

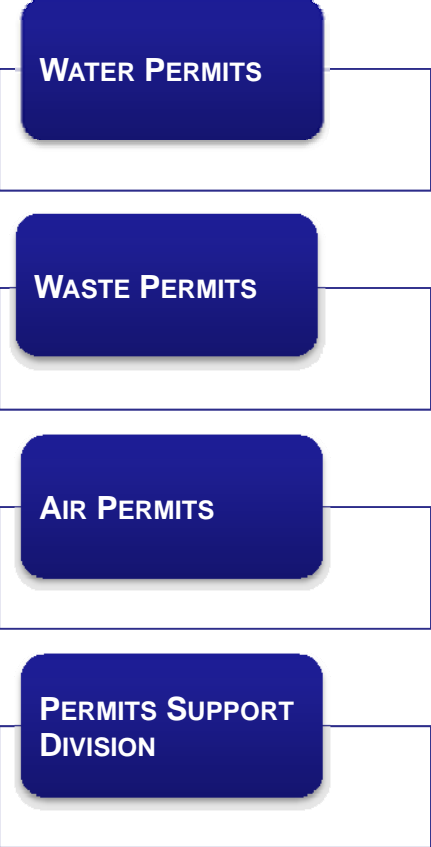


# Ozone 101 for AWMA Young Professionals

**Presented by:**  
**Vivian H. Aucoin, ES Supervisor**  
**Air Quality Assessment Division**  
**La. Dept. of Environmental Quality**

# OFFICE ORGANIZATIONAL CHART

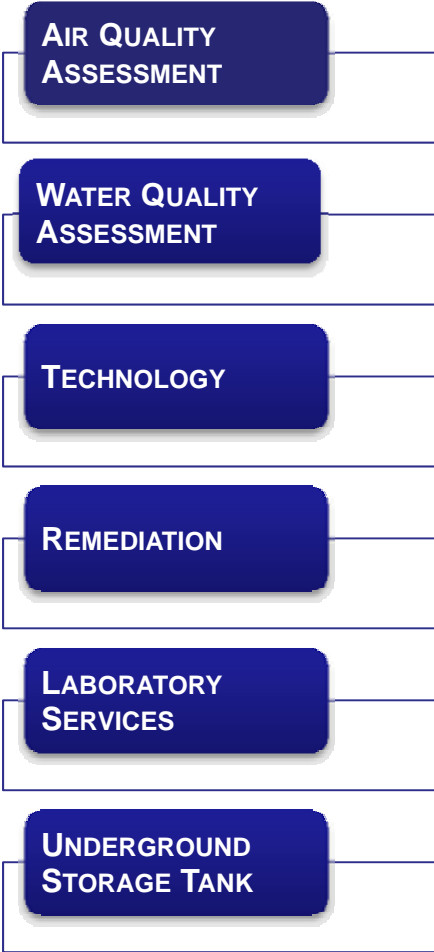
## ENVIRONMENTAL SERVICES



## ENVIRONMENTAL COMPLIANCE



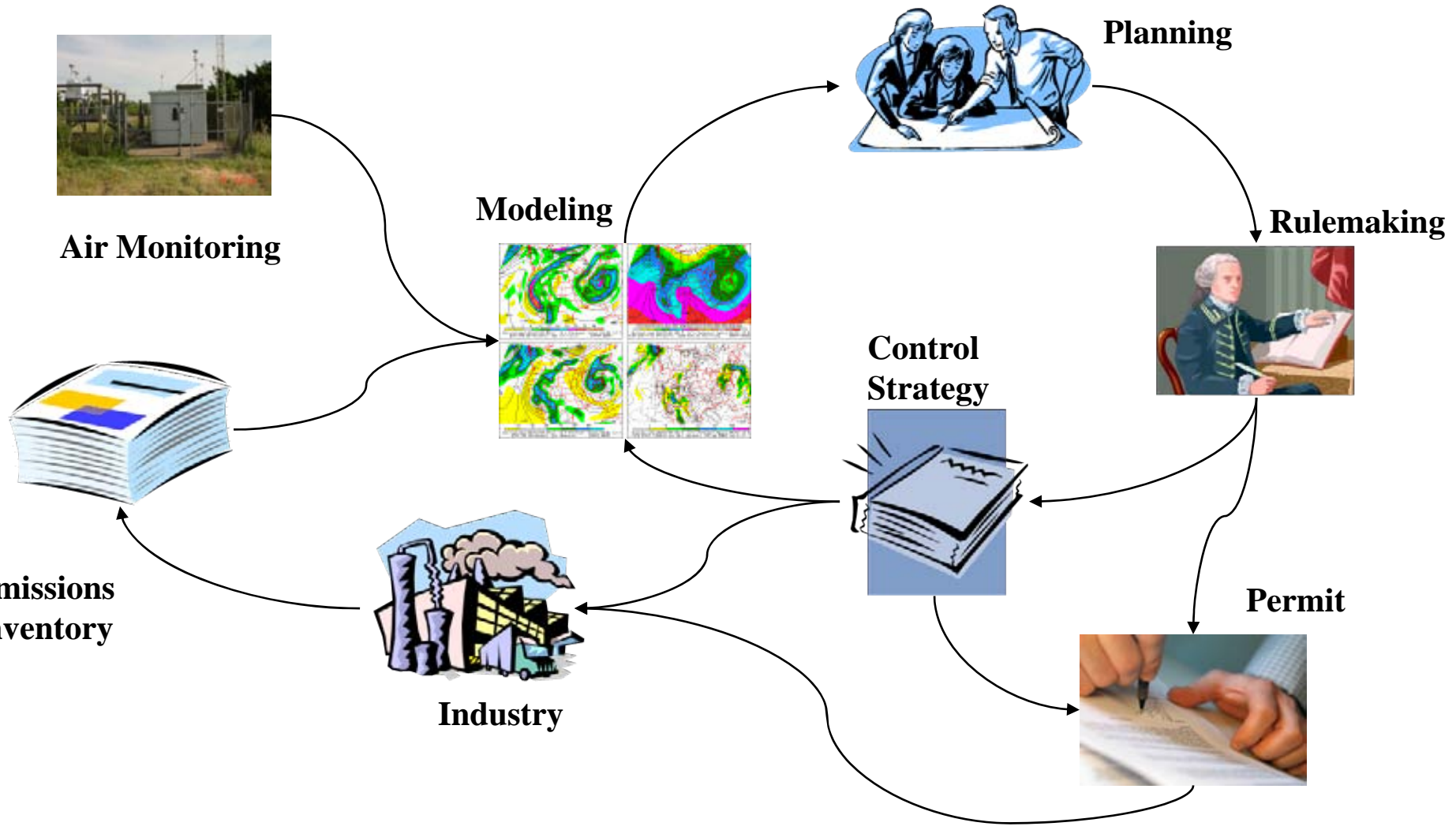
## ENVIRONMENTAL ASSESSMENT



## MANAGEMENT & FINANCE



# Air Quality Management Process





# Introduction



- Why are we so concerned about ozone?
  - What is ozone and how does it form?
  - The Clean Air Act: How does it protect your health?
- What is the new ozone standard and how does it affect Louisiana?
  - What are monitors and what do they tell us?
  - What are the impacts of the new standard? Timeline?
- What are the next steps?
  - Control strategies and solutions both State & Federal
  - Voluntary Measures



# What is Ozone?



- Ozone is commonly referred to as smog.
- It is not emitted, but forms in the atmosphere under certain conditions
- Volatile Organic Compounds (VOC) + Nitrogen Oxides (NO<sub>x</sub>) + Sunlight = Ozone
- In other words, emissions from industry + cars + human activities + nature + sunshine = ozone

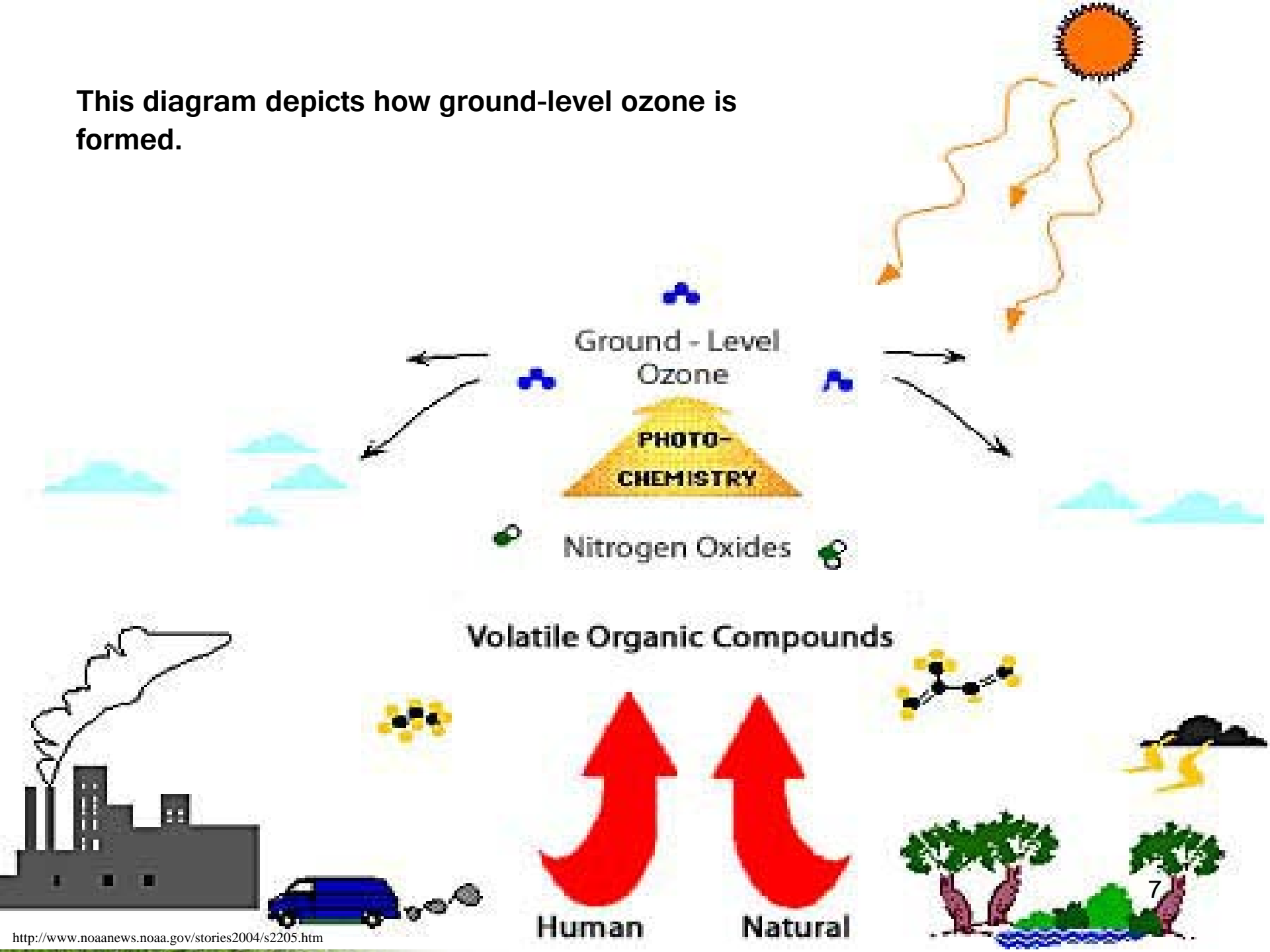


# Ozone: Good up high, Bad near by



In the stratosphere, ozone protects us from the sun's harmful ultraviolet rays, but turns to smog in the troposphere.

This diagram depicts how ground-level ozone is formed.





# THE CLEAN AIR ACT AND HEALTH

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# The Clean Air Act Amendments of 1990

- The main goal of the Clean Air Act is to protect human health and welfare.
- Requires EPA to set National Ambient Air Quality Standards for 6 Criteria Pollutants;
- The 6 pollutants are: Carbon Monoxide, Lead, Nitrogen Dioxide, Ozone, Particulate Matter and Sulfur Dioxide;
- As of December 31, 2008, Louisiana is monitoring attainment of all NAAQS;



# Ozone and Health





# The New Ozone Standard



How will it affect Louisiana?





# 8-Hour Ozone Standard: The Revision for 2008

On March 12, 2008, EPA announced a new primary 8-hour ozone standard of 0.075 parts per million (ppm). The secondary standard was set identical to the primary.

26 parishes may potentially be designated nonattainment based on monitor data showing design values\* above 0.075 ppm.

\*Design Value – the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentration measured at each monitor within an area.



# **Reconsideration of 2008 Ozone NAAQS**

- **On September 16, 2009 the Obama Administration announced that it would reconsider the 2008 Ozone NAAQS.**
- **EPA wants to ensure that they are clearly grounded in science, protect public health with an adequate safety margin and are sufficient to protect the environment.**



# The Reconsideration Timeline

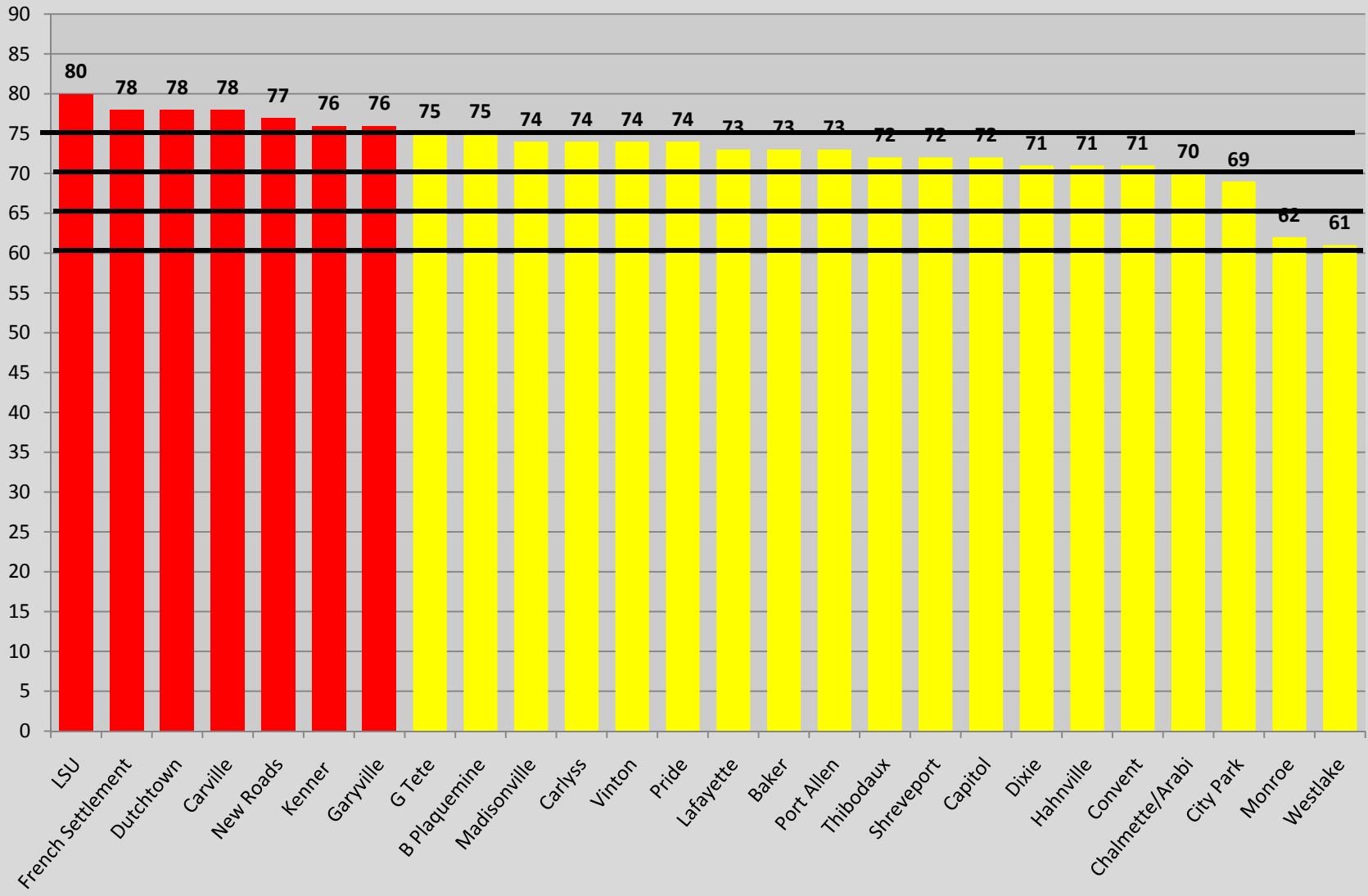
□ The anticipated implementation schedule for this new standard is as follows:

- |                               |  |
|-------------------------------|--|
| □ Proposed Reconsidered NAAQS | December 2009                                |
| □ EPA Final Reconsideration   | August 2010                                  |
| □ EPA Final Designations      | August 2011                                  |
| □ SIPs Due                    | 2013   |
| □ Attainment Dates            | 2013 – 2030 (depends on severity of problem) |

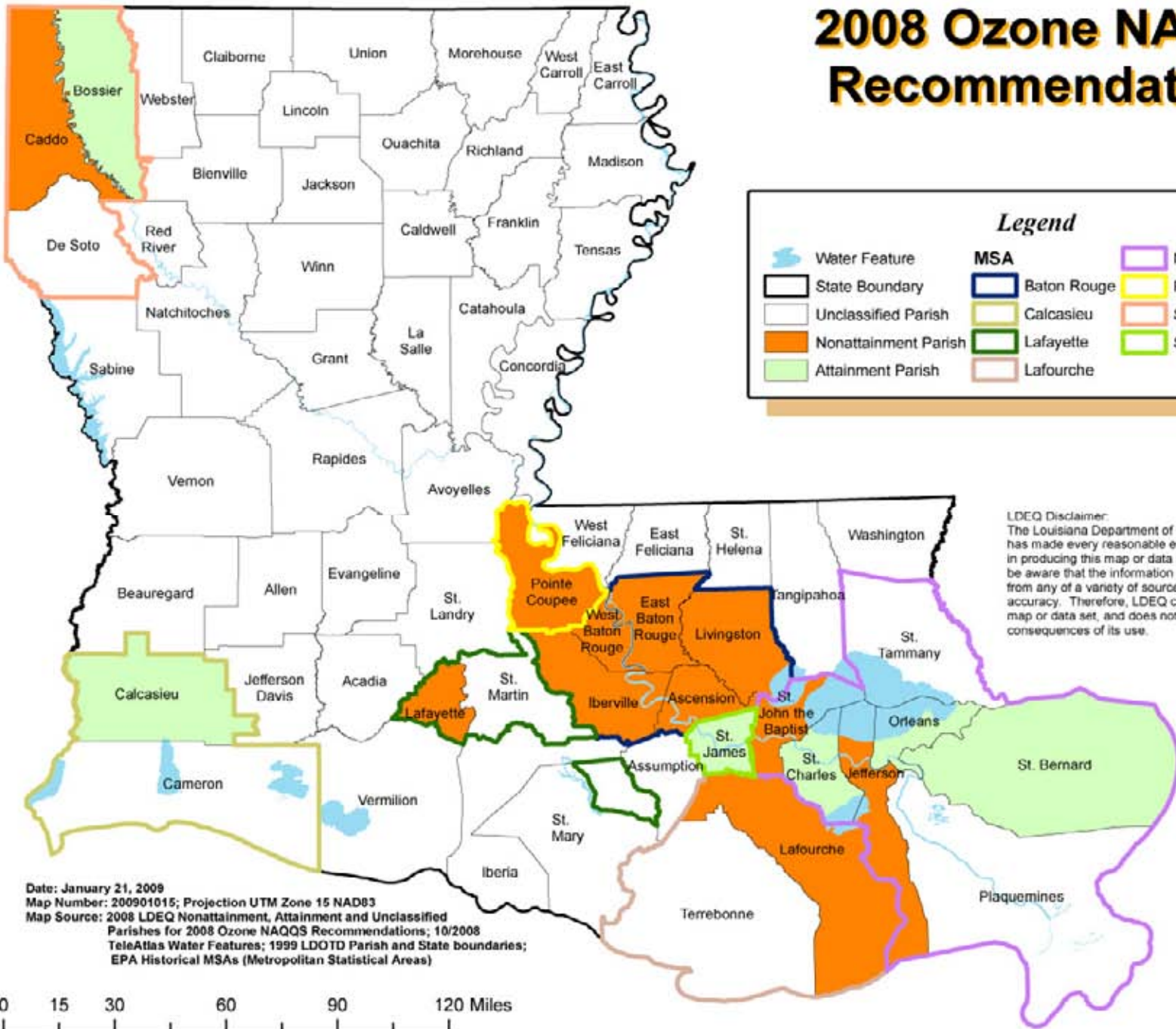
□ It should be noted that this schedule is subject to change due to on going litigation.



# 8-hr Design Value as of September 28, 2009



# 2008 Ozone NAAQS Recommendations



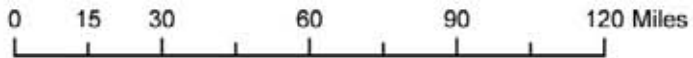
**Legend**

Water Feature	<b>MSA</b>	New Orleans
State Boundary	Baton Rouge	Pointe Coupee
Unclassified Parish	Calcasieu	Shreveport Bossier
Nonattainment Parish	Lafayette	St. James
Attainment Parish	Lafourche	

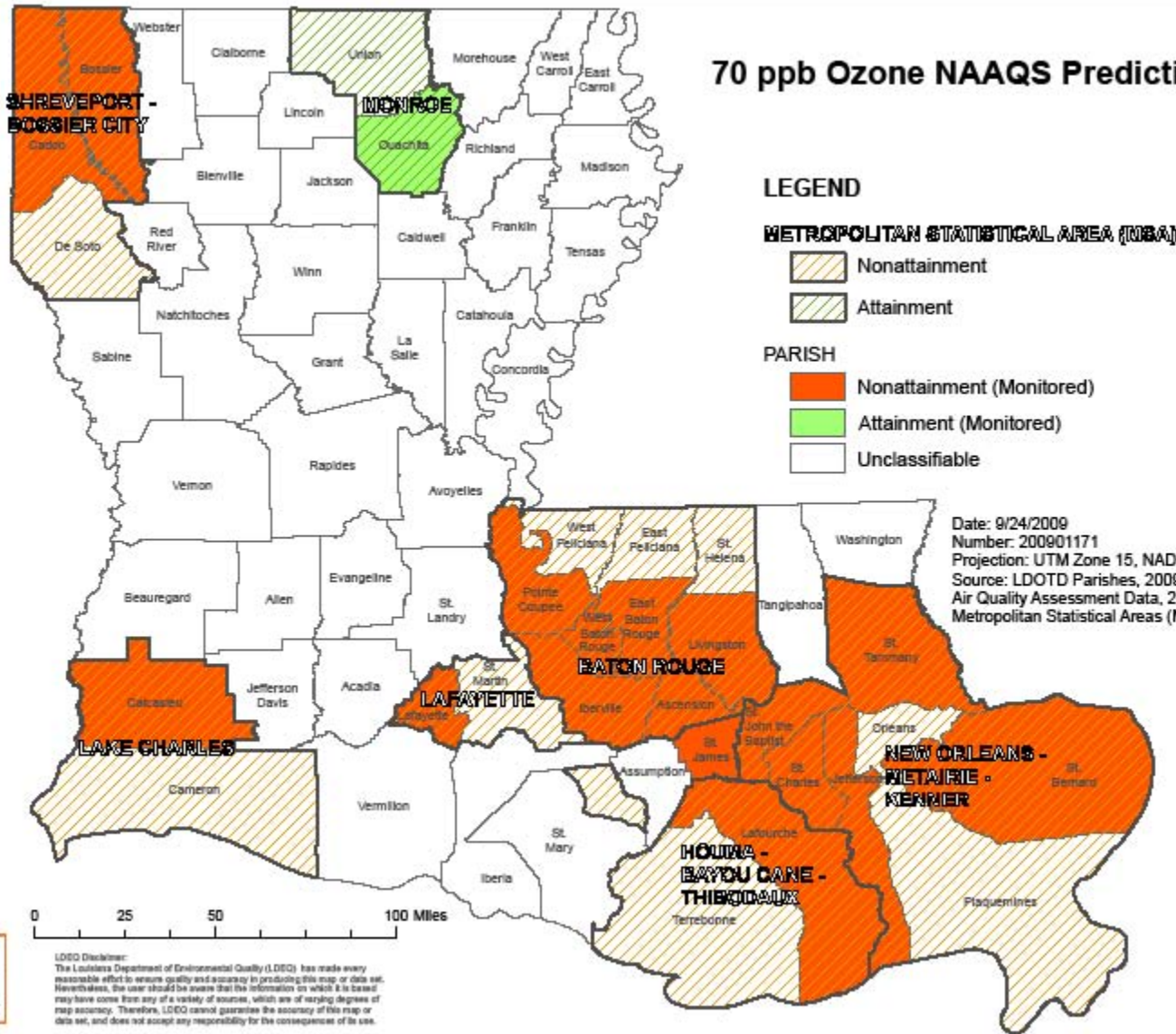
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Date: January 21, 2009  
 Map Number: 200901015; Projection UTM Zone 15 NAD83  
 Map Source: 2008 LDEQ Nonattainment, Attainment and Unclassified Parishes for 2008 Ozone NAAQS Recommendations; 10/2008 TeleAtlas Water Features; 1999 LDOTD Parish and State boundaries; EPA Historical MSAs (Metropolitan Statistical Areas)



# 70 ppb Ozone NAAQS Predictions



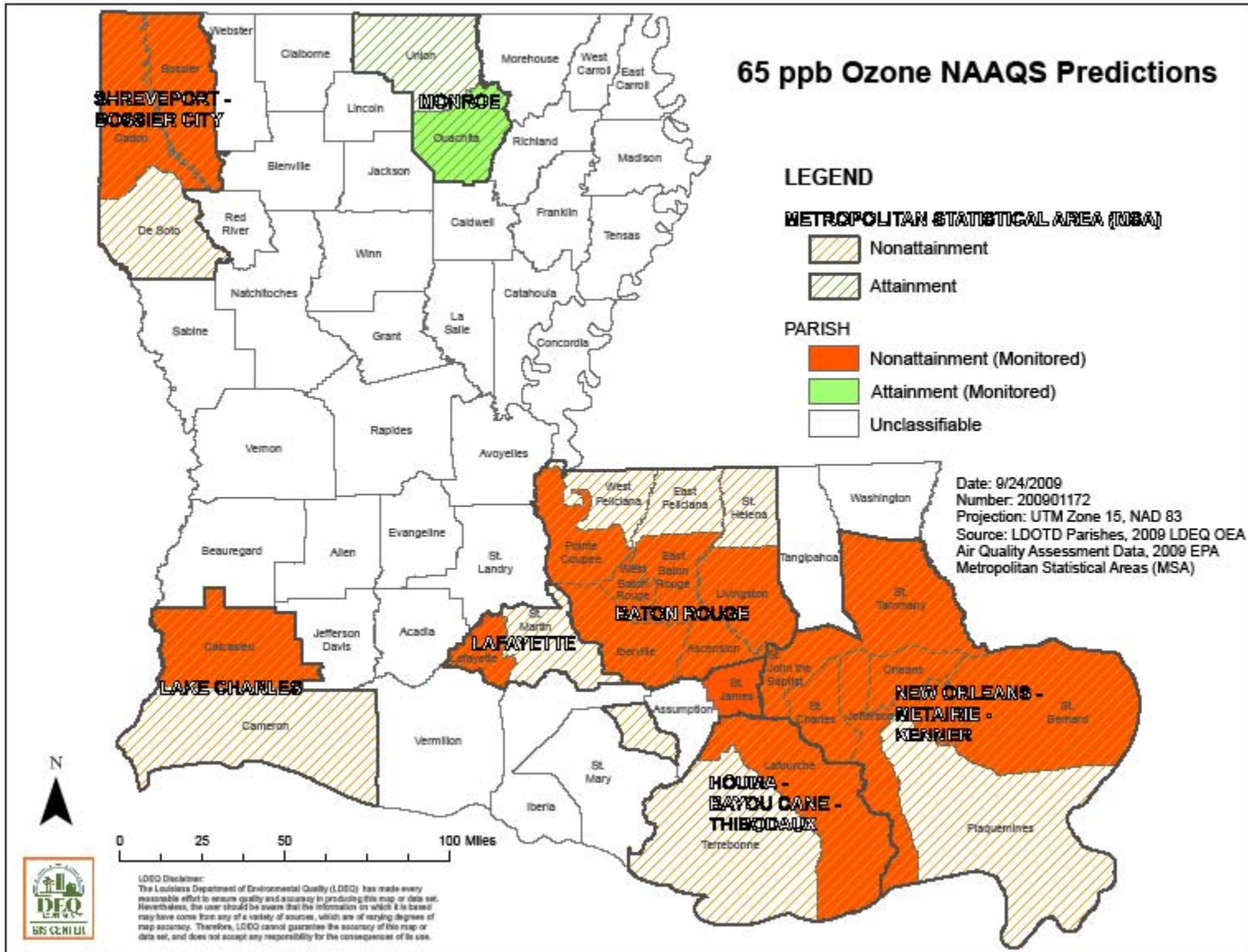
Date: 9/24/2009  
Number: 200901171  
Projection: UTM Zone 15, NAD 83  
Source: LDOTD Parishes, 2009 LDEQ OEA  
Air Quality Assessment Data, 2009 EPA  
Metropolitan Statistical Areas (MSA)



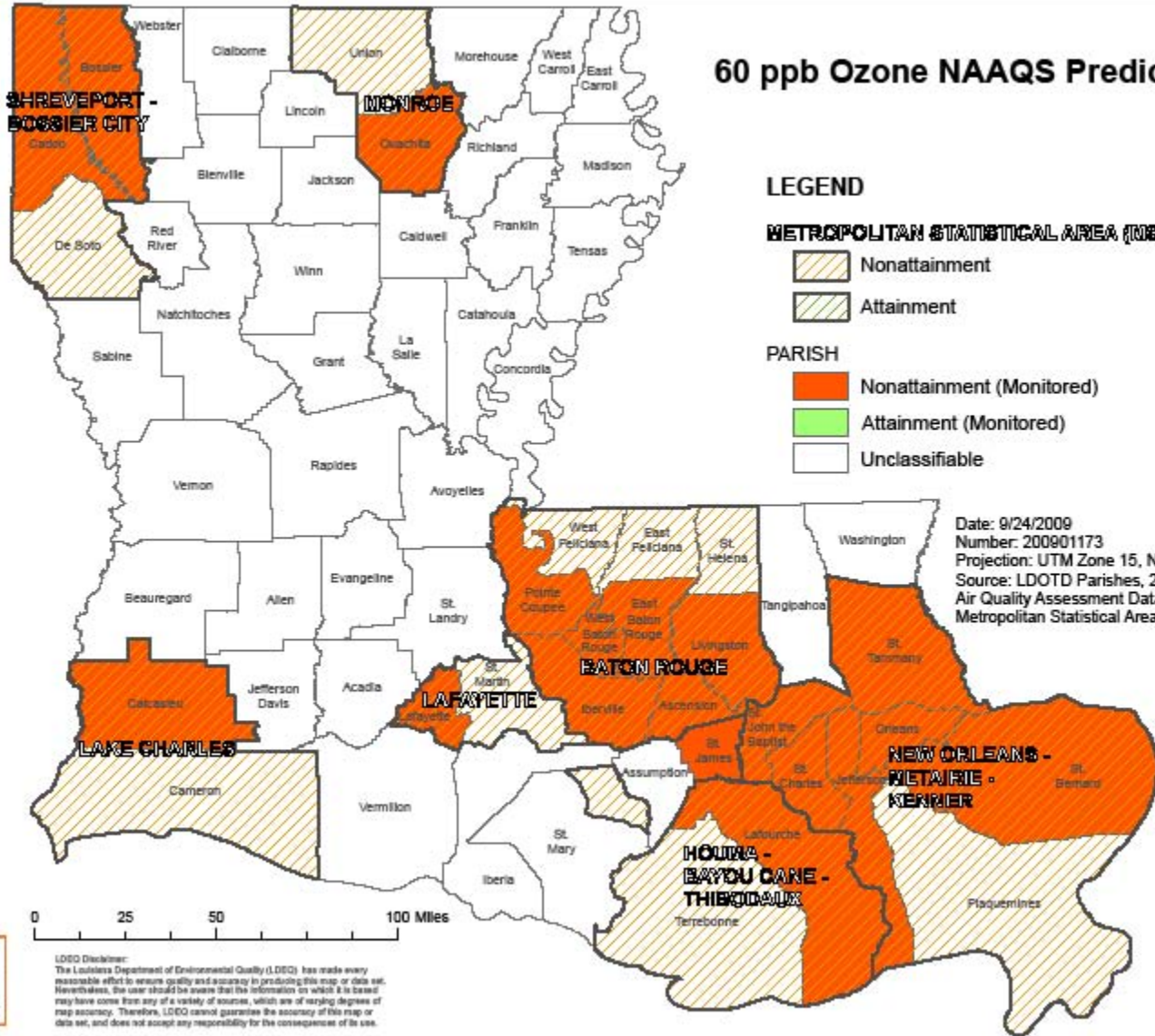
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# 65 ppb Ozone NAAQS Predictions



# 60 ppb Ozone NAAQS Predictions



## LEGEND

### METROPOLITAN STATISTICAL AREA (MSA)

- Nonattainment
- Attainment

### PARISH

- Nonattainment (Monitored)
- Attainment (Monitored)
- Unclassifiable

Date: 9/24/2009  
 Number: 200901173  
 Projection: UTM Zone 15, NAD 83  
 Source: LDOTD Parishes, 2009 LDEQ OEA  
 Air Quality Assessment Data, 2009 EPA  
 Metropolitan Statistical Areas (MSA)



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# Designations and Classifications

- Designation refers to whether or not an area is above or below the standard
- Classification categories are determined based on an area's ozone concentration.





# Impacts of the Standard on New Nonattainment Parishes

- Changed Emission Inventory Requirements
- Lowered Major Source Thresholds
- New Source Review
- Emission Offsets
- RACT Requirements
- Transportation Conformity/General Conformity
- Automobile Inspection/Maintenance
- Regulations on small businesses (bakeries, dry cleaners, paint shops, etc.)



**So now what?**

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# Rules

- **On the Federal side:**
- **Fuel rules like the ultra low sulfur diesel rule;**
- **Locomotive and marine rules**
- **On the State side:**
- **VOC rules**
- **NO<sub>x</sub> rules**
- **Fugitive emissions**
- **Working with area sources as well as mobile sources**



# Voluntary Programs

- **Ozone Action Days**
- **Businesses instituting flex time or telecommuting**
- **Buy a hybrid**
- **Bicycle lanes**
- **Green light districts**
- **Transportation control measures**
- **Use of low VOC products, like paints**



# Ozone Resources

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