

Preparing for the New Ozone National Ambient Air Quality Standards

NSRP Environmental Panel Meeting

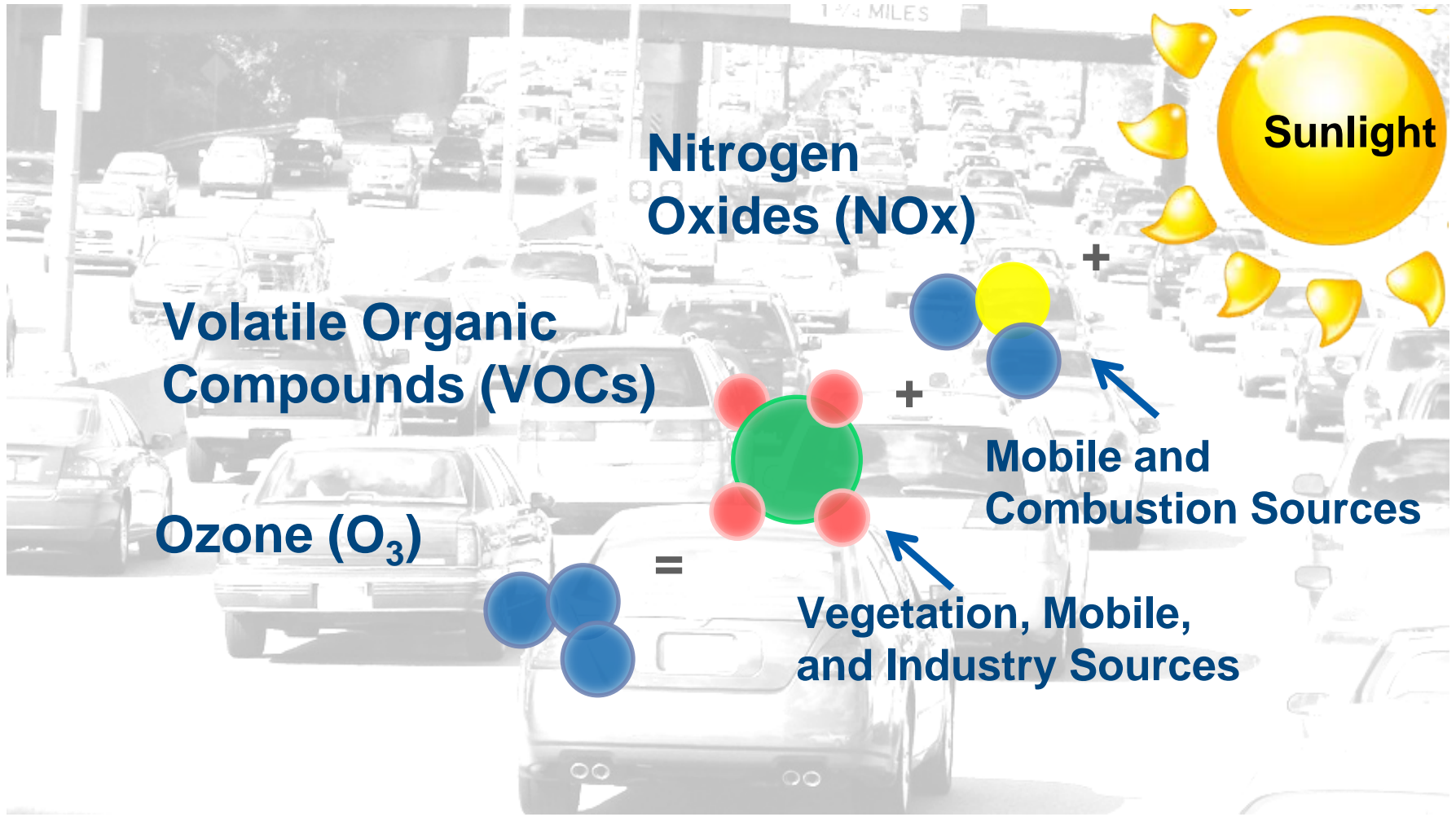
March 17, 2011

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EHS Engineer



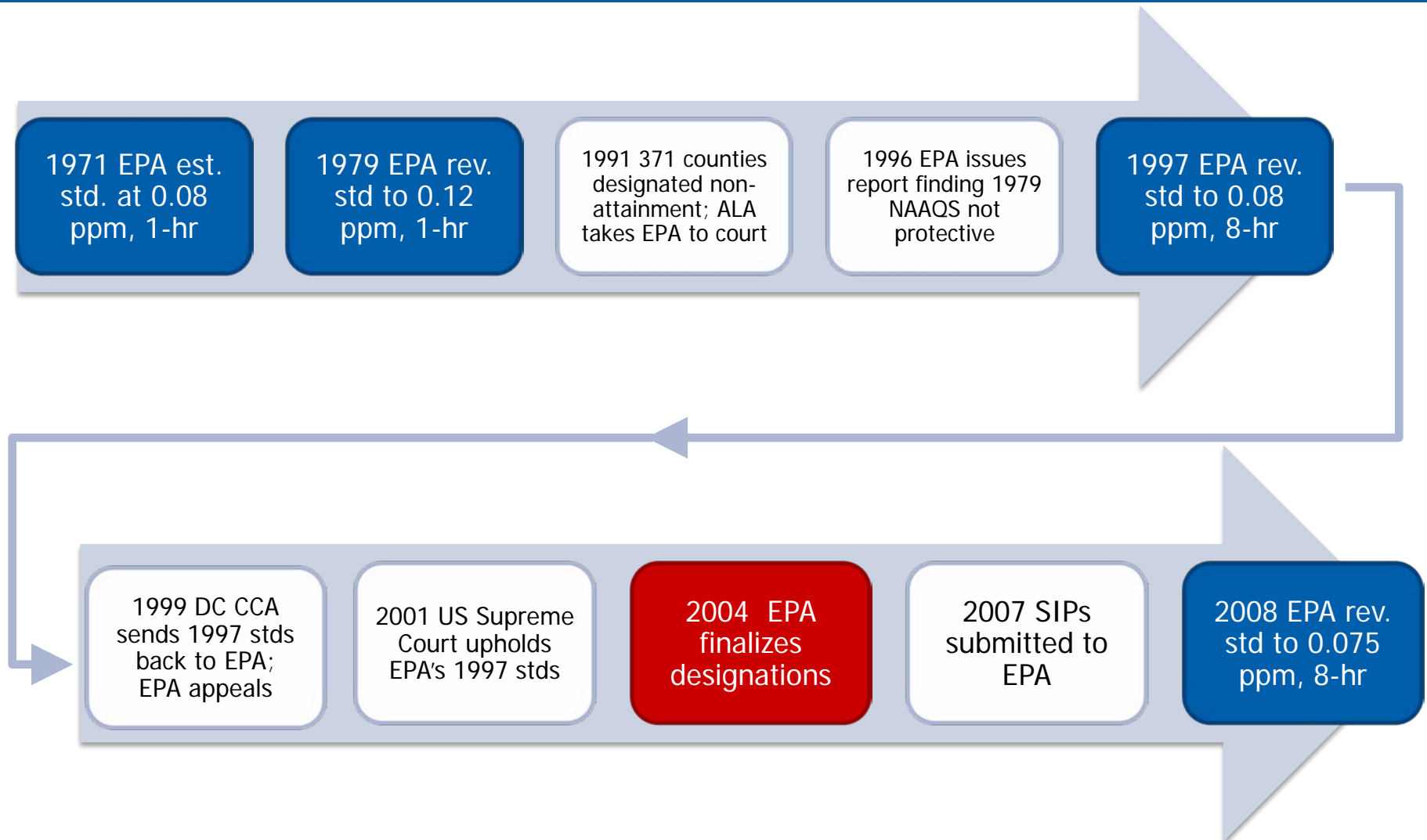
- Ground Level Ozone
- History of Ozone NAAQS
- Timeline for Implementing Ozone NAAQS
- EPA Reconsideration
- Attainment with Various Ozone NAAQSs
- Mississippi's Ozone
- Gulf Coast Ozone Trends
- EPA Ozone Projections
- Shipyard Ozone Reduction Plan

Ground Level Ozone



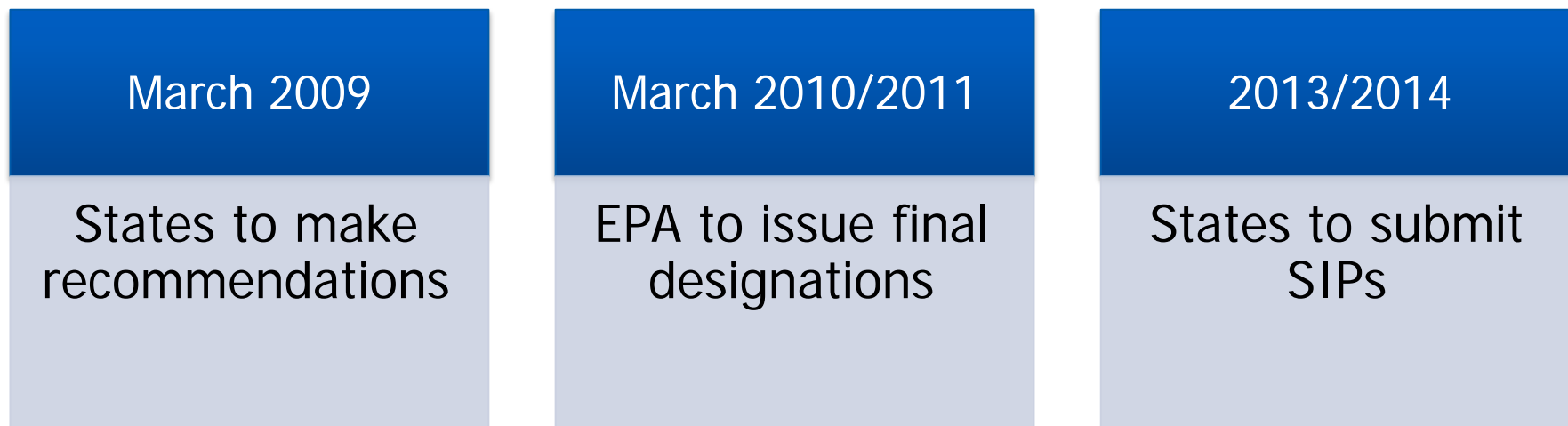
$$\text{Sunlight} + \text{NOx} + \text{VOCs} = \text{O}_3$$

History of Ground Level Ozone Standards



It Took 7 Years After Standards Set to Complete Designations

Timeline for Implementing 2008 Ozone NAAQS



Final Designations Due March 12, 2011

- September 2009 Announcement
 - Designations stayed for 2008 standards
 - Ozone NAAQS returns to 1997 standards
 - Revised standards to be proposed by December 2009
- January 2010 Proposes Revisions
 - Primary standard: 0.060 – 0.070 ppm
 - Secondary standard: 7 – 15 ppm-hours
 - Standards finalized by August 2010
 - Designations finalized by July 2011
 - States SIPs due December 2013

- December 2010 – EPA to delay final standards until July 2011
- January 2011 – EPA sends list of questions to CASAC
- March 1, 2011 - CASAC sends draft letter of response to EPA
- March 8, 2011 - Letter to EPA from US Senate Committee on Environment and Public Works (Rep. Upton and Sen. Inhofe)
 - Why delay implementation of 2008 standards with the reconsideration
 - What information was lacking to warrant more CASAC input
 - How do the January 2011 questions differ from 2008 review
 - How is public getting involved with new round of questions
 - How will out-of-date records benefit a reconsidered standard
 - CASAC response references new science
 - Why is 2008 standard not part of reconsidered range

- Reconsideration of 2008 Standards
 - Based on the 2008 record
 - 2006 Criteria Document
 - Outdated science

- Five-year Statutory Review of 2008 Standards
 - Scheduled to be completed in 2013
 - Less than 2 years after July 2011

Attainment with Various Ozone NAAQSs

PPB

84

- 1997 Standard
- 85 of 238 in violation (36%)

75

- 2008 Standard (reconsidered)
- 322 of 675 in violation (48%)

70

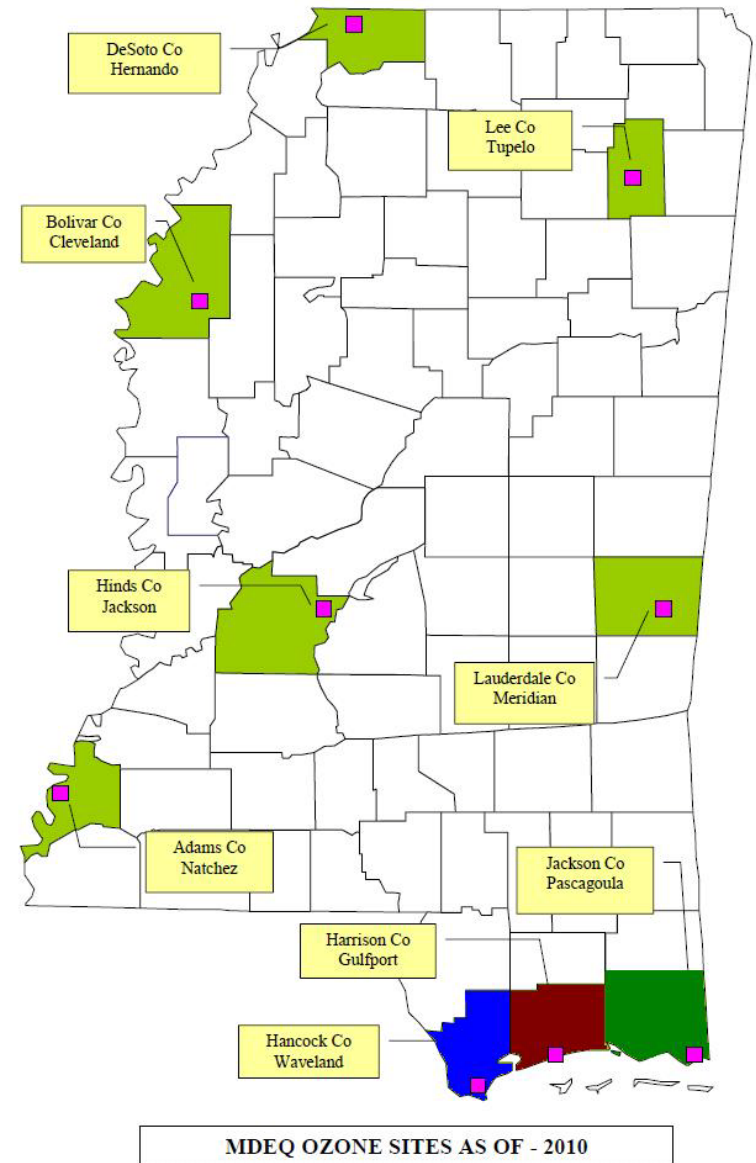
- 2010 Proposed High
- 515 of 675 in violation (76%)

60

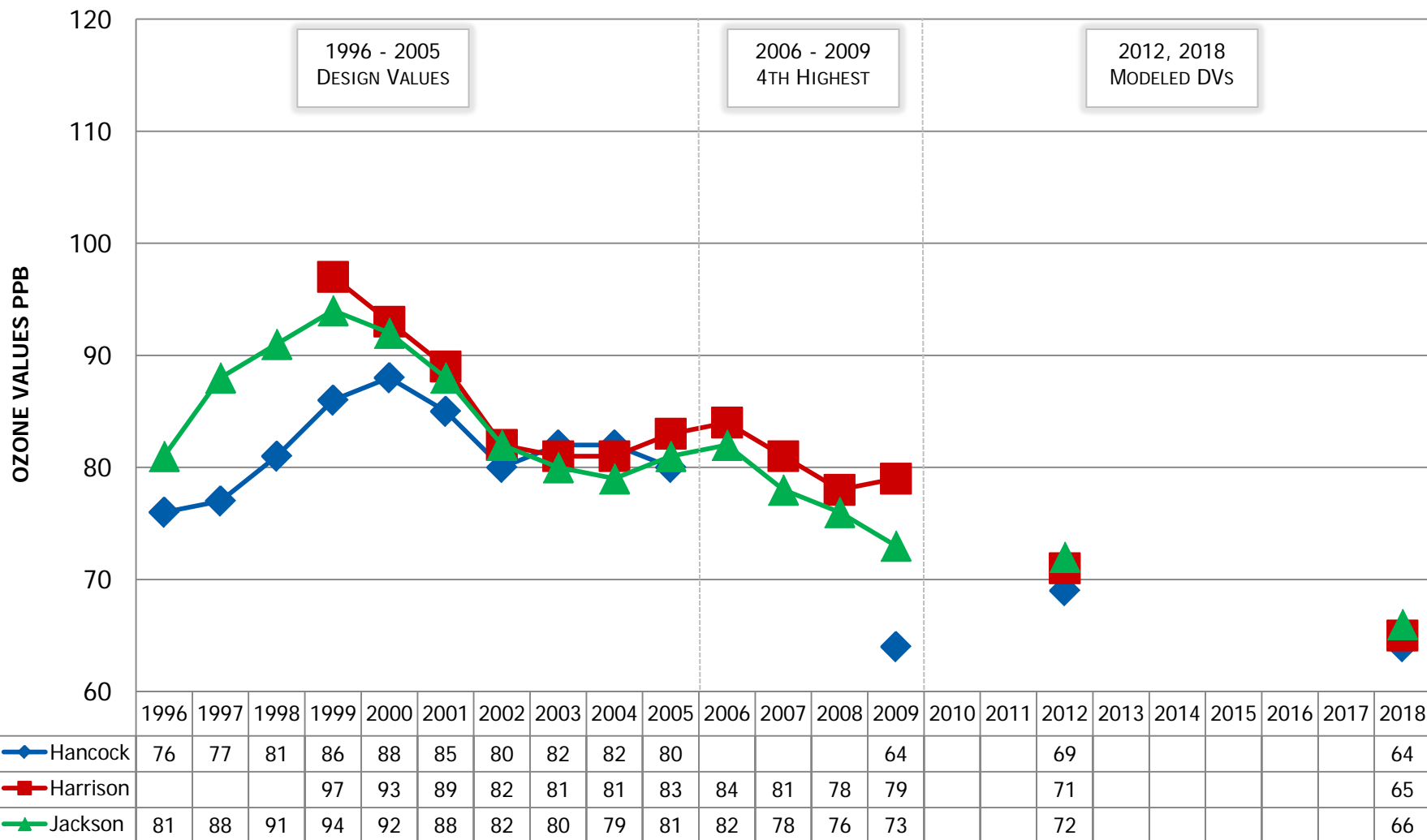
- 2010 Proposed Low
- 660 of 675 in violation (98%)

Mississippi's Ozone

- 2010 – Nine Ozone Monitors
- 2004 – All Counties Designated In Attainment
 - 2001 – 2003 Air Monitoring Data
- Based on 2008 Data - All Monitors Violate 70 ppb
- March 2009 – Mississippi submits recommendations
 - Three counties not in attainment
- July 2009 – MDEQ Letter to EPA
 - Support for Early Action Compacts
 - “Prescriptive approach of CAA”
 - Modeling results indicate all counties will meet the 2008 standard by 2012



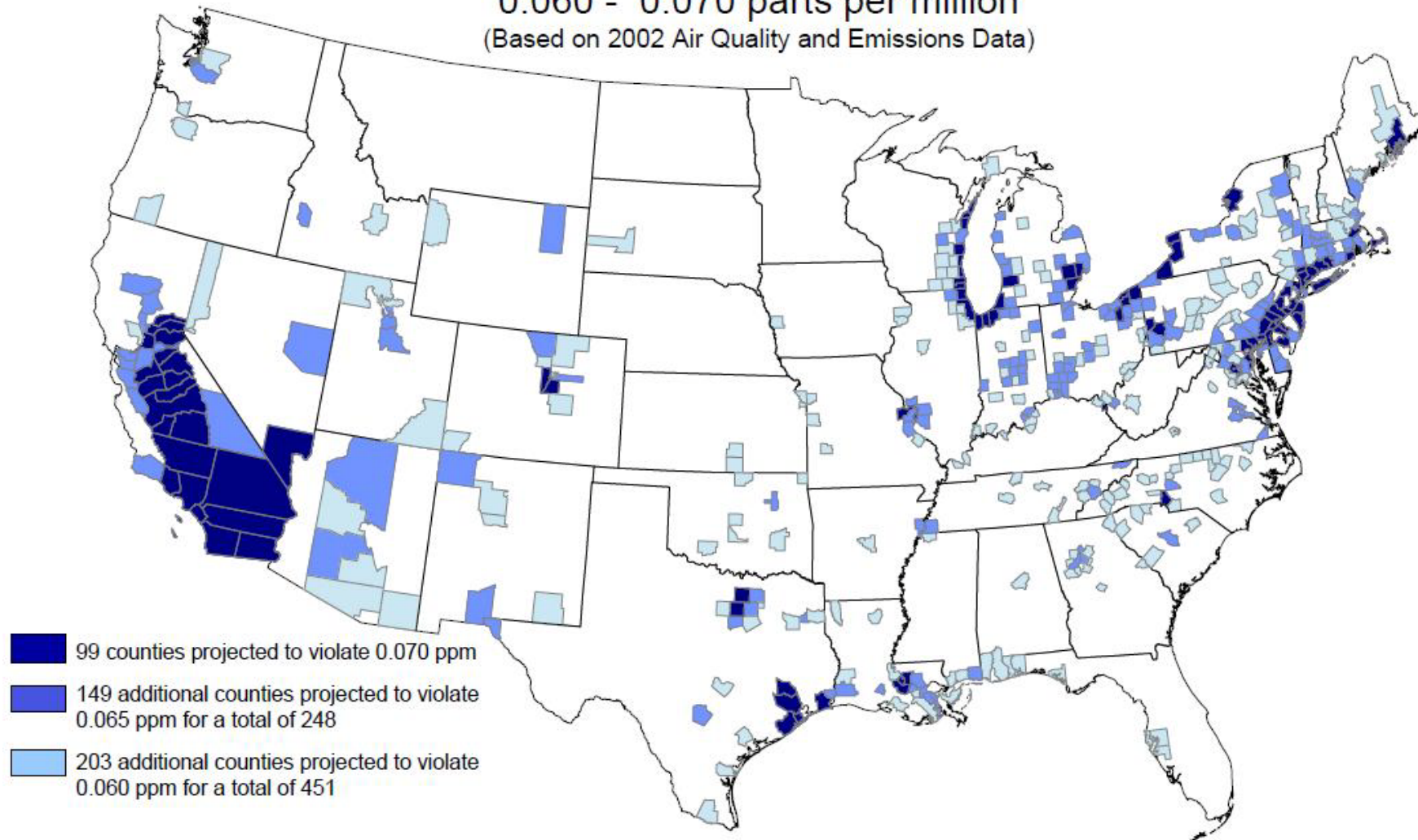
Mississippi Gulf Coast Ozone Trends



Counties With Monitors Projected to Violate Primary 8-hour Ground-Level Ozone Standards in 2020

0.060 - 0.070 parts per million

(Based on 2002 Air Quality and Emissions Data)



What's Been Happening to Lower Ozone Concentrations?

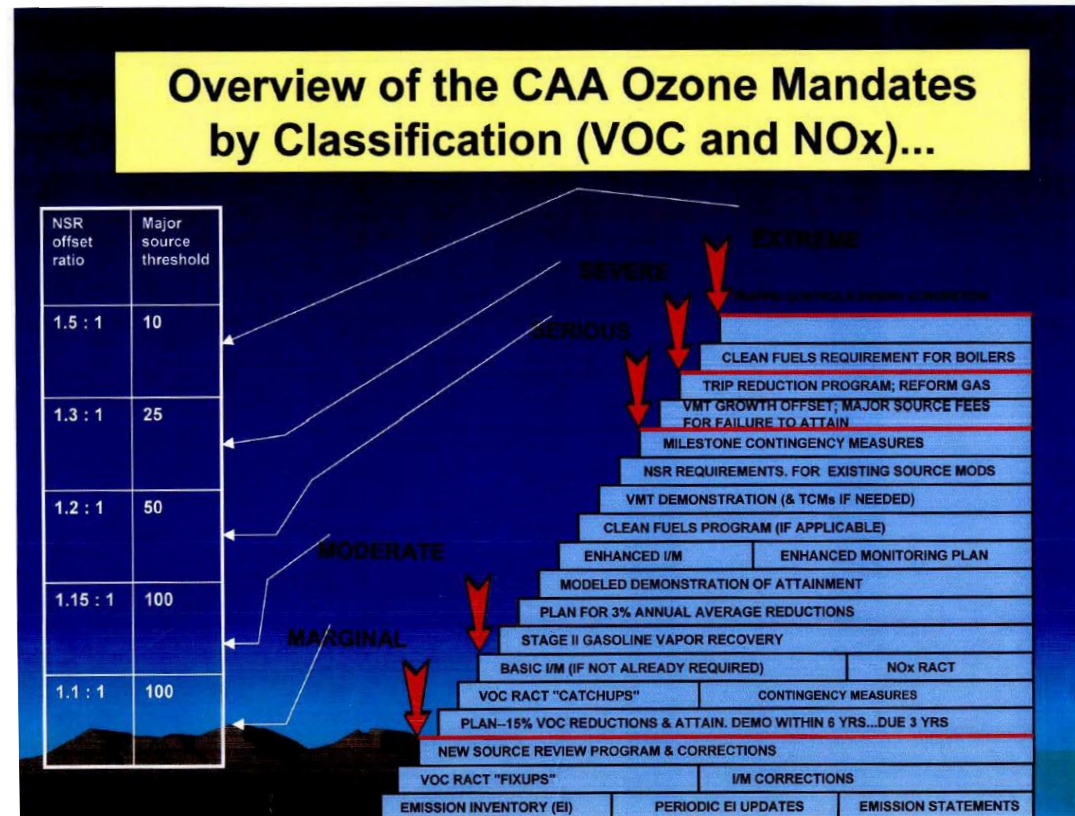
- National Emission Reduction Regulations

- Light duty vehicles, trucks and motorcycles rules – NOx and VOC
- Heavy duty highway rules – NOx and VOC
- Nonroad CI/SI engines rules – NOx and VOC
- Other nonroad engine rules – NOx and VOC
 - Aircraft
 - Locomotives
 - Marine engines
 - Recreational engines
- Air toxics major and area source rules – VOC



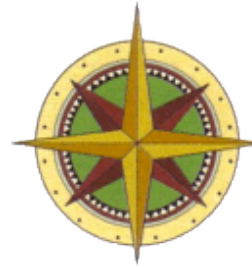
What is Happening at State Level?

- Mississippi DEQ
 - Launched campaign to inform public
 - Implications of nonattainment status
 - Develop ozone reduction plan



What is Happening at Local Level?

- Gulf Regional Planning Commission
 - General planning organization
 - 14 local and county governing bodies in Gulf Coast counties



Gulf Regional
Planning Commission

Serving the Governments of the Mississippi Gulf Coast

- Clean Air Campaign
 - Student involvement
 - Producing campaign theme and logo
 - Video – public service announcement
 - Educational lesson plans and activities
 - Funding from MDOT and FHA

Shipyard's Voluntary Ozone Reduction Plan

- Diesel Engines
 - Low-NOx engines installed in large portal cranes
 - Modernized fleet of mobile and nonroad sources
- Carpooling
 - Vanpool for employees
- Thermal Oxidizers
 - Paint booth VOC destruction
- Material Changes
 - Water-based paints
 - High solids paints
- Anti-idling Policy on Fleet Vehicles
- Improved Management of Compressed Air

Shipyard Employee Awareness Campaign

- Environmental Awareness Topic
 - General description of ozone
 - Ozone Action Days
 - List of voluntary ways to reduce ozone formation
 - Carpool/public transportation
 - Combine errands
 - Limit engine idling
 - Tighten gas caps
 - Refuel after dark
 - Mow lawns after 6 PM
- Ozone Action Day Alerts

OZONE FORECAST ALERT

Wednesday, May 5	Thursday, May 6	Friday, May 7
Unhealthy for Sensitive Groups	Moderate	Good

OZONE AIR QUALITY INDEX (AQI)

Air Quality Index (AQI) Values	Level of Health Concern	Colors
When the AQI is in this range	...air quality conditions are:	...as symbolized by this color
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple

The purpose of the AQI is to help you understand what the local air quality means to your health. The daily AQI and forecasts of expected AQIs are published by the Mississippi Department of Environmental Quality.

An Ozone Action Day is declared when the ozone AQI is expected to exceed 100, or when the AQI is **Orange, Red or Purple**.

By following any or all of the following actions, we can reduce harmful air pollution at any time. These actions are especially helpful on Ozone Action Days.

- Conserve energy at work and home by turning off lights when not being used
- Carpool or use public transportation
- Combine errands to reduce vehicle trips
- Limit or stop engine idling
- When refueling, stop when fuel pumps shut off to prevent overfilling or spilling
- Tighten gas cap securely
- Keep vehicle and boats engines maintained and tuned up
- Inflate vehicle tires to recommended pressure
- Refuel vehicles after dark
- Mow your lawn after 6 PM or after Ozone Action Days

For More Information Contact:
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Preparing for New Ozone Standards

- Gulf Coast Ozone Levels are Decreasing
- Voluntary Ozone Reduction Plan
- Employee Awareness Campaign