



A NEW DECADE OF AIR RESOURCE PROTECTION 2010

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WHAT WILL DRIVE OUR AIR RESOURCE MANAGEMENT

- *New & Revised Ambient Air Quality Standards*
- *New Administration, Old Administration & the Courts*
- *Resource Commitment to Bringing Areas into Attainment if Violating Ambient Air Quality Standards*
- *Funding and Prioritizing Activities*
- *Regional Transport*
- *Urban and Rural mix of Emissions*
- *Community, Public, and Industry Involvement*
- *Emerging Issues*

AMBIENT AIR QUALITY STANDARDS

- *Ozone - March 2008*
- *Lead – September 2008*
- *Nitrogen Dioxide (primary)– December 2009*
- *Sulfur Dioxide (primary) – March 2010*
- *Nitrogen Dioxide & Sulfur Dioxide (secondary)
October 2010*
- *Particulate – 2006 and October 2011*
- *Carbon Monoxide – July 2012*

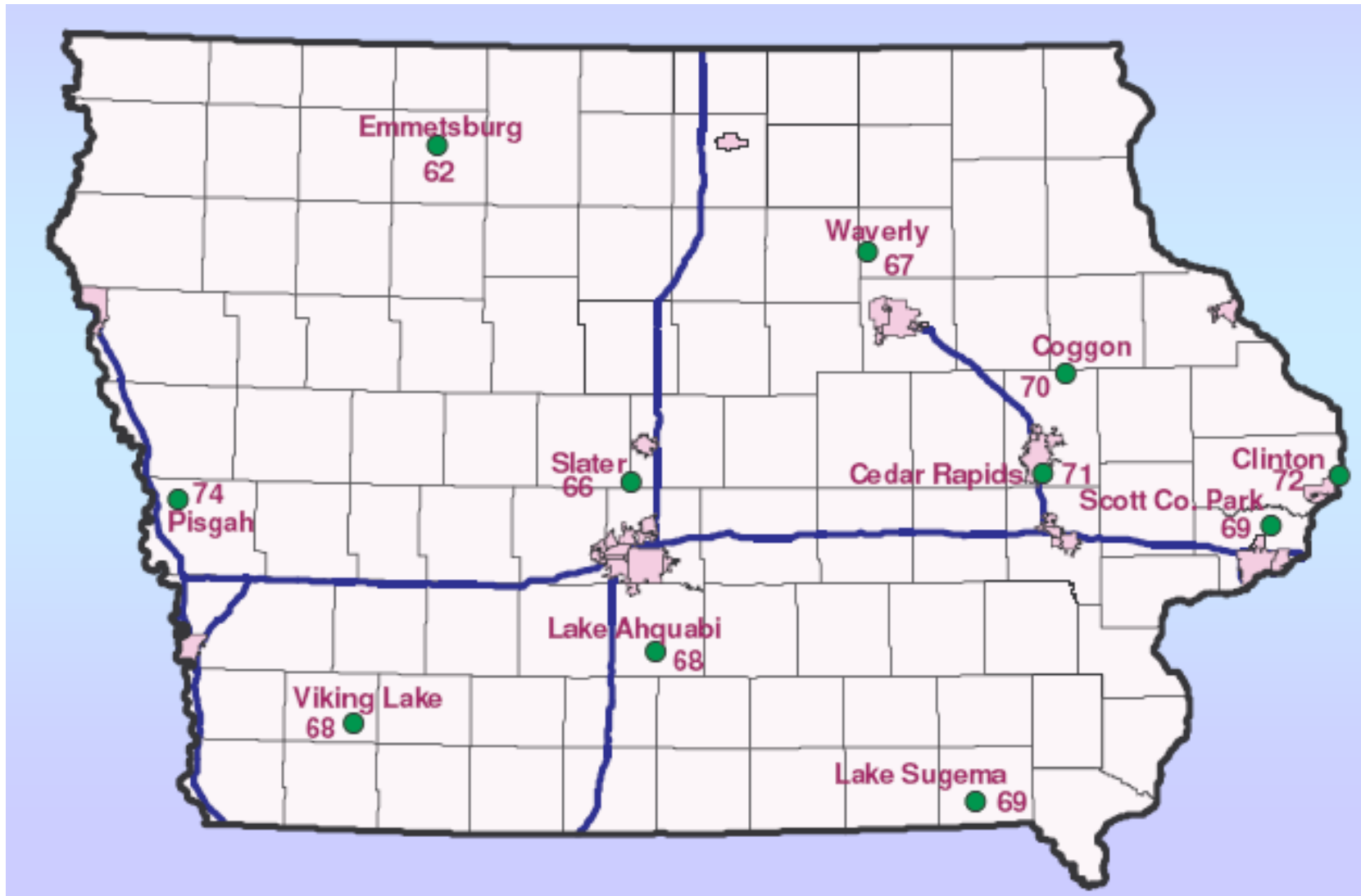
Repeat every 5 years...

AMBIENT AIR QUALITY STANDARDS OZONE

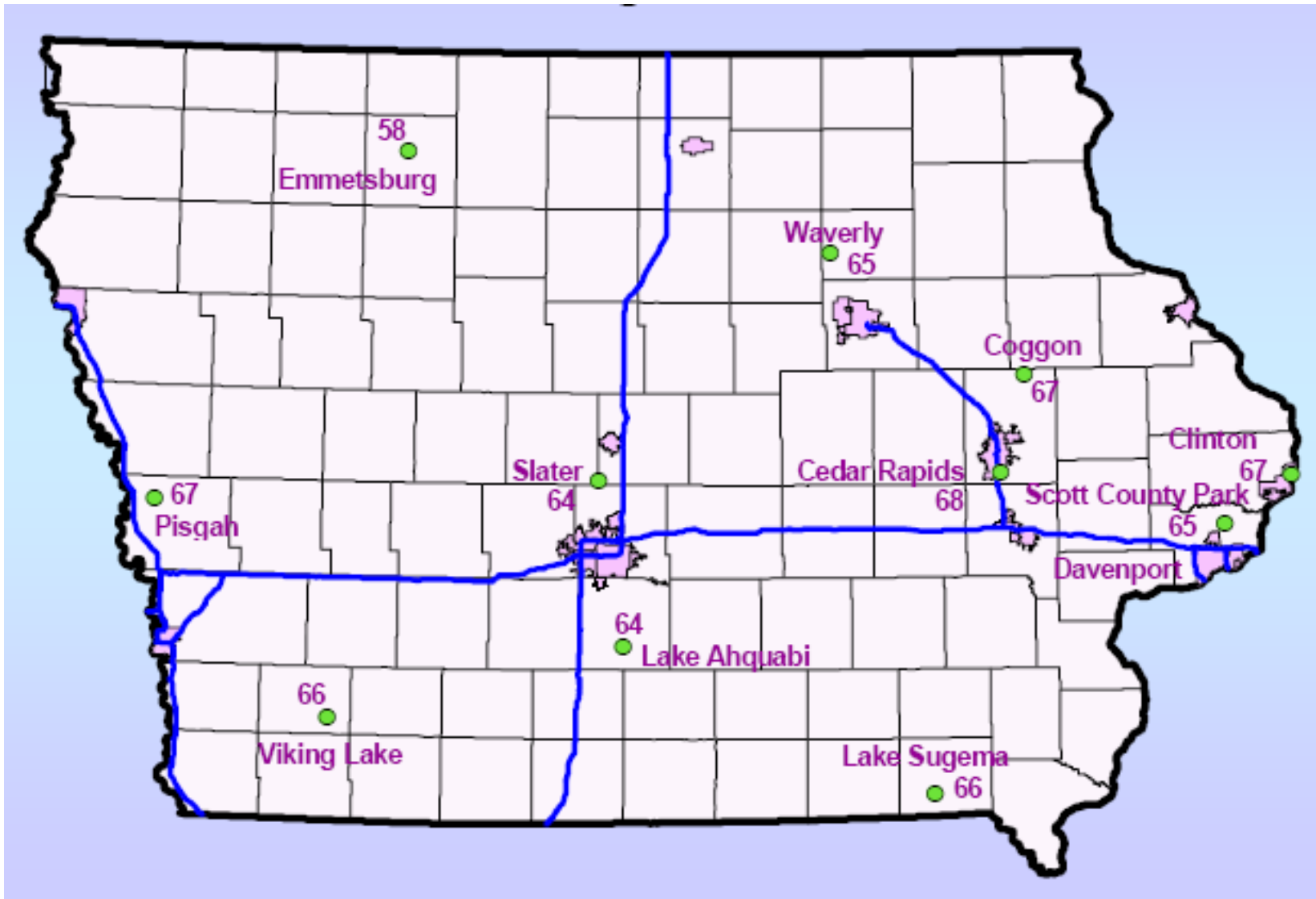
How are we responding to current ozone levels?

- *Coordination with other states to develop community-based early response*
 - *Bi-state air quality task force, other metropolitan planning and transportation organizations, local AQ programs*
- *Potential change in primary standard to 0.70 ppm, future change in secondary standard*

OZONE DESIGN VALUES 2005-2007



OZONE DESIGN VALUES 2006-2008



AMBIENT AIR QUALITY STANDARDS LEAD

- ***Monitoring plan***
 - *Council Bluffs*
 - *Other Source(s) under review*
- ***Development of capacity – lab & field equipment***
- ***Monitoring thresholds: 1 ton actual emissions, model 50% of the NAAQS can request a waiver***
- ***Potential change in the threshold to 0.50 ton actual emissions***
- ***Permitting and Program Management challenge***
 - *Sources can currently be permitted right up to the NAAQS and this will necessitate the siting of an ambient monitor*
 - *The monitor must remain there as long as the modeling criteria is exceeded*

AMBIENT AIR QUALITY STANDARDS NO₂

- *Proposed, comments due to EPA September 15, 2009*
- *New Standard likely tightened*
- *Monitoring challenges - roadways*
- *Regulatory challenges – transportation planning*

AMBIENT AIR QUALITY STANDARDS PM2.5

- *Infrastructure Plan due September 21, 2009*
 - Authority and program elements
 - October 15, 2009
- *Implementation Plan due May 16, 2011*
 - Rules and implementation plan
 - August 2011

AMBIENT AIR QUALITY STANDARDS PM2.5

Implementation Plan Draft Schedule

- *Development of air quality rules and program elements to assure PM2.5 Attainment and Maintenance*
- *May – September 2010 Work Groups*
 - *Non-concurrent sub-groups*
 - *Technical product development*
- *October 2010 – November 2011 Rule Drafting*
- *December 2010 – Environmental Protection Commission Information*
- *January 2011 – Environmental Protection Commission Notice*
 - *February – April 2011 Public Hearings*
- *May – June 2011 Finalize rule*
- *July 2011 Environmental Protection Commission final adoption*

NATIONAL AMBIENT AIR QUALITY STANDARDS - WHERE DO WE STAND THIS YEAR?

- *What is a “threshold value”? How does it differ from the “standard” and the “design value”?*
 - For PM2.5, the Standard is met (or attained) when the 3 year average of the annual 98th percentile 24-hour value is 35 $\mu\text{g}/\text{m}^3$ or less.
 - Each site has a “design value.” The design value is the 3 year average of the 98th percentile 24-hour value.
 - A violation of the National Ambient Air Quality Standard occurs if the design value equals 35.5 $\mu\text{g}/\text{m}^3$ or greater.
 - The Threshold Value is the 98th percentile value for the current year that would cause the design value calculation to equal 35.5 $\mu\text{g}/\text{m}^3$ or higher , showing a violation of the standard.

2009 THRESHOLD VALUES PM2.5 24-HOUR STANDARD

Site	2007- 98th %	2008- 98th %	2009 threshold
Muscatine, Musser Park	44.0	33.7	28.8
Davenport, Black Hawk Foundry	37.4	31.3	37.8
Clinton, Chancy Park	36.6	31.0	38.9
Iowa City, Hoover	32.8	28.3	45.4
Clarion, CAFO Site	33.3	27.2	46.0
Davenport, Adams Elementary	32.8	27.5	46.2
Waterloo, Grout Museum	31.5	28.5	46.5
Davenport, Jefferson School	30.4	28.2	47.9
Clinton, Rainbow Park	29.6	28.3	48.6
Lowell Elementary, Sioux City	31.2	24.7	50.6
Keokuk, Fire Station	29.6	23.8	53.1
Franklin Elementary, Council Bluffs	33.0	20.2	53.3
Lake Sugema State Park	26.5	25.7	54.3
Des Moines, Public Health Bldg.	27.9	24.2	54.4
Cedar Rapids, Army Reserve	25.9	25.4	55.2
Clive, Indian Hills Jr. High	25.2	22.6	58.7
Iowa Lakes College, Emmetsburg	25.0	21.3	60.2
Viking Lake State Park	24.7	18.8	63.0

CURRENT AMBIENT AIR QUALITY STANDARD EXCEEDANCES

2009 NAAQS Exceedances (reported through August 26th, 2009)

Monitor Type	Site Location	Site Name	Exceedance Date	Concentration	Units	AQI*
PM2.5	Muscatine	Garfield School	1/3/09	54.0	ug/m3	128
PM2.5	Clinton	Chancy Park	1/22/09	40.7	ug/m3	101
PM2.5	Clinton	Rainbow Park	1/22/09	40.3	ug/m3	100
PM2.5	Cedar Rapids	Linn Public Health	1/22/09	35.8	ug/m3	91
PM2.5	Cedar Rapids	Army Reserve	1/22/09	40.2	ug/m3	100
PM2.5	Clarion	Clarion-CAFO	1/22/09	39.2	ug/m3	98
PM2.5	Waterloo	Grout Museum	1/22/09	43.4	ug/m3	107
PM2.5	Waterloo	Water Tower	1/22/09	38	ug/m3	95
PM2.5	Muscatine	Garfield School	2/26/09	35.7	ug/m3	91
PM2.5	Muscatine	Garfield School	4/4/09	37.3	ug/m3	94

* EPA is currently revising the Air Quality Index for Fine Particulate



AIR TOXICS IN SCHOOLS

- *December 2009 USA Today articles*
- *Iowa response – data & modeling uncertainties*
 - **Data review, stack testing, dispersion modeling, monitoring, collaboration with IDPH**
- *Studies completed*
 - **Story City – found no concentrations of concern**
- *Studies underway*
 - **Clinton, Keokuk, other areas identified in USA today**

REGIONAL & NATIONAL OUTLOOK

- ***Clean Air Interstate (CAIR) rule “replacement” - 2011***
 - **110 (A)(2)(D) – Cause or contribute to the interference with Attainment or Maintenance**
- ***Regional Haze – Reliance on CAIR for electric generating units***
- ***Mercury Rule replacement***
- ***Boiler National Emissions Standards for Hazardous Air Pollutants (Boiler MACT)***

IOWA OUTLOOK

- *Statewide implementation of PM2.5 Permitting Program*
 - *Work groups Winter 2010*
- *Community-Based Air Resource Planning Assistance*
 - *Clinton, Council Bluffs, Dubuque, and more*
- *Funding*
 - *Watch for upcoming “Air Quality Program Funding 101” sessions this fall*



COMMUNITY-BASED AIR RESOURCE PLANNING

- **The Case for Community-Based Air Resource Planning**
 - *No surprises = Planned growth*
 - *Become a regular part of Transportation, Community, and Industrial Planning*
- **How?**
 - **Utilize existing air resource use information and develop regional models to better characterize air resource use by area, mobile, and other sources**
 - **Encourage air pollution considerations in transportation planning**
 - **Provide support for local development and land use planning**
 - **Support industry planning**

COMMUNITY-BASED AIR RESOURCE PLANNING

○ Resources Available:

- Some facility-wide modeling
- Very few community-wide models

○ Resources Needed:

- Community modeling to identify resource constraints
- Regional modeling, transportation modeling
- Inventory analysis
- Development of information on incorporating Air Quality criteria into planning activities
 - *Transportation – Intermodal Surface Transportation Efficiency Act collaboration*
 - *Communities – Industrial Parks, Siting, and Growth plans*
 - *Facilities – New sites, expansions, and changes*

AIR QUALITY PLAN

- **Putting it all together – the big picture**
 - **Current state – how are we protecting the resource now?**
 - **Emerging issues – what the issues that are driving air resource protection?**
 - **Future state – what would be the best approach to protecting the resource in the future?**
- **Public sessions input incorporated throughout**
- **Draft to stakeholders Jan 2010**



DISCUSSION

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