

AGENDA

Regional Air Quality Workshop November 16, 2005

O'Hare International Center – Auditorium
10275 W. Higgins Road
Rosemont, IL

Purposes:

- Review stationary and mobile source candidate control measures under consideration
- Continue collaboration between State/Local agencies and stakeholders

- 9:30 am CDT Welcome, Introductions, and Meeting Overview
Status of Regional Air Quality Planning (Mike Koerber, LADCO)
- 9:45 Candidate Stationary Source Control Measures
- White Papers (Ed Sabo, MACTEC) – 45 minutes
 - Stakeholder Comments - Analysis of EGU White Paper (Douglas Jeavins, BBC) – 15 minutes
- 11:00 Candidate Mobile Source Control Measures (Lit Chan, Environ)
- 12:00 Lunch (to be provided)
- 1:00 Technical Information for a Regional Fuels Strategy (Tom Darlington, AIR)
- 1:45 Local Control Measure Planning (10-15 minutes each)
- Chicago (Clean Air Counts, City of Chicago)
 - NW Indiana
 - Indianapolis
 - Detroit
 - Cleveland
 - Columbus
- 2:45 Upcoming Activities
- Public Outreach
 - Technical Analyses
 - Other Initiatives
- 3:00 Open Discussion
- 3:30 Adjourn

Status of Regional Air Quality Planning

Michael Koerber
Lake Michigan Air Directors Consortium
November 16, 2005

Regional Planning Efforts

- Technical Analyses
- Emission Reduction Targets
- Control Strategy Options

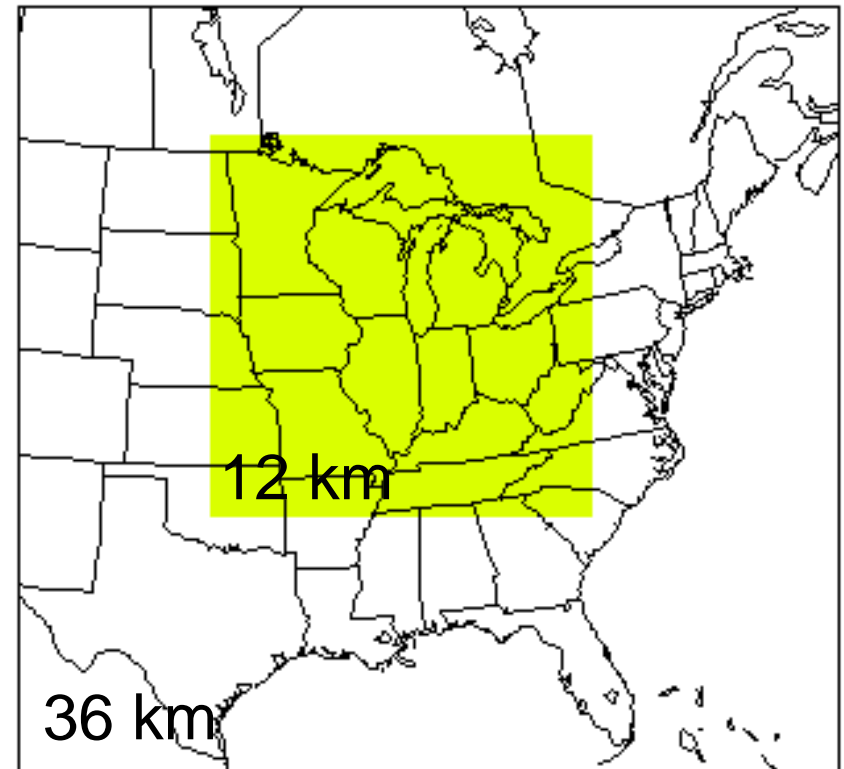
Technical Analyses: Modeling

Model: CAMx

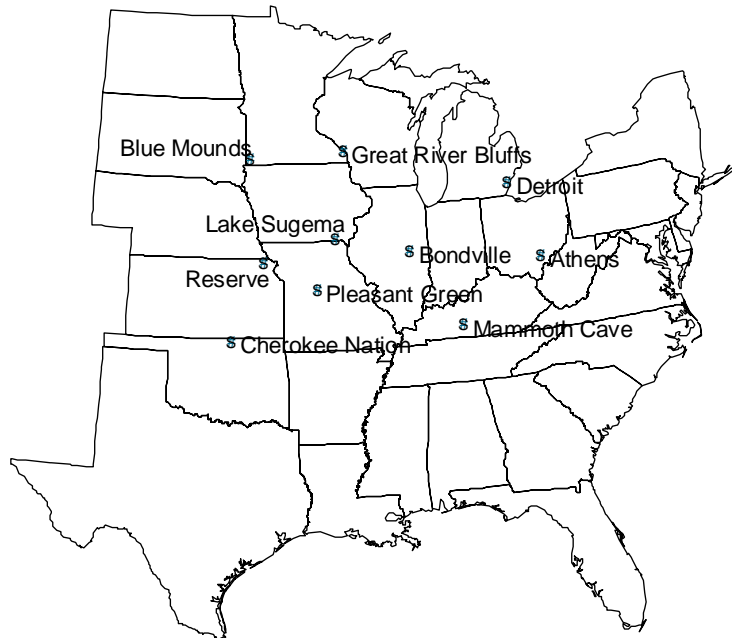
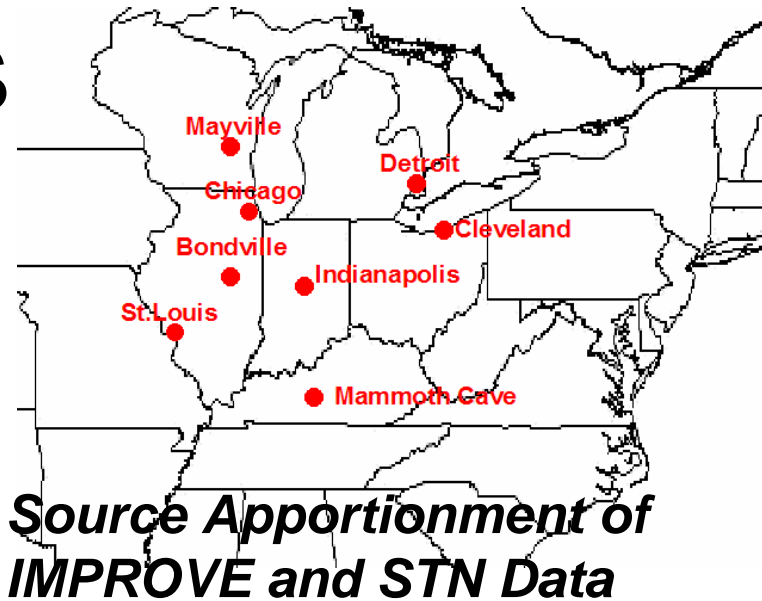
Domain/Grid: Eastern U.S.
(36 km), Midwest (12 km)

Year: 2002 (full year)
- PM/haze, 36 km

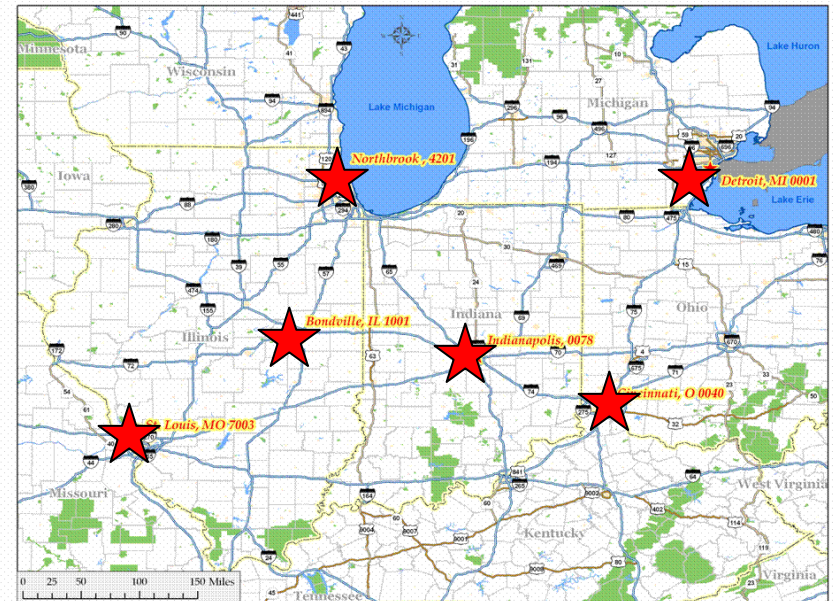
2001, 2002, 2003
(summer) – O₃, 12 km



Technical Analyses Monitoring and Data Analyses



Regional Ammonia Monitoring



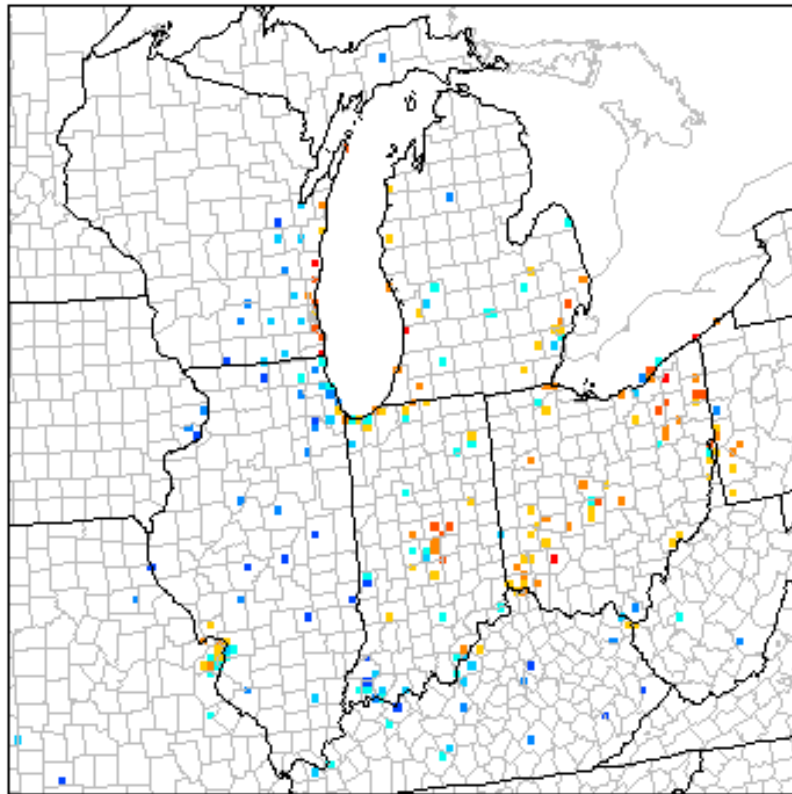
Urban Organics Study

Existing Control Programs

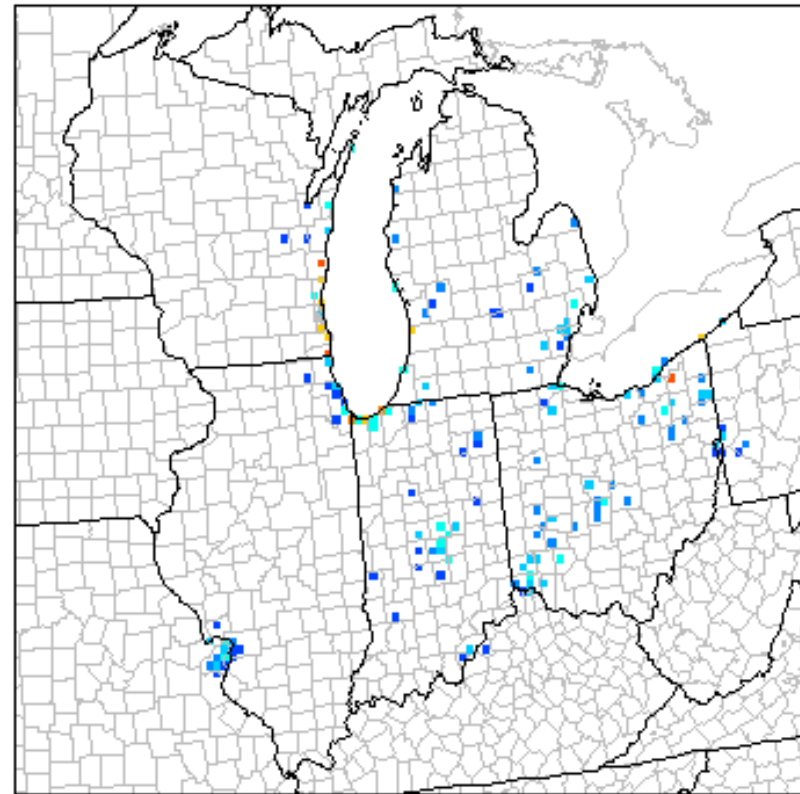
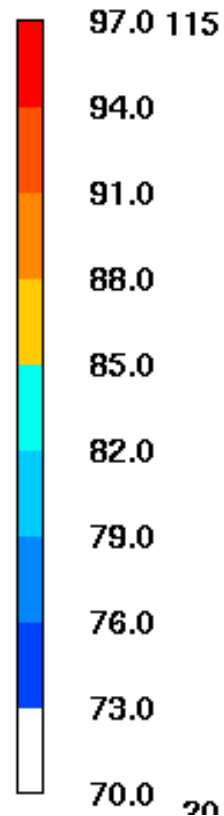
- **On-Highway Mobile Sources**
 - Tier II/Low sulfur fuel
 - Inspection/Maintenance programs (nonattainment areas)
 - Reformulated gasoline (nonattainment areas)
- **Off-Highway Mobile Sources**
 - Federal control programs incorporated into NONROAD model (e.g., nonroad diesel rule), plus the evaporative Large Spark Ignition and Recreational Vehicle standards
 - Heavy-duty diesel (2007) engine standard/Low sulfur fuel
 - Federal railroad/locomotive standards
 - Federal commercial marine vessel engine standards
- **Power Plants**
 - Title IV (Phases I and II)
 - NO_x SIP Call
 - **Clean Air Interstate Rule**
- **Other Point Sources**
 - VOC 2-, 4-, 7-, and 10-year MACT standards
 - Combustion turbine MACT
 - Industrial boiler/process heater/RICE MACT

Ozone Results

2002 (observed)

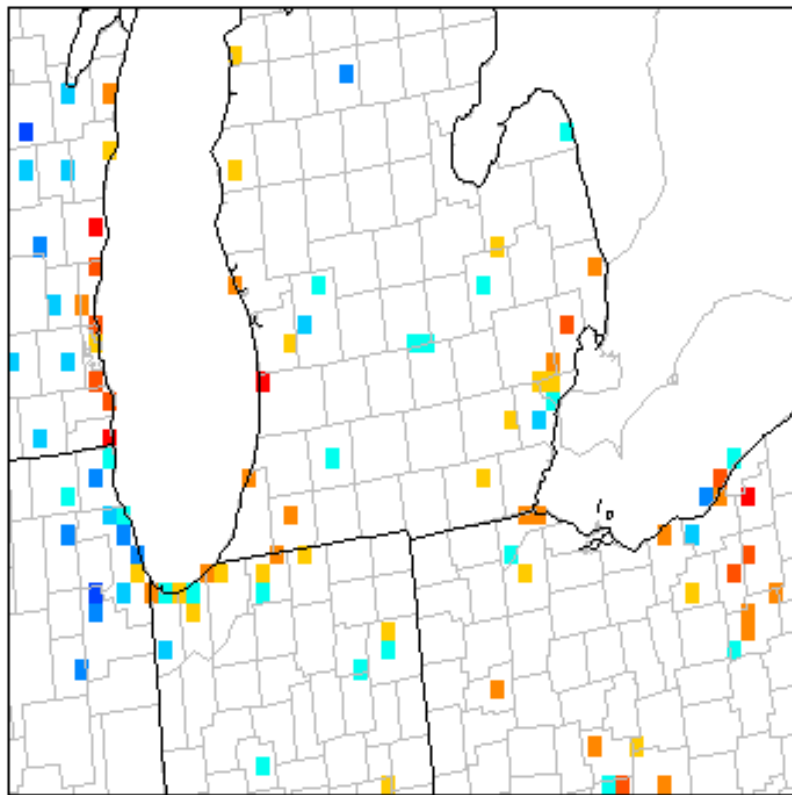


2009 (projected)

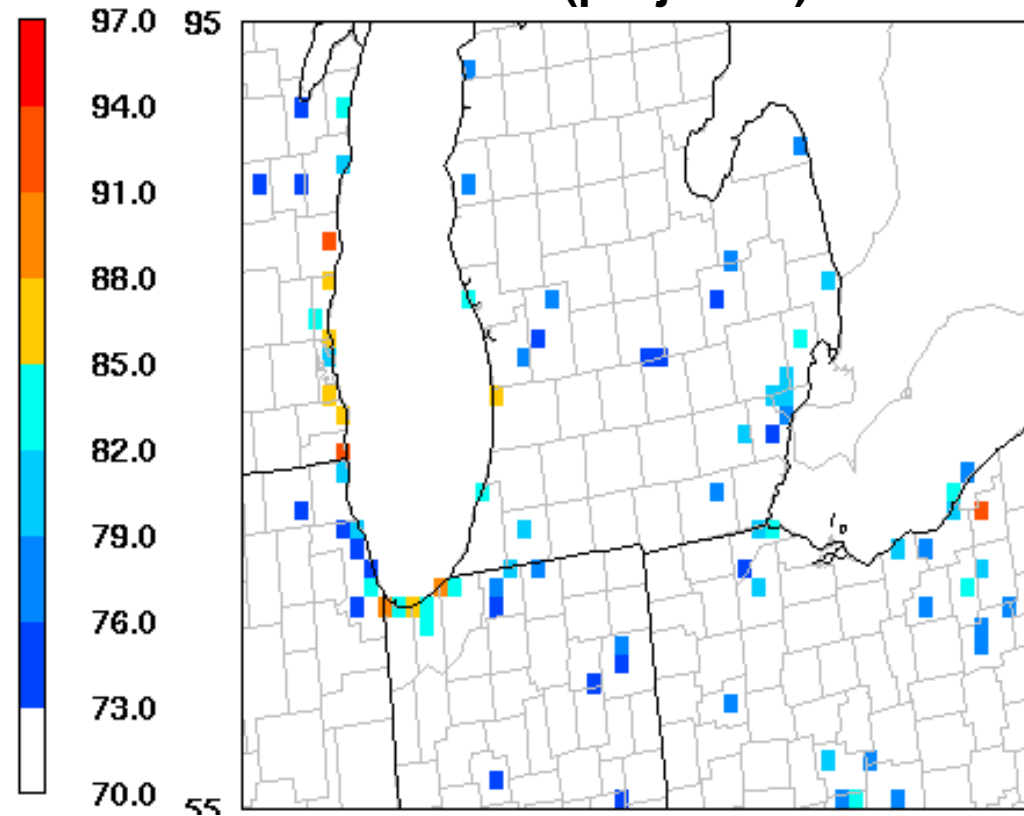


Ozone Results

2002 (observed)

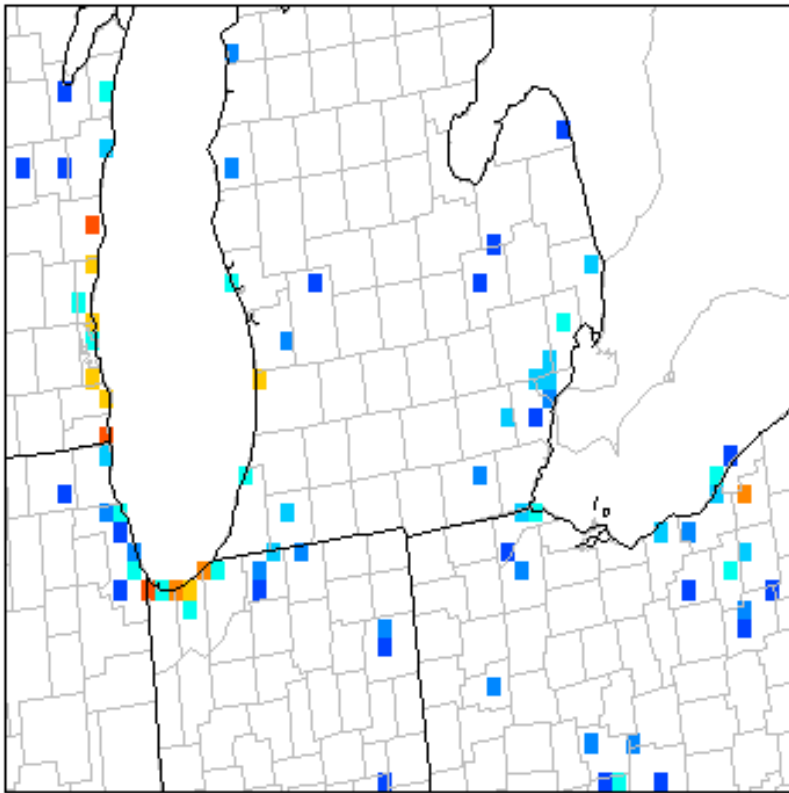


2009 (projected)

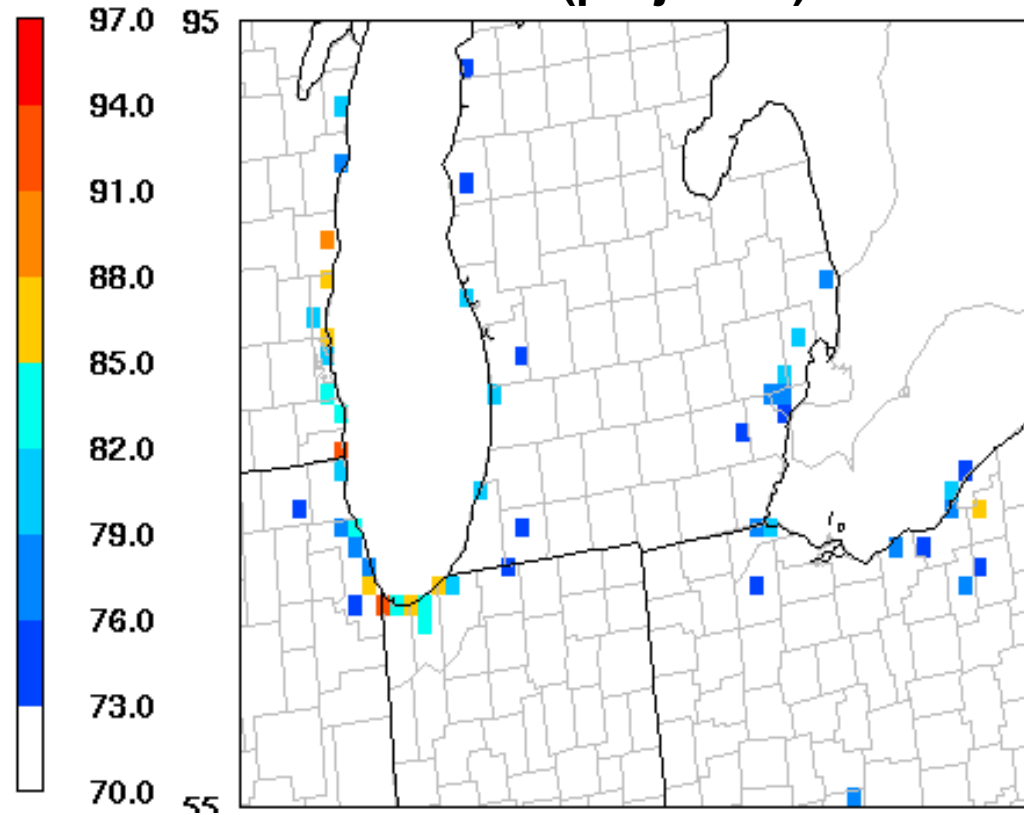


Ozone Results

2012 (projected)

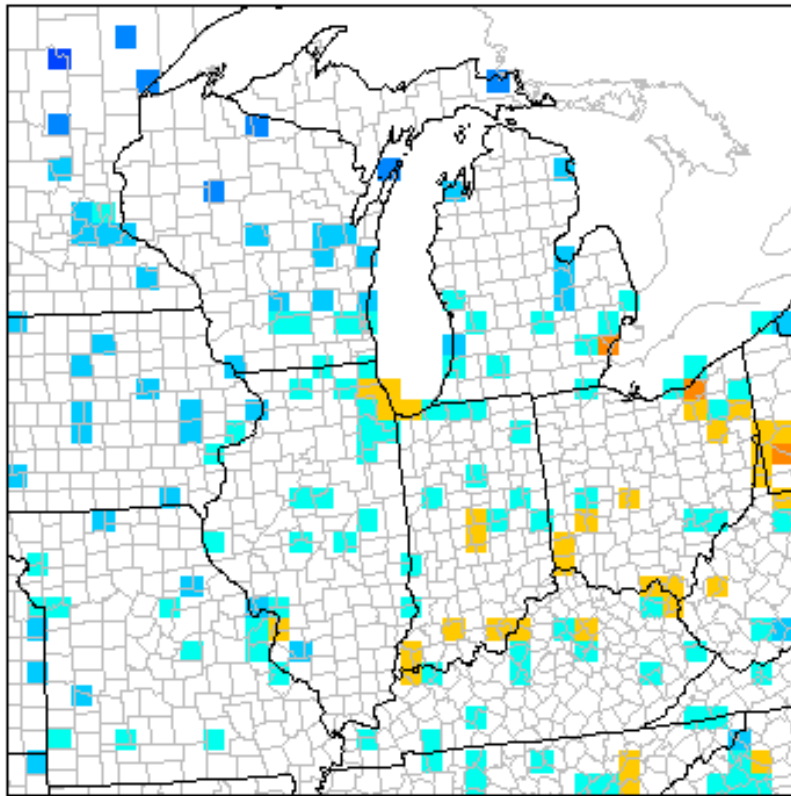


2018 (projected)

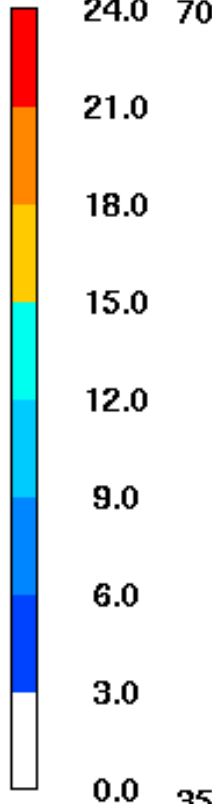
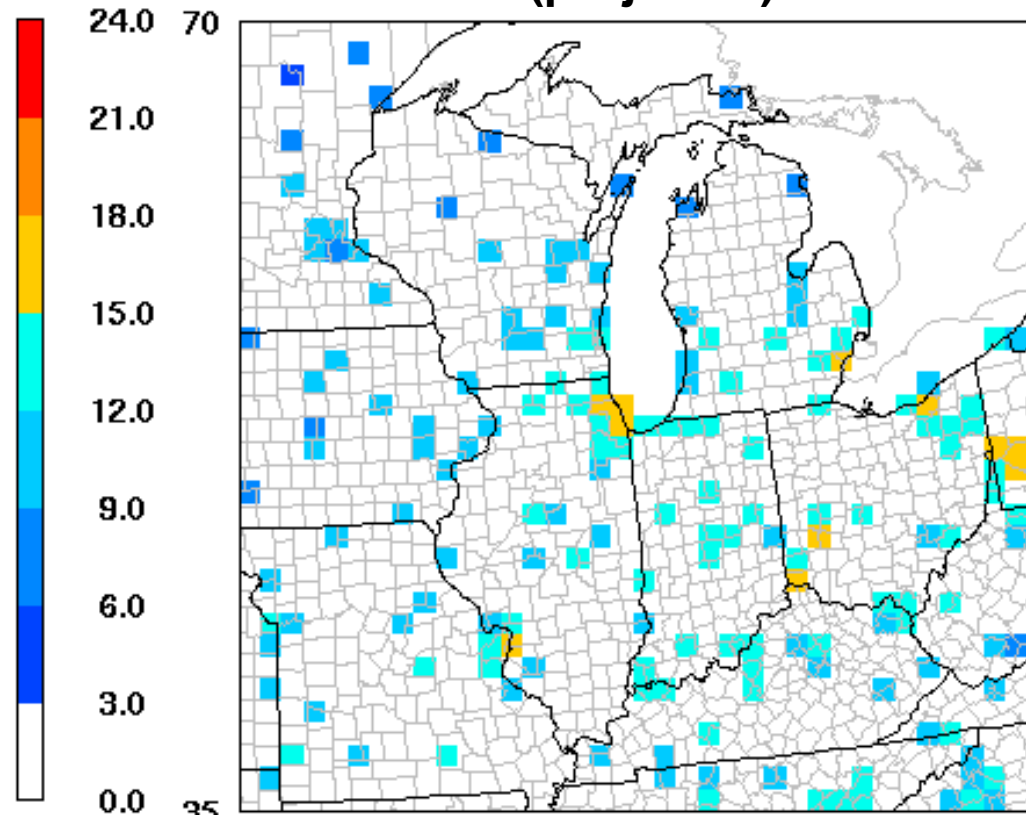


PM_{2.5} Results

2002 (observed)

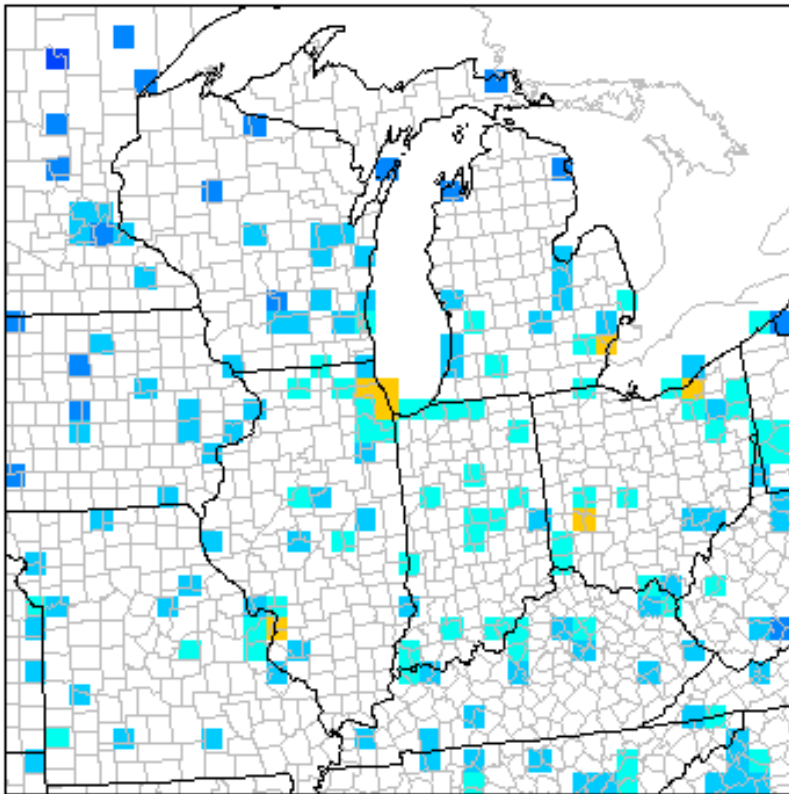


2009 (projected)

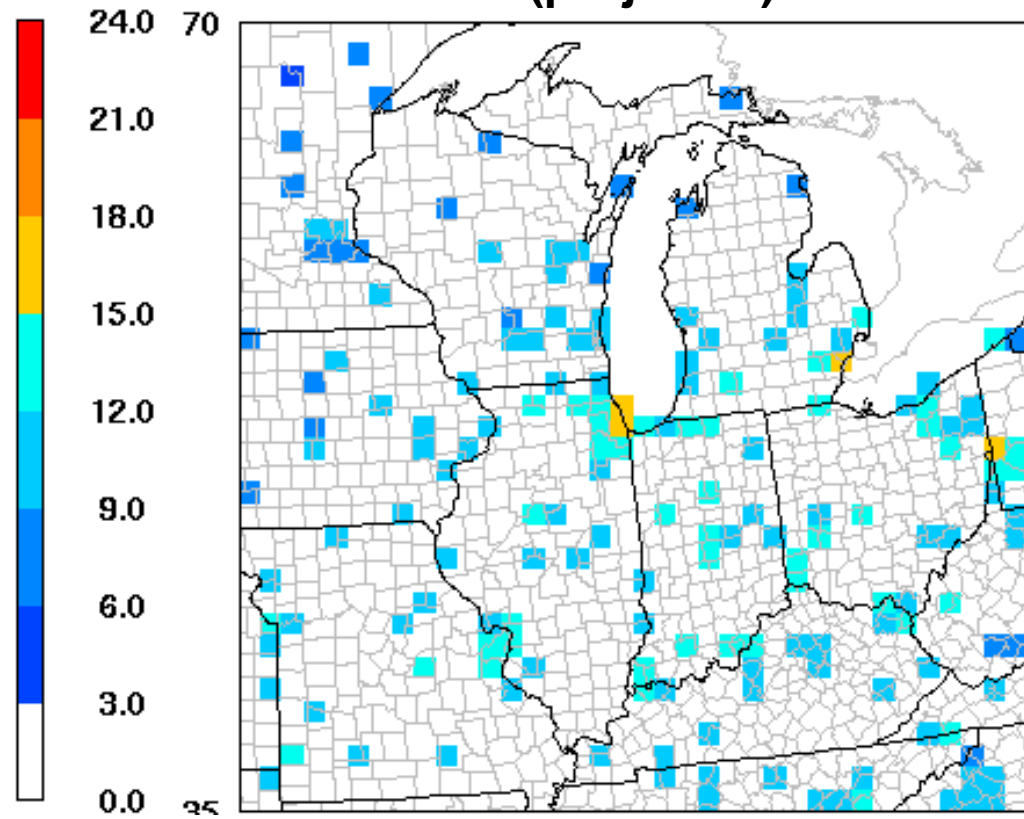


PM_{2.5} Results

2012 (projected)

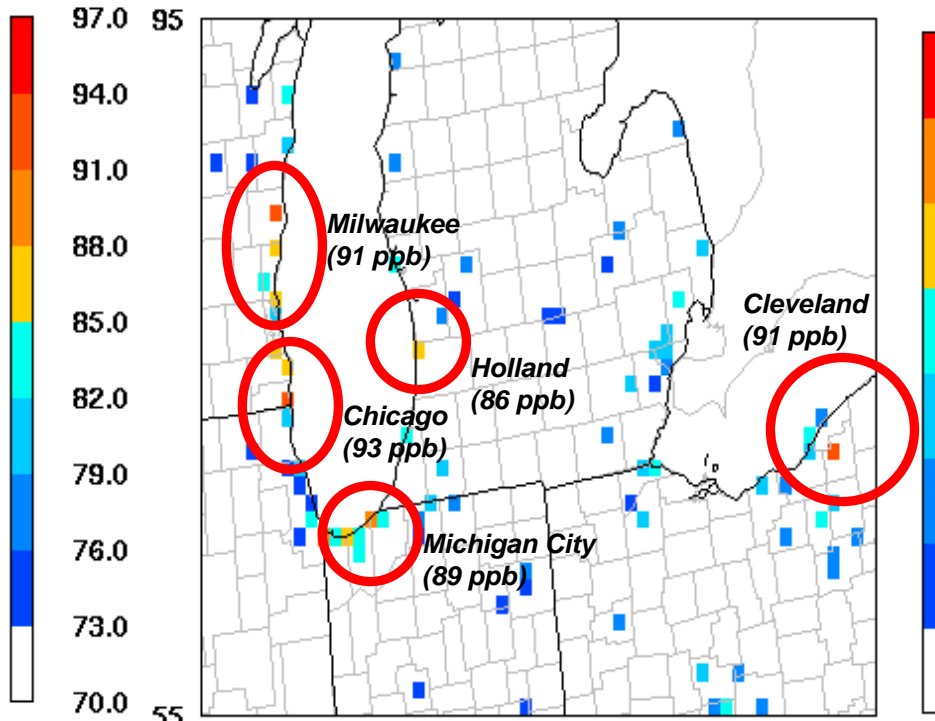


2018 (projected)

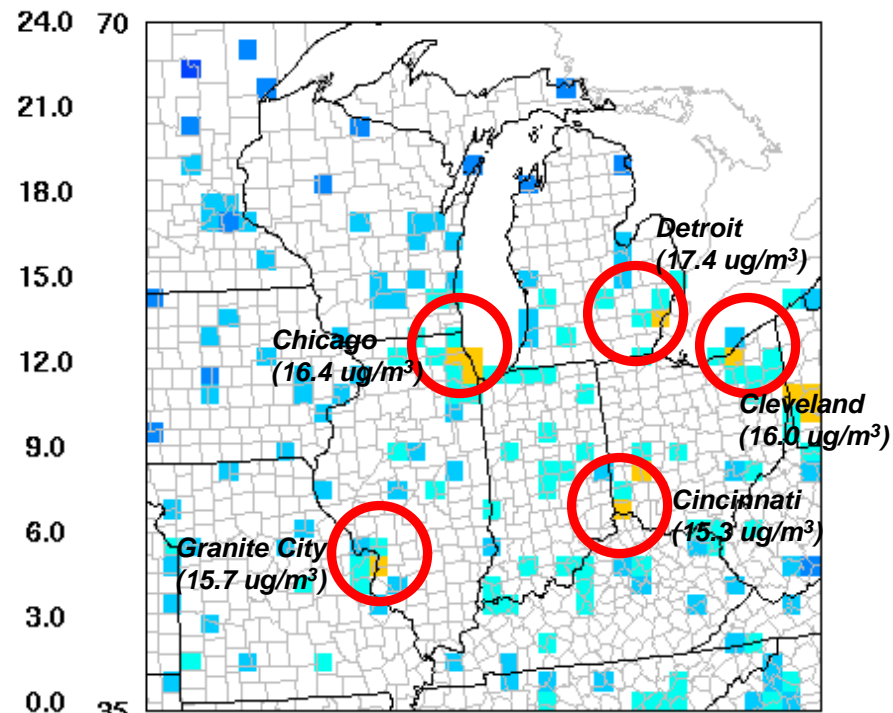


Residual Nonattainment Areas

Ozone



PM_{2.5}



Example Control Options

		<u>Option</u>	<u>Local VOC,OC</u>	<u>Regional NOx</u>	<u>Regional SO2</u>
Chicago	Ozone	(1)	> 75%	----	
		(2)	----	40%	
		(3)	35%	35%	
	PM2.5	(1)	30%	30%	----
		(2)	25%	25%	25%
Milwaukee	Ozone	(1)	> 75%	----	
		(2)	----	30%	
		(3)	25%	25%	
Detroit	PM2.5	(1)	30%	30%	----
		(2)	25%	25%	25%
Granite City	PM2.5	(1)	25%	25%	----
		(2)	20%	20%	20%
Cleveland	Ozone	(1)	> 75%	----	
		(2)	----	30%	
		(3)	25%	25%	
	PM2.5	(1)	25%	25%	----
		(2)	20%	20%	20%

**Reasonable starting point for policy discussions:
25-35% VOC/OC, NOx, SO2**

Control Strategy Options: Issues

- Precursors/pollutants
- Source sectors/control measures
- Geographic coverage
- Timing
- Level of control

Possible Stationary Source Control Measures

- **Point Sources**

- Electric Generating Units
- Industrial/Commercial/Institutional (ICI) Boilers
- Cement Kilns
- Petroleum Refineries
- Iron & Steel Plants
- Chemical Plants
- Glass Plants
- Asphalt Plants
- Surface Coating
- Degreasing

- **Area Sources**

- Industrial Surface Coating
- Degreasing
- Architectural Coatings
- Portable Fuel Containers
- Consumer Products
- Auto Refinishing
- Gasoline Dispensing Facilities

Possible Mobile Source Control Measures

- **Heavy-Duty Diesel Vehicles**

- Retrofit programs
- Accelerate turnover of older vehicles with new, cleaner vehicles or alternative fuel vehicles
- Repower older , high emitting engines with low emitting engines
- Accelerate “reflashing” programs

- **Diesel Vehicles/Equipment**

- Use of reformulated fuels

- **Diesel Equipment**

- Accelerated turnover of current vehicles with lower emitting vehicles or alternative fuel vehicles
- Diesel Equipment
- Retrofit programs
- Accelerate use of Tier 2,3,4 engines

- **Light Duty Vehicles**

- Accelerated turnover of current vehicles with lower emitting vehicles or alternative fuel vehicles

Summary

- Regional, multi-pollutant planning approach
- SIPs for ozone (8-hour) and PM_{2.5} due in mid-2007 and early 2008, respectively
 - Need to identify control strategies by early 2006
- Modeling shows existing controls will improve air quality, but not enough to meet air quality standards
 - Need combination of local and regional controls; many combinations show attainment; 25-35% reductions suggested as starting point for policy discussions
- Examination of additional, possible control measures is on-going