

Michigan Clean Diesel Coalition Meeting

Steve Marquardt – U.S. EPA Region 5

May 14, 2010



Review of National Ambient Air Quality Standards (NAAQS)

- The Clean Air Act requires EPA to set two types of national ambient air quality standards (NAAQS) for “criteria” air pollutants:
 - **Primary standards** to protect public health with an adequate margin of safety
 - **Secondary standards** to protect public welfare (visibility, wildlife, crops, vegetation, national monuments and buildings)
- EPA has set NAAQS for six common air pollutants:
 - Nitrogen dioxide
 - Carbon monoxide
 - Lead
 - Particulate matter
 - Ground-level ozone (smog)
 - Sulfur dioxide
- The law requires EPA to review the scientific information and the standards for each pollutant every five years, and to obtain advice from the Clean Air Scientific Advisory Committee (CASAC) on each review
- Different considerations apply to setting NAAQS than to achieving them
 - **Setting NAAQS:** based on scientific evidence of health and environmental effects
 - **Achieving NAAQS:** account for cost, technical feasibility, time needed to attain

Ongoing NAAQS Reviews: Current Schedule

revised 3-15-2010

| MILESTONE | POLLUTANT | | | | | | |
|-----------|------------------------------|-------------------------|-------------------------|--------------|---------------------|-----------|--|
| | Lead | NO ₂ Primary | SO ₂ Primary | Ozone | CO | PM | NO ₂ /SO ₂ Secondary |
| NPR | New schedule being developed | <u>Jun 26, 2009</u> | <u>Nov 16, 2009</u> | Jan 6, 2010 | <u>Oct 28, 2010</u> | Nov 2010 | <u>July 12, 2011</u> |
| NFR | <u>Oct 15, 2008</u> | <u>Jan 22, 2010</u> | <u>Jun 2, 2010</u> | Aug 31, 2010 | <u>May 13, 2011</u> | July 2011 | <u>Mar 20, 2012</u> |

NOTE:

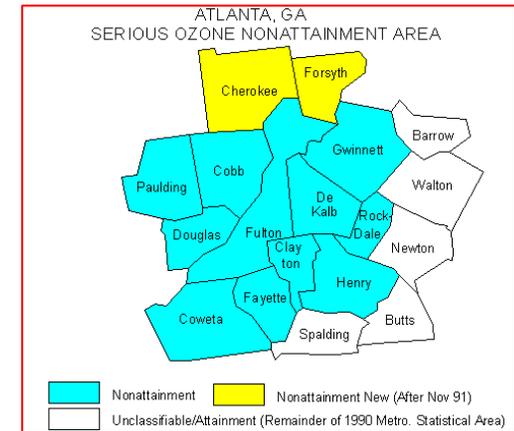
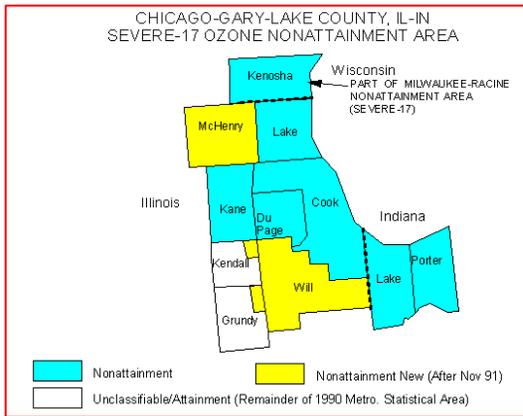
Underlined dates indicate court-ordered or settlement agreement deadlines.

Ongoing NAAQS Reviews: Comparison of Standards

revised 3-15-2010

| | POLLUTANT | | | | | |
|--------------|---|--------------------------|-----------------------------|--|-----------------------------------|------------------------------------|
| | Lead ($\mu\text{g}/\text{m}^3$) | NO ₂ (ppm) | SO ₂ (ppb) | Ozone (ppm) | CO (ppm) | PM ($\mu\text{g}/\text{m}^3$) |
| Old Standard | 1.5 (calendar quarterly) | 0.053 (annual basis) | 140 (daily) 30 (annual) | 0.08 (8-hr avg) (aka 84 ppb) | 9 (8-hour avg) 35 (1-hour avg) | 65 (daily) 15 (annual) |
| New Standard | 0.15 (rolling 3-mon. avg) NOTE: | 0.100 (hourly basis) | <u>50 – 100</u> (hourly) | <u>0.060 – 0.070 (8 hr avg)</u> (aka <u>60-70 ppb</u>) and (<u>7-15 ppm-hours</u>) | <u>To be proposed</u> | 35 (daily) 15 (annual) |

Underlined dates indicate proposed levels that have not yet been finalized.

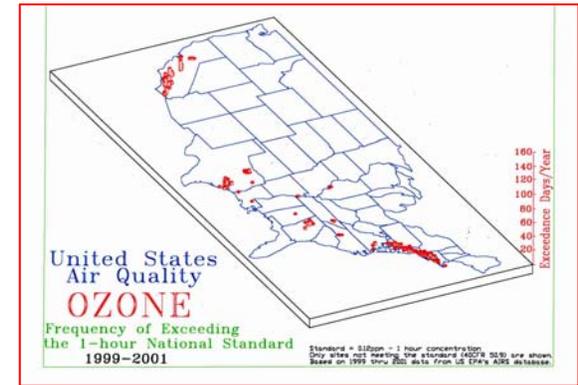


What is a “nonattainment” (NA) area?

Nonattainment Area ...

➤ *any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.*

**Sec. 107(d)(1)(A)(i)
Designations**



What are NA designations ... and what factors influence designations?

- Areas (often Combined Statistical Areas or Core-Based Statistical Areas or smaller/larger) that are experiencing, or are contributing to air quality violations of the NAAQS are “designated” via EPA rulemaking as **NONATTAINMENT** for the pollutant in question ... 40CFR Part 81
- State clean air plans are generally due **3** years after formal designations.
- These plans (or SIPs) must demonstrate how control measures will attain the NAAQS by a future date, generally prescribed in the CAA ... the **ATTAINMENT DATE**

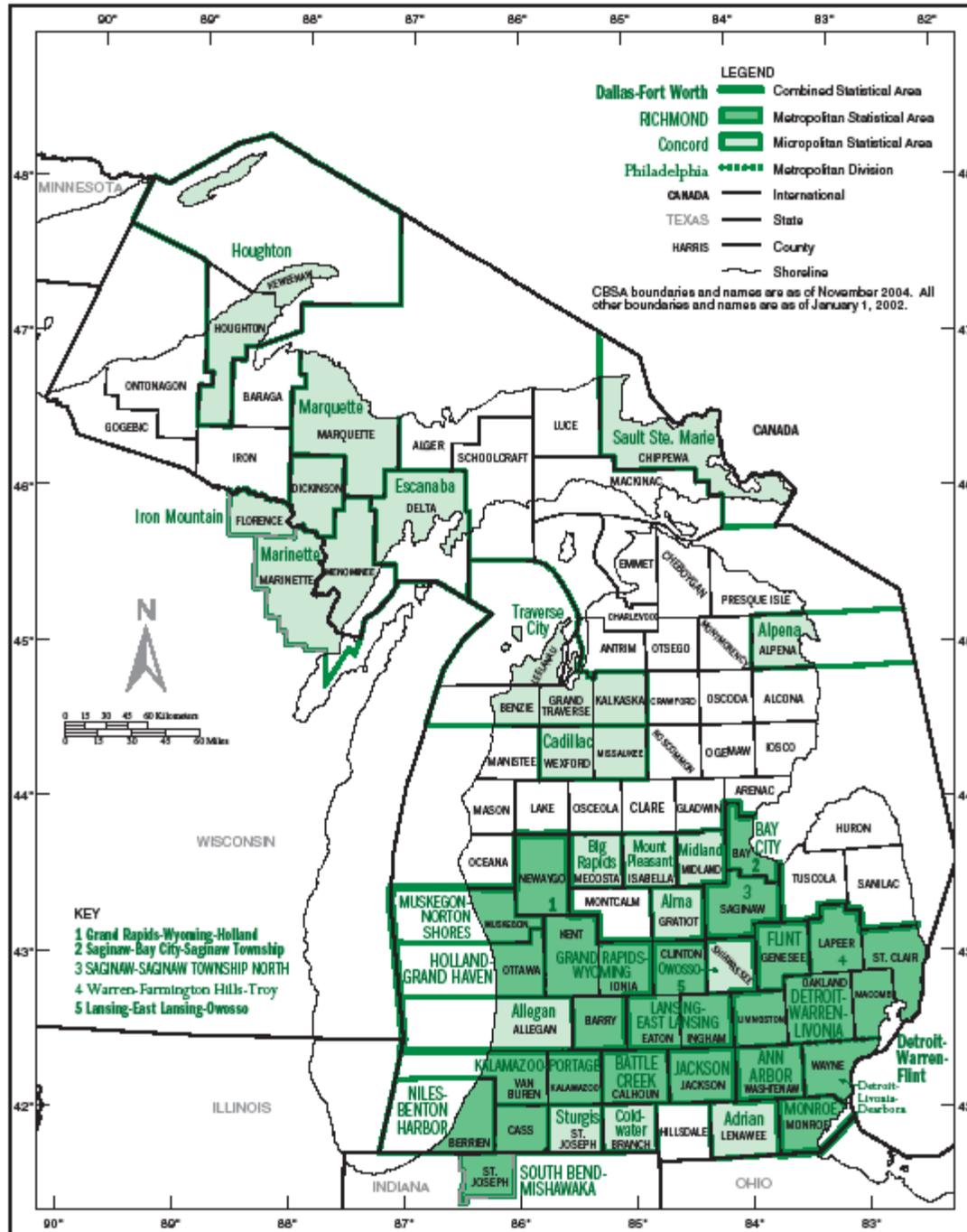
What are NA designations ... and what factors influence designations?



EPA guidance ...factors to consider when defining NA boundaries

- Emissions and air quality in adjacent areas
- Population density & urbanization including commercial development (including adjacent areas)
- Ozone air quality data What it represents... local or larger areas (urban or regional scale)
- Location and magnitude of emission sources ... in and nearby the area
- Traffic and commuting patterns
- Expected growth (including extent, pattern and rate of growth)
- Meteorology (weather and transport patterns)
- Geography/topography (mountains or other air basin boundaries)
- Jurisdictional boundaries
- Level of control of emission sources
- Regional emission reductions (e.g., enforceable regional strategies)

MICHIGAN - Core Based Statistical Areas and Counties



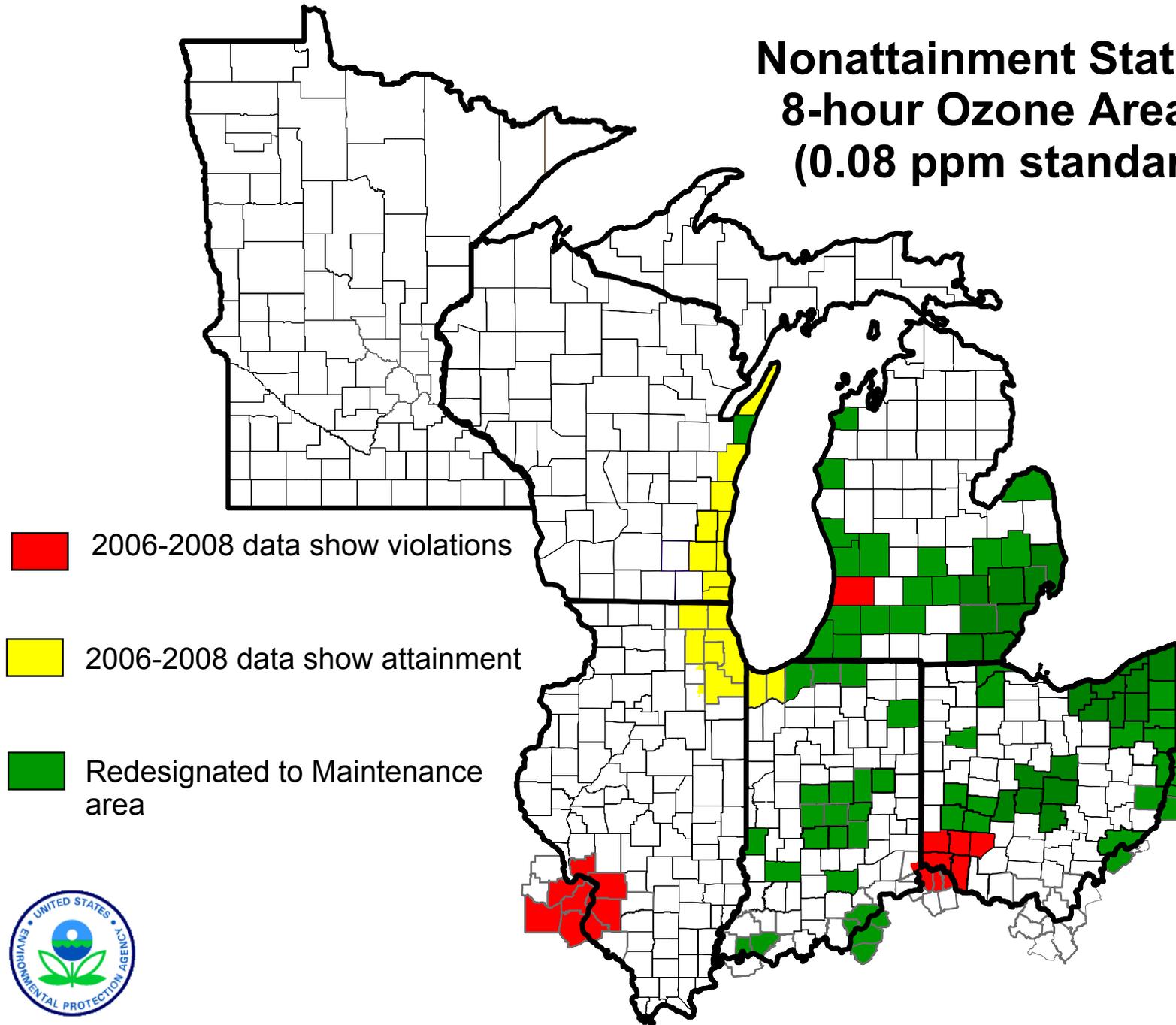


Air and Radiation Division

Region 5 Air Quality

1997 8-Hour Ozone Standard
(.08 ppm aka 84 ppb)

Nonattainment Status 8-hour Ozone Areas (0.08 ppm standard)



 2006-2008 data show violations

 2006-2008 data show attainment

 Redesignated to Maintenance area





Air and Radiation Division

2010 8-Hour Ozone Standard

Proposed Range:

Primary (.060 ppm to 0.070 ppm)

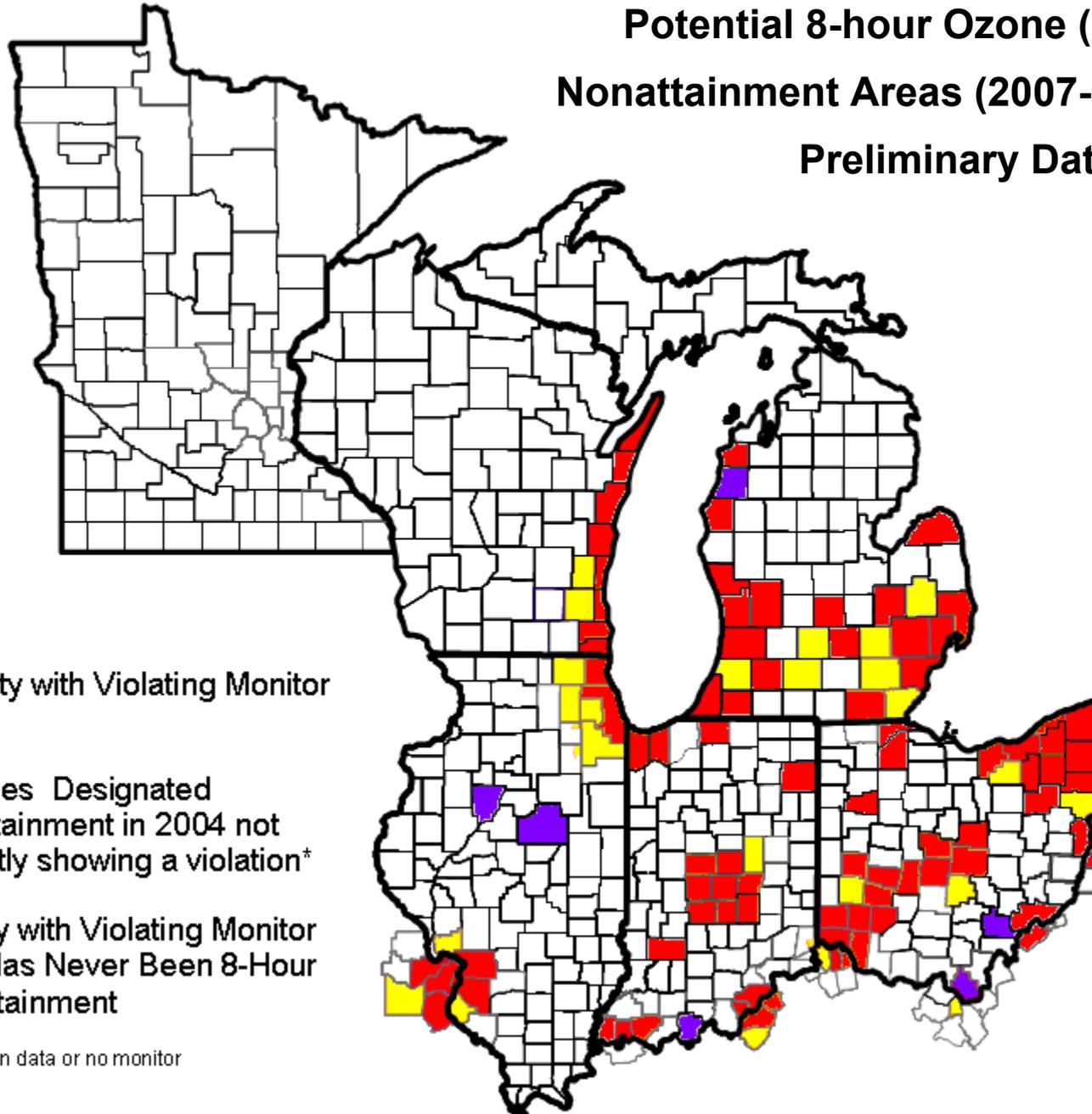
Secondary (7-15 ppm-hours)



Potential 8-hour Ozone (.070 ppm) Nonattainment Areas (2007-2009 data) Preliminary Data

-  County with Violating Monitor
-  Counties Designated Nonattainment in 2004 not currently showing a violation*
-  County with Violating Monitor That Has Never Been 8-Hour Nonattainment

*Could be due to clean data or no monitor



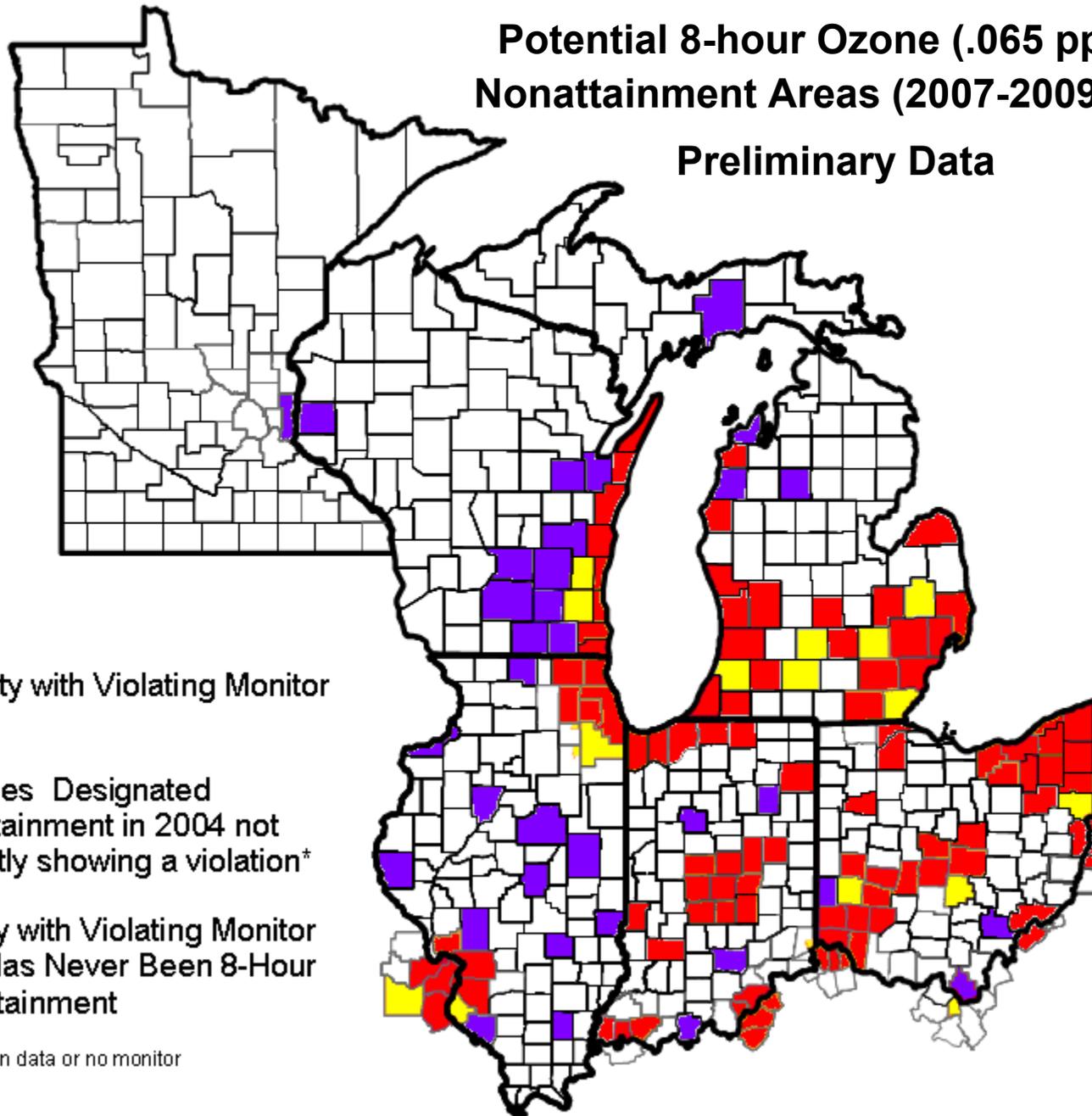


Potential 8-hour Ozone (.065 ppm) Nonattainment Areas (2007-2009 data)

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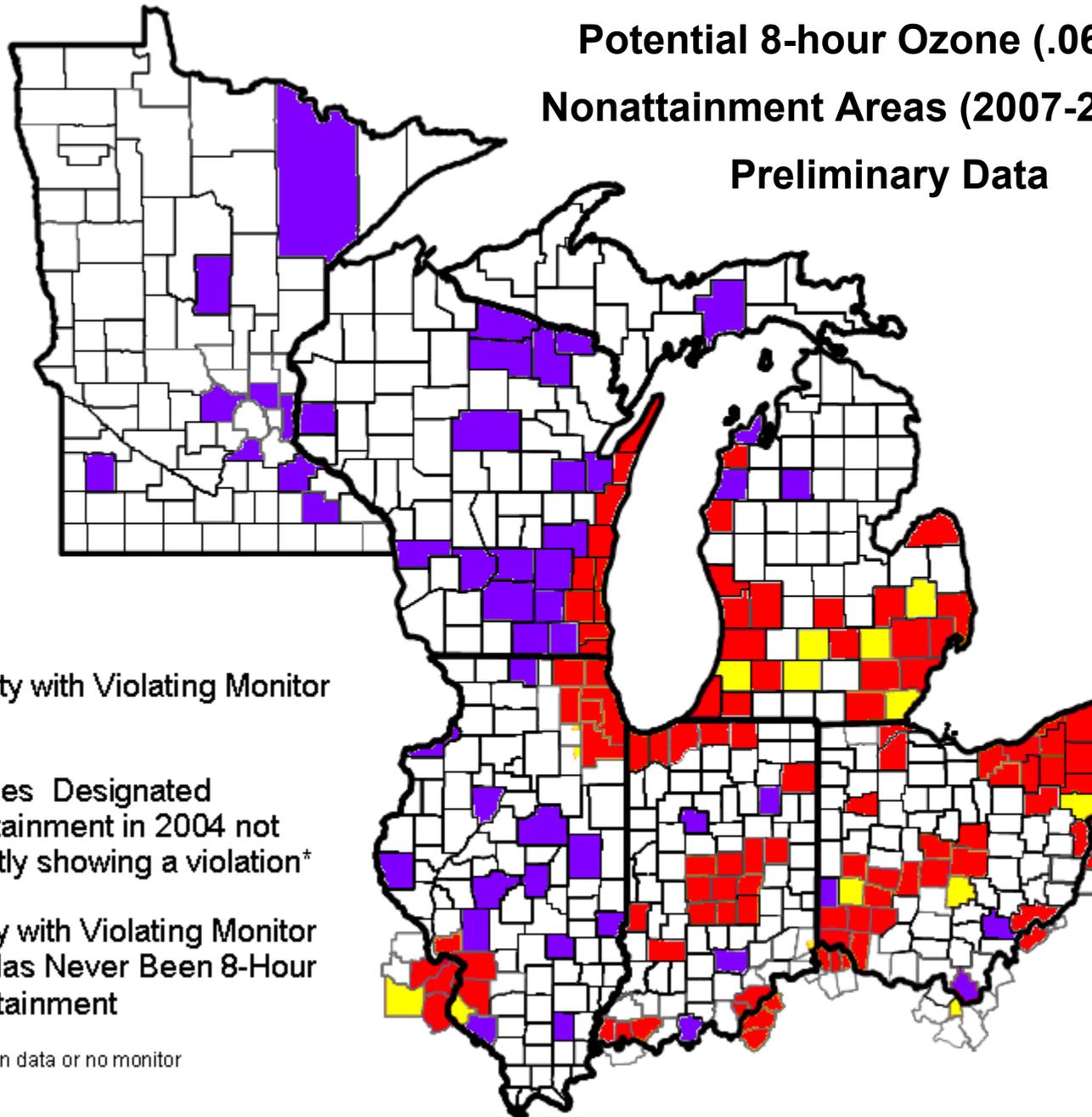




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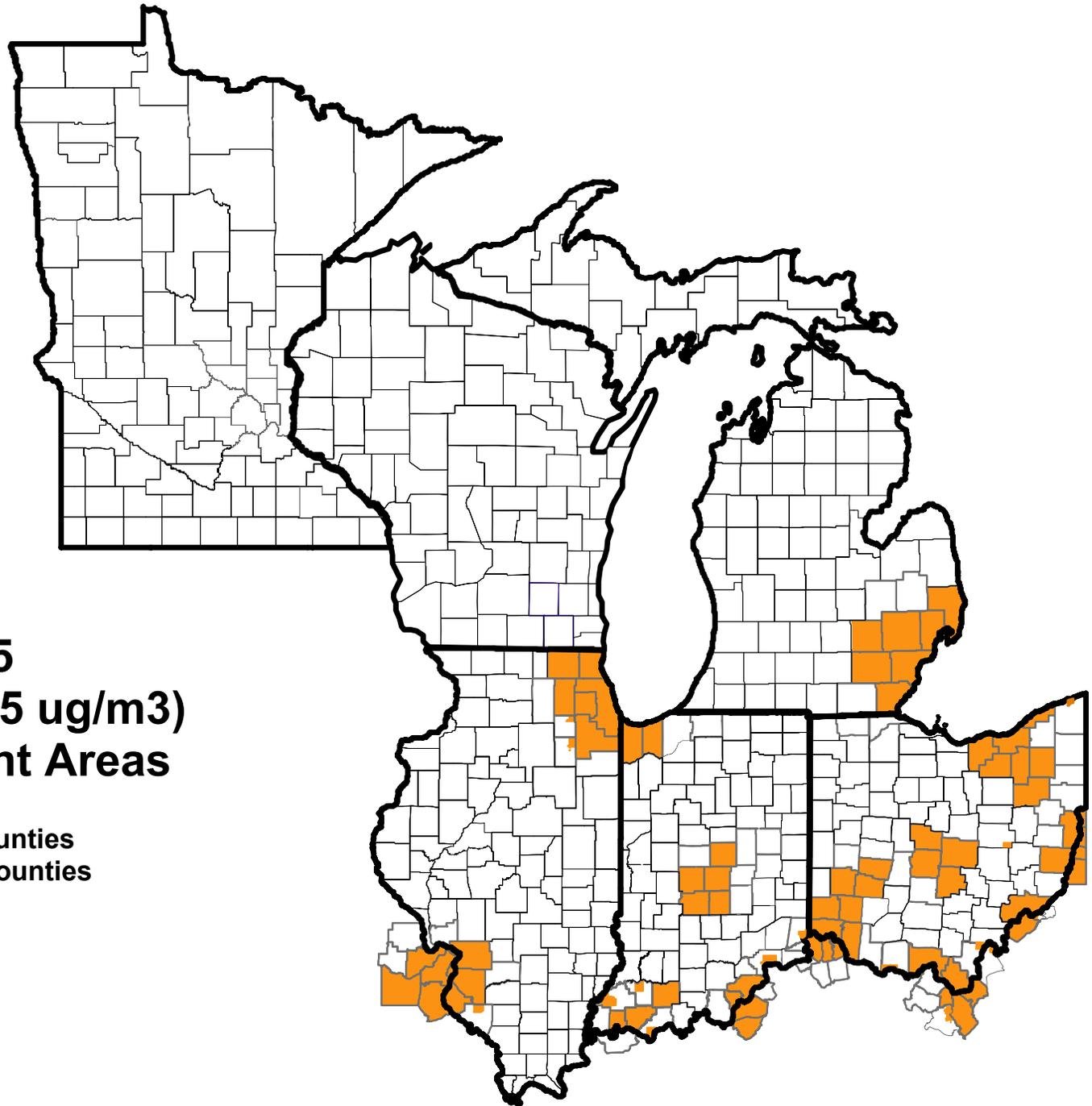




Air and Radiation Division

1997 PM_{2.5} Standard

(15 $\mu\text{g}/\text{m}^3$ annual standard
65 15 $\mu\text{g}/\text{m}^3$ daily standard)



**PM 2.5
(Annual std. 15 ug/m³)
Nonattainment Areas**

**51 Full Counties
12 Partial Counties**

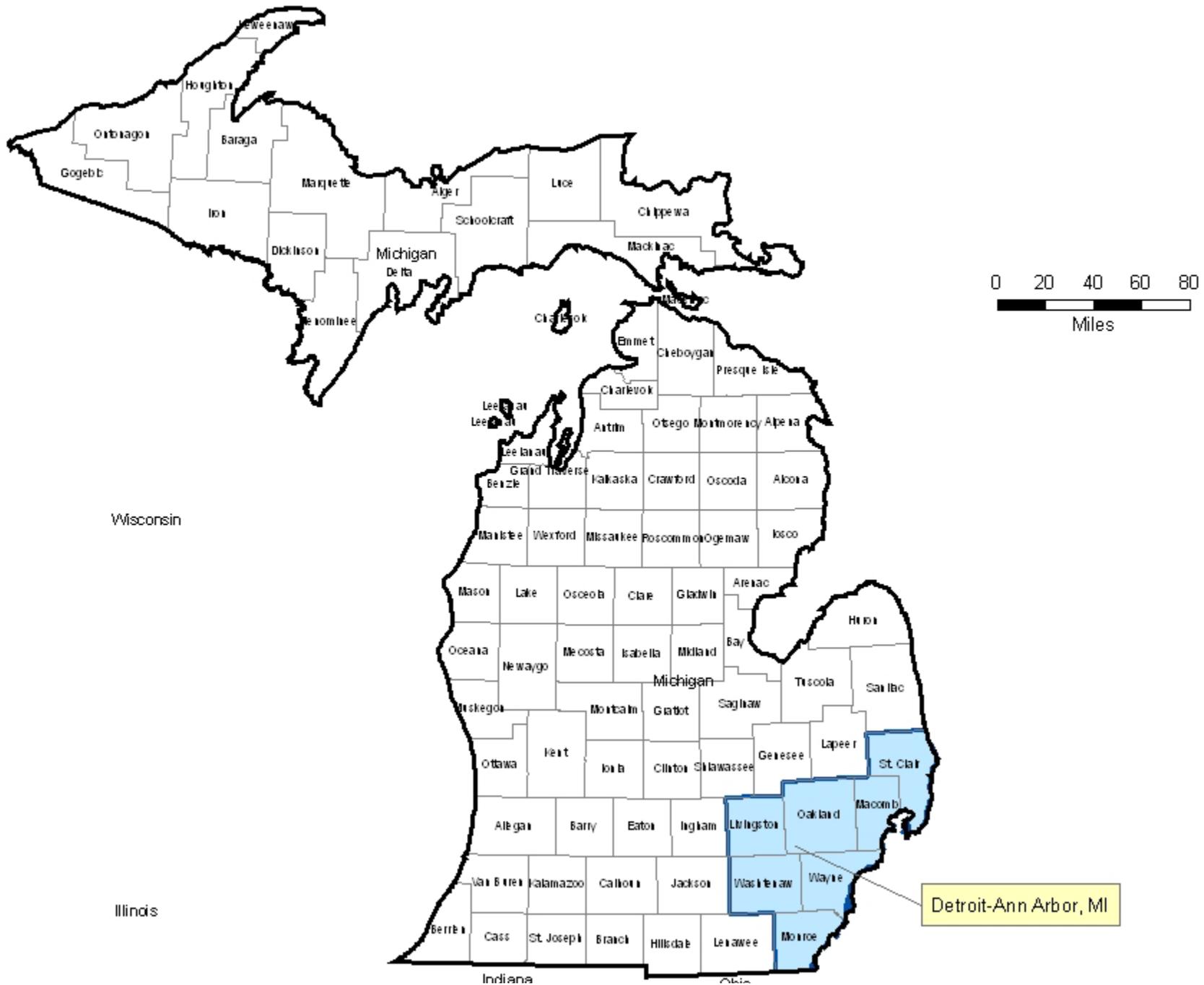


Air and Radiation Division

2006 PM_{2.5} Standard

(15 $\mu\text{g}/\text{m}^3$ annual standard
35 $\mu\text{g}/\text{m}^3$ daily standard)

-2.5 Nonattainment Areas (2006 Standard) in Blue Border





MIDWEST CLEAN DIESEL
INITIATIVE

The logo for the Midwest Clean Diesel Initiative features a blue wavy banner across the top. Below the banner, the words "MIDWEST CLEAN DIESEL" are written in a bold, dark blue, sans-serif font. Underneath that, the word "INITIATIVE" is written in a green, sans-serif font, with each letter spaced out.

MIDWEST CLEAN DIESEL INITIATIVE

- Public-private partnership to accelerate diesel emission reductions in the Midwest
- Leadership Group
 - 33 Members Signed Collaborative Principles
 - Co-Chairs: Cummins, Illinois EPA, American Lung Association of Upper Midwest, US EPA
- MCDI Goal:
 - reduce emissions from 1 million diesel-powered engines by 2010

The logo for the Midwest Clean Diesel Initiative features a blue wavy ribbon that curves across the top. Below the ribbon, the words "MIDWEST CLEAN DIESEL" are written in a bold, dark blue, sans-serif font. Underneath that, the word "INITIATIVE" is written in a green, sans-serif font, with each letter spaced out.

MIDWEST CLEAN DIESEL INITIATIVE

- Objectives:
 - 1) Develop/Support State Clean Diesel Coalitions
 - 2) Award of EPA funds/generation of non-EPA funding
 - 3) Address common issues across the Region
 - 4) Create Actions that Stir the Imagination

Results:

- MCDI partners have impacted over 850,000 diesel engines
 - Installation of retrofit technologies, replacements, repowers, idle reduction programs, and cleaner fuels

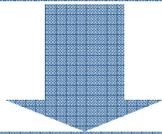
EPA Grant Funding

| Year | National Funding | Regional Share | Funding Requested | Applications | Awards |
|------------------|-------------------------|-----------------------|--------------------------|---------------------|---------------|
| FY03-07 | \$38M | | | | |
| FY08 | \$49.2M | Approx \$7M | Approx \$21M | 44 | 19 |
| ARRA | \$300M | Approx \$37M | Approx \$221M | 87 | 18 |
| FY09/2010 | \$120M | Approx \$13M | Approx \$84M | 71 | TBD |

*Since 2005, Region 5 has awarded and managed 63 awards for over \$47M

National Clean Diesel Program

National
(70%)

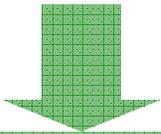


National Clean Diesel
Funding Assistance Program

Clean Diesel Emerging Technologies Program

SmartWay Clean Diesel Finance Program

State
(30%)



State Clean Diesel Grant Program

| | |
|------------|----------------|
| State Base | Matching Bonus |
|------------|----------------|



National Clean Diesel Campaign

National Clean Diesel Funding Assistance Program: Eligible Entities

- Regional, state, local, tribal or port agency with jurisdiction over transportation or air quality; and
- Nonprofit organization or institution which
 - Represents or provides pollution reduction or educational services to persons or organizations that operate diesel fleets; or
 - Has, as its principal purpose, the promotion of transportation or air quality

Fleets and Equipment

Including but not limited to:

- Buses
- Medium or heavy duty trucks
- Marine engines
- Locomotives



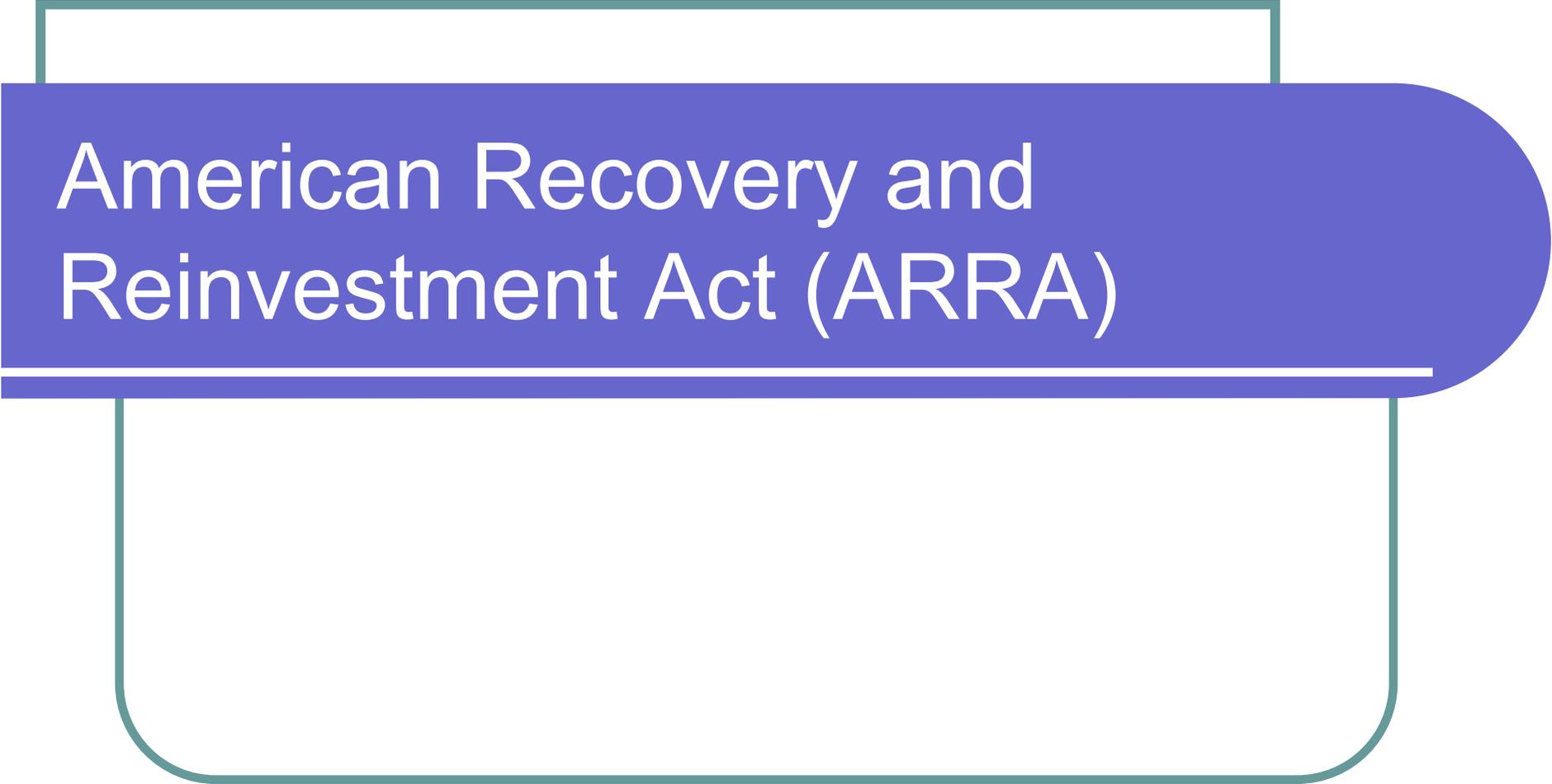
- Non-road engine, stationary engine or vehicle used for:
 - Construction
 - Handling of cargo (including at a port or airport)
 - Agriculture
 - Mining
 - Energy production (genset)

National Clean Diesel Funding Assistance Program: % of \$ for Technologies/Projects

- EPA's Clean Diesel funding will cover up to:
 - 100% for verified exhaust controls
 - 100% for certified engine upgrades
 - 100% for incremental cost of cleaner fuels
 - 75% for certified engine repowers
 - 25% for all certified replacements that meet model year 2007 emissions standards
 - 50% for school buses that meet model year 2010 emissions standards
 - 100% for verified idle reduction technologies
 - 100% for verified aerodynamic technologies and low rolling resistance tires

Tools

- All technologies must be EPA or CARB verified or EPA certified engine configurations
- Diesel Emission Quantifier
 - Provides PM, NOX, HC, CO, CO2
 - Provides PM health benefits
- NCDC Helpline:
 - 1-877-623-2322 (1-877-NCDC-FACTS)
 - cleandiesel@epa.gov



American Recovery and Reinvestment Act (ARRA)

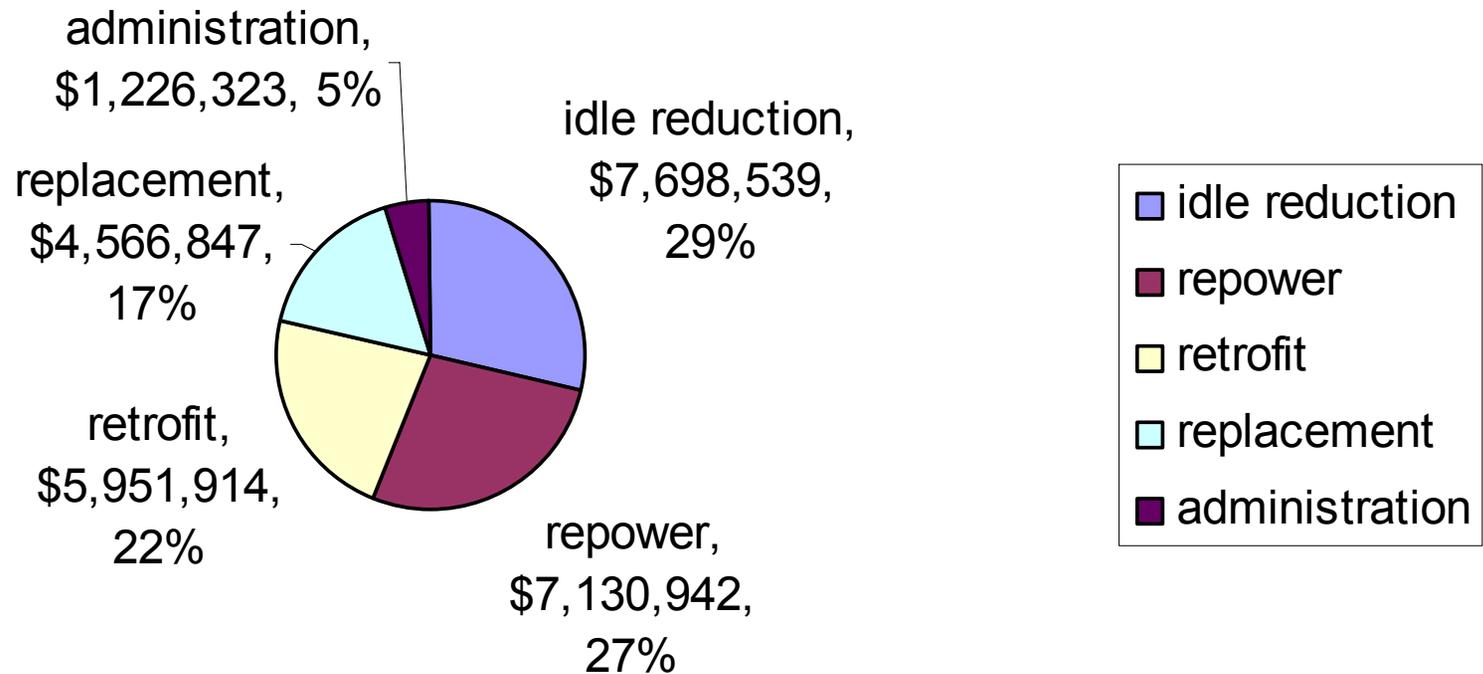


Region 5 Recovery Act Projects Awarded

| Applicant Name | Federal Funds Awarded |
|---|------------------------------|
| American Lung Association - Upper Midwest | \$3,721,731 |
| City of Chicago Department of Environment | \$1,000,000 |
| Great Lakes Commission | \$1,209,049 |
| Greater Lansing Area Clean Cities | \$1,073,528 |
| Hamilton County Environmental Services | \$1,080,000 |
| Illinois EPA | \$4,172,335 |
| Lenawee School District | \$1,230,696 |
| Minnesota Environmental Initiative | \$3,000,000 |
| National School Transportation Association | \$2,442,983 |
| Ohio Department of Development | \$5,000,000 |
| Wisconsin Department of Commerce | \$2,073,135 |
| Wisconsin DNR | \$571,107 |
| | \$26,574,564 |

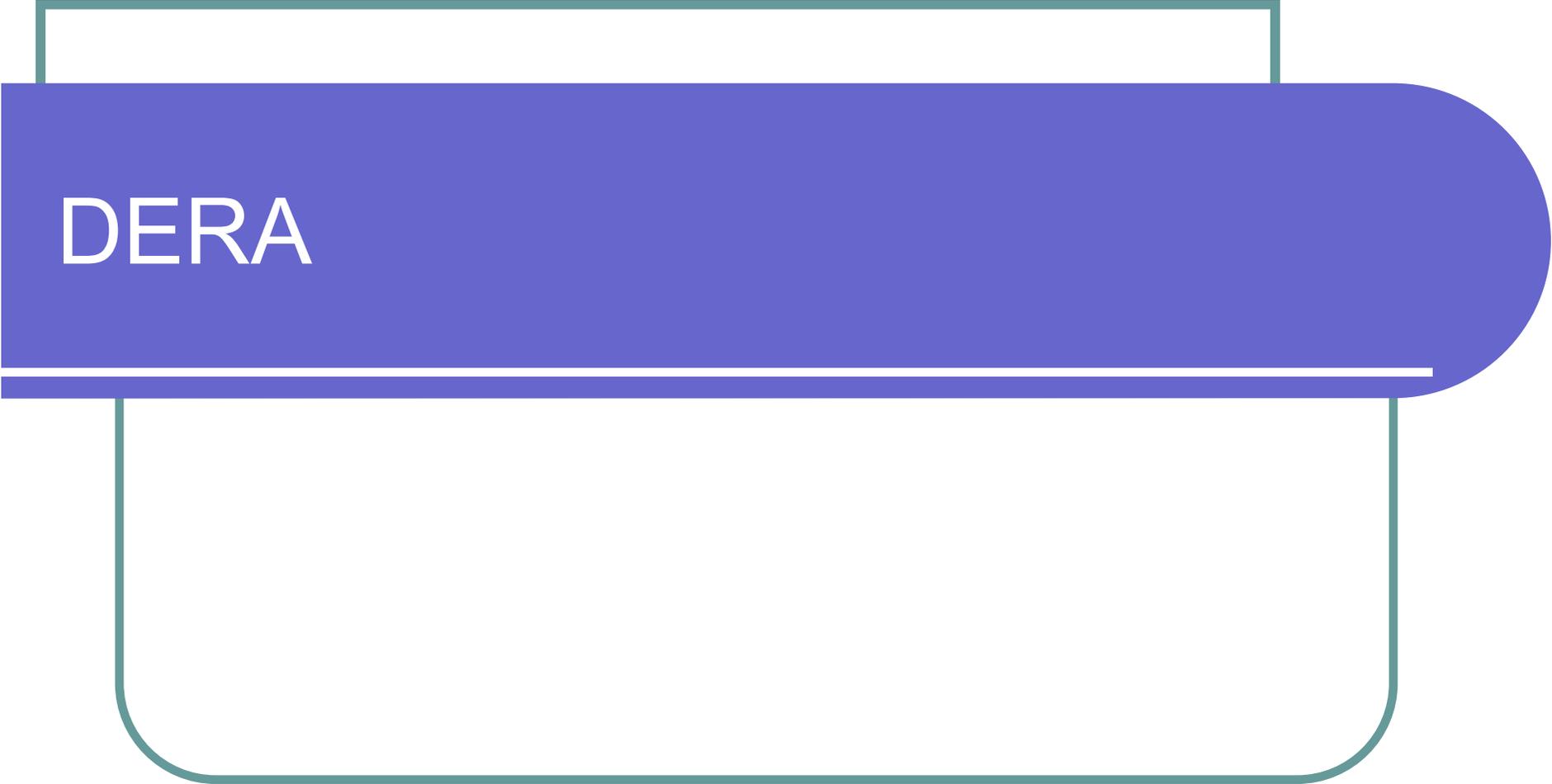
*Each state also received \$1.73M to run state specific competitions

Region 5 Recovery Act Projects



MI ARRA Projects

- **Great Lakes Commission (\$1,209,049)**
 - **Repower of 2 Great Lakes Marine Vessels**
- **Greater Lansing Area Clean Cities (\$1,073,528)**
 - **School Bus Retrofit**
 - **School Bus Idle Reduction**
 - **School Bus Replacement**
- **Lenawee School District (\$1,230,696)**
 - **School Bus Retrofit**
 - **School Bus Idle Reduction**
 - **School Bus Replacement**
- **MDNRE (\$1.73M)**



DERA

FY09/2010 EPA Funds

- State Allocations

- All 50 states and DC
- 2008 base - \$196,880
- 2008 match incentive - \$98,440
- 2009 base - \$235,294
- 2009 match incentive - \$117,647
- 2010 base - \$235,294
- 2010 match incentive - \$117,647
- Total Federal - \$1,001,202

FY09/2010 Competition

- 65 competitive proposals in Region 5
- 6 ineligible proposals
 - Late
 - Private companies
 - Funding range
- MI – 14 proposals for fleets

FY09/2010 Competition

- 1. Project Summary and Overall Approach - 15
- 2. Results – Outcomes and Outputs - 15
- 3. National Programmatic Priorities - 25
- 4. Regional Significance - 25
- 5. Past Performance--Programmatic Capability and Reporting on Results - 6
- 6. Staff Expertise/Qualifications - 5
- 7. Budget/Resources - 5
- 8. Applicant Fleet Description - 4

FY09/2010 Competition

- In making funding decisions, the EPA Approving Official may also consider sector (fleet type) diversity, technology diversity, geographic diversity,

FY09/2010 Competition

- Recommendations have been made
- Awards to be complete by June 2010
- MI
 - Okemos Public Schools (\$877,076)
 - Michigan Infrastructure and Transportation Association (\$600,000)
 - Clean Energy Coalition (\$600,000)

FY2011 Funding

- Presidents Budget - \$60M
- Same state allocation
- Same competition programs
- Request for proposals likely available in October 2010

- Reauthorization?

Next Steps

- Continue to support clean diesel coalitions
- Use EPA grant funds to lead to broader actions
- Reengage in supplemental environmental projects to connect to quality projects
- Pursue non-EPA funding and non-grant actions
- Technical Webinars
- Track and report results

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<http://www.epa.gov/midwestcleandiesel/>