

# State Health Data Availability and Access For Environmental Public Health Indicator



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Program



Minnesota  
Environmental  
Public Health  
Tracking

# Accessing Public Health Data

- State public health agencies hold many datasets with potential application for EPHI research
- Barriers to data access and use are significant
  - Programs are “siloed”
  - Lack of clear path for making data requests
  - Laws governing data sharing and use vary by state and by program
  - Most “public” data are aggregated and de-identified

# Environmental Public Health Tracking



## National EPHT Network

- 23 states and NYC

## State EPHT Programs

- provide a portal for access to state and local level data
- add data unique to the state
- negotiate data use agreements with data stewards to ease data sharing
- build environmental epidemiology capacity













Minnesota  
Environmental  
Public Health  
Tracking

# “Deconstruction of data silos will be a chief and lasting outcome of EPHT”



# Minnesota Public Health Data Access

 <p><b>Air Quality</b></p>	 <p><b>Childhood Lead Poisoning</b></p>
 <p><b>Asthma</b></p>	 <p><b>Chronic Obstructive Pulmonary Disease (COPD)</b></p>
 <p><b>Birth Defects</b></p>	 <p><b>Drinking Water Quality</b></p>
 <p><b>Cancer</b></p>	 <p><b>Heart Attacks</b></p>
 <p><b>Carbon Monoxide Poisoning</b></p>	 <p><b>Reproductive &amp; Birth Outcomes</b></p>

**Topics in development:** pesticides, climate change, environmental tobacco smoke, radon, private well data

Age-adjusted Rates | Statistically Higher or Lower

Statistically Higher or Lower

Select Years:

2006 - 2008

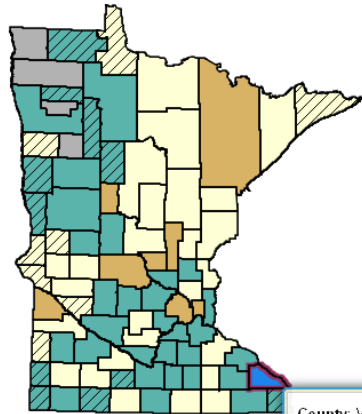
2003 - 2005

2000 - 2002

Legend

- Statistically lower than the state average
- No significant difference
- Statistically higher than the state average
- Unstable rate\*

**Asthma Hospitalizations**  
2006 - 2008 Statistically Higher or Lower  
Age-adjusted rates per 10,000



- FIND CITY
- CENTER MAP
- HELP

County: Winona  
Age-adjusted rate : 4  
Count: 56  
Total population: 148786  
Age below 18 : 22.8%  
Age above 65: 13.1%  
Below poverty line: 12%

Download Map

\* Rates based on counts less than or equal to 20 should be interpreted with caution, the rate may be unstable because it can change dramatically with the addition or subtraction of one case.  
\*\* To protect an individual's privacy, hospitalization counts from 1 to 5 are suppressed if the underlying population is less than or equal to 100,000.

- About Asthma
- About the Map Data
- MNPH Data Access: Asthma
- MNPH Data Access: Home

**Asthma Hospitalizations: Age-adjusted rates per 10,000**  
2006 - 2008 Statistically Higher or Lower

State	Rate	95% CI	Count	Tot. pop.	% age > 65	% age < 18	% below poverty
Minnesota	8.2	(8.1 - 8.4)	12871	15570119	12.1	26.2	7.9
County	Rate	95% CI	Count	Tot. pop.	% age > 65	% age < 18	% below poverty
Houston*	1.5	(0.7 - 2.9)	9	58425	16	27.2	6.5
Morrison	6.6	(5.1 - 8.5)	67	98258	15.6	28	11.1
Renville	5.2	(3.3 - 7.8)	25	48285	19.8	26.5	8.8
Blue Earth	4	(3.1 - 5.2)	62	179934	12.1	21.4	12.9
Sherburne	6.9	(5.8 - 8.0)	165	257001	7.1	30.9	4.4
Sibley	7.4	(5.1 - 10.3)	35	45113	16.4	27.7	8.1
Todd	4.7	(3.2 - 6.6)	34	71931	16.1	27.4	12.9
Winona	4	(2.9 - 5.2)	56	148786	13.1	22.8	12
Carlton	8.4	(6.7 - 10.3)	91	101426	15.1	25.4	7.9
Atkin	6.3	(4.1 - 9.2)	33	47863	23	20.9	11.6
Crow Wing	7.7	(6.4 - 9.0)	152	184720	17.1	24.8	9.8
Pine	6.9	(5.2 - 8.9)	60	84585	15	25.5	11.3
Lake	9.1	(5.7 - 13.9)	24	32248	20	22.3	7.4
Kittson**				13519	21.6	25.1	10.2
Marshall**				28347	18.5	25.4	9.8
Lake of the Woods*	7.1	(3.4 - 13.1)	11	12199	17.2	24.7	9.9

Unstable rate\*

Download Data

Data not shown\*\*

- Certificates & Records
- Diseases & Conditions
- Environmental Health
- Health Care & Coverage
- Life Stages & Populations
- Prevention & Healthy Living
- Data & Statistics
- Emergency Preparedness
- Facilities & Professions
- Injury, Violence & Safety
- Policy, Economics & Legislation
- Privacy Statement & Disclaimer

Home

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Locations & Directions

Comments & Questions

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# Secure Portal Concept

**Secure DATA Access**

Email Address

Password

Sign In



**Custom  
Data  
Sets?**

# Data Privacy vs. Public Health Protection

- Balance of public good vs. individual rights
- Mn Government Data Practices Act
  - Data are classified and separated
  - All government data are public unless....
    - Classified otherwise under a specific law
    - Health data on individuals is private
    - Epidemiological investigations for public health protection
    - Commissioner of Health has broad authority
    - Research uses



# State Collaborations with Academic Partners

## Data “linkage” studies

- Dan Wartenburg, UMDNJ
  - Birth outcomes and air pollution
- Leslie Staynor, U. Illinois- Chicago
  - birth records and childhood cancers and state drinking water information systems (SDWIS) data on agricultural chemicals (nitrate and atrazine)

# EPHI Research Project in Minnesota

- US EPA STAR grant

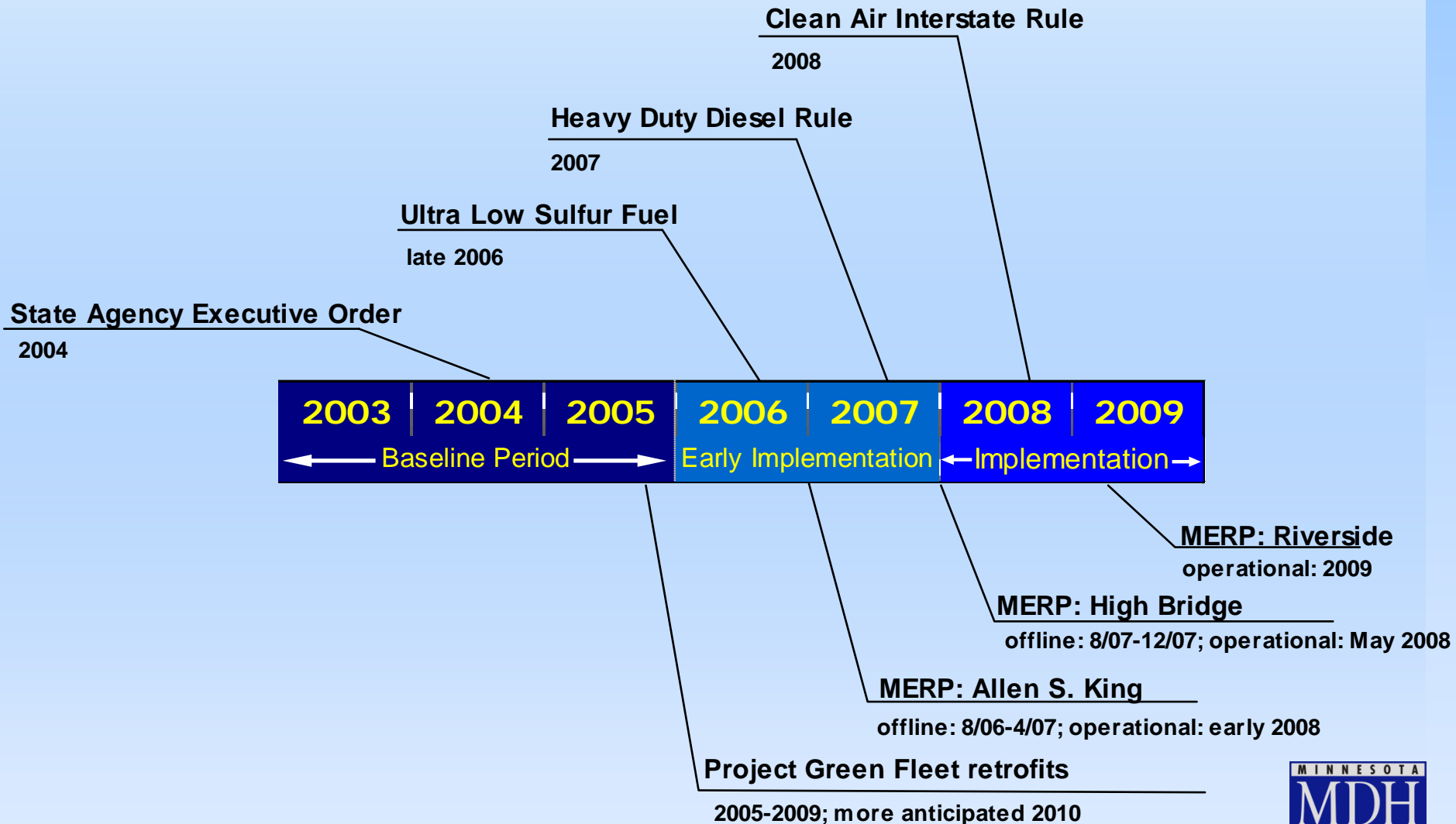


- Partners:

- Minnesota Dept. Of Health
- Minnesota Pollution Control Agency'
- Olmsted Medical Center, Rochester Epi Project

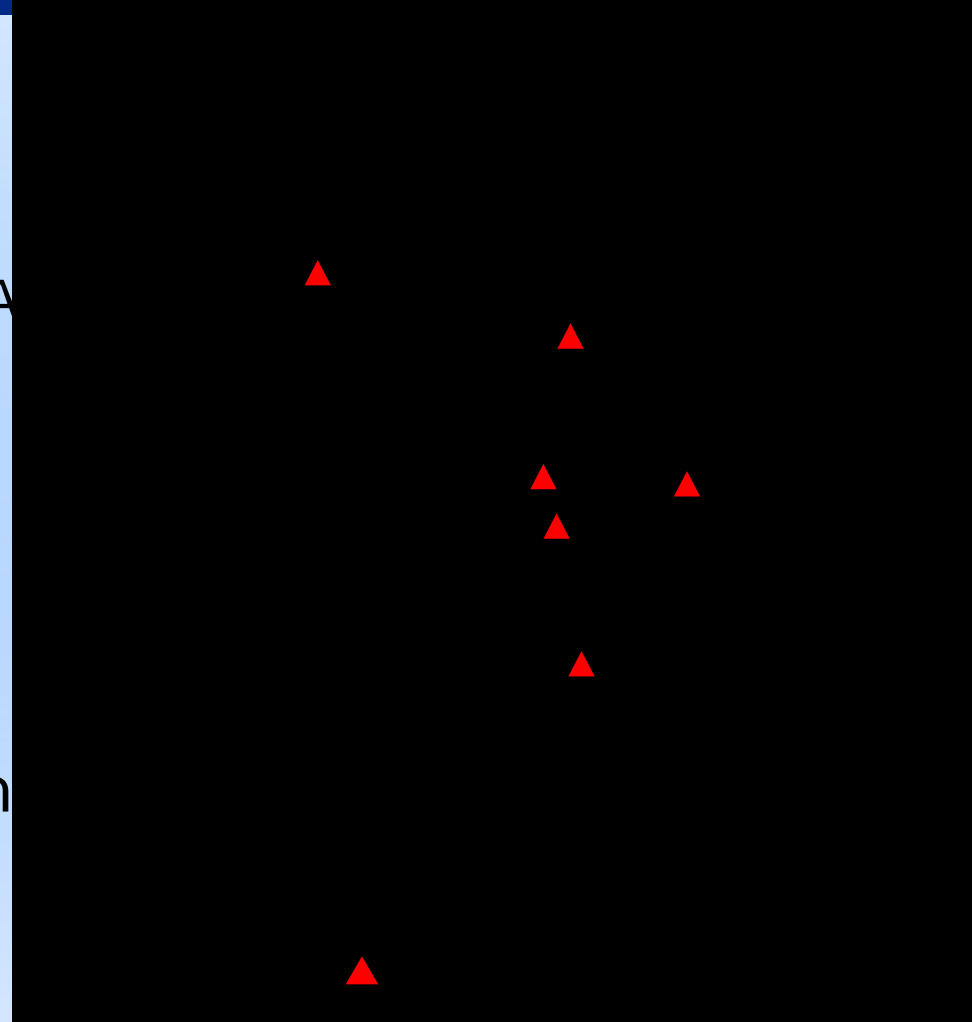
- Purpose: Develop outcome-based environmental health indicators for tracking public health impacts of particulate matter reduction strategies

# PM reduction strategies



# Population exposure data

- Ambient  $PM_{2.5}$  (MPCA)
  - Continuous monitors
  - Daily 24-hr averages
  - Avg. of 6 monitor stations for MSP metro



# Health outcomes data

- Hospitalizations (MDH)
  - Asthma
  - Chronic Lower Respiratory Disease
  - Total respiratory disease
  - Cardiovascular disease
- Mortality (MDH)
  - All-cause
  - cardiopulmonary
- Rochester Epi Project (linked health care records)
  - Asthma clinic cluster visits
  - Oral steroid prescription data
- Ambulance data (EMS runs)

For more information

Environmental Epidemiology Unit  
Chronic Disease and Environmental Epidemiology Section  
Minnesota Department of Health

<http://www.health.state.mn.us/divs/hpcd/cdee/enviroepi.html>



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