


# SO WHAT?





# THE BIGGER PICTURE





**Sean Bragan**

*Federal Coordinator*

PPM Consultants, Inc.

Phone: 803-396-0801

Mobile: 803-318-1694

E-mail: [sean.bragan@ppmco.com](mailto:sean.bragan@ppmco.com)

Website: [www.ppmco.com](http://www.ppmco.com)

