



IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Air Quality Bureau
Implementation Update for
2012 Annual PM_{2.5} NAAQS
AQ Client Contact Meeting
March 6, 2014

Air Quality Standards

Clean Air Act (CAA)

- Requires the U.S. EPA to establish health based (primary) and welfare (secondary) standards for criteria pollutants
- Called National Ambient Air Quality Standards (NAAQS)
 - May also be called “air quality standards” or “standards.”
 - (Not to be confused with Emissions Standards)
 - Establishes maximum concentrations of pollutants that are acceptable in the general air we breathe.
- Primary NAAQS: Protect public health with margin of safety
- Secondary NAAQS: Protect public welfare, including soil, crops, and vegetation.

NAAQS Pollutants

Six criteria pollutants

- Ground-level ozone (O_3)
- Nitrogen Dioxide (NO_2)
- Sulfur Dioxide (SO_2)
- Carbon Monoxide (CO)
- Lead (Pb)
- Particulate Matter (PM)
 - PM_{10} : Particulate matter 10 micrometers or less in size.
 - $PM_{2.5}$: Particulate matter 2.5 micrometers or less in size (“fine particulate”).
- NAAQS undergo periodic review, required by CAA every 5 years.

Fine Particulate Standards: PM_{2.5}

Short-term standard: 24-hour standard

- Revised 24-hour PM_{2.5} Sept. 2006
 - Level: 35 µg/m³ (Primary & Secondary Standard)
 - Form: 3 year average of the 98th percentile value

Long-term standard: Annual standard

- Revised annual PM_{2.5} NAAQS promulgated on **December 14, 2012**
 - Level: 12 µg/m³ (Primary Standard)
 - Form: 3 year average of annual values (same as before)
- Level remains at 15 µg/m³ for Secondary Standard

DNR & Stakeholder Actions to Implement Revised Annual PM_{2.5} Standard

- Implementation for PSD projects: March 18, 2013.
- Recommending attainment/nonattainment designations.
- Stakeholder meetings to review emissions limitations.
- DNR report to governor and General Assembly.
- Develop and submit to EPA a revision to the State Implementation Plan (SIP): Infrastructure SIP.
 - Updating permitting requirements.
 - No later than December 14, 2015 for non-PSD projects.
 - Updating permitting guidance.
 - Review and update administrative rules as needed.

Annual PM_{2.5} Standard Implementation Timeframes

Standard Promulgated:	Dec. 14, 2012
State Designation Recommendations:	Dec. 14, 2013
EPA's Designations:	Dec. 14, 2014
Infrastructure SIP Due:	Dec. 14, 2015
Nonattainment SIP Due:	~Aug 2016
Attainment Date:	Depends upon classification (Moderate: up to 6 years)

Due to a 2013 court decision, special nonattainment provisions in CAA Part D, subpart 4, now apply to PM_{2.5} nonattainment areas. (EPA rules pending.)

2012 Annual PM_{2.5} NAAQS Designations

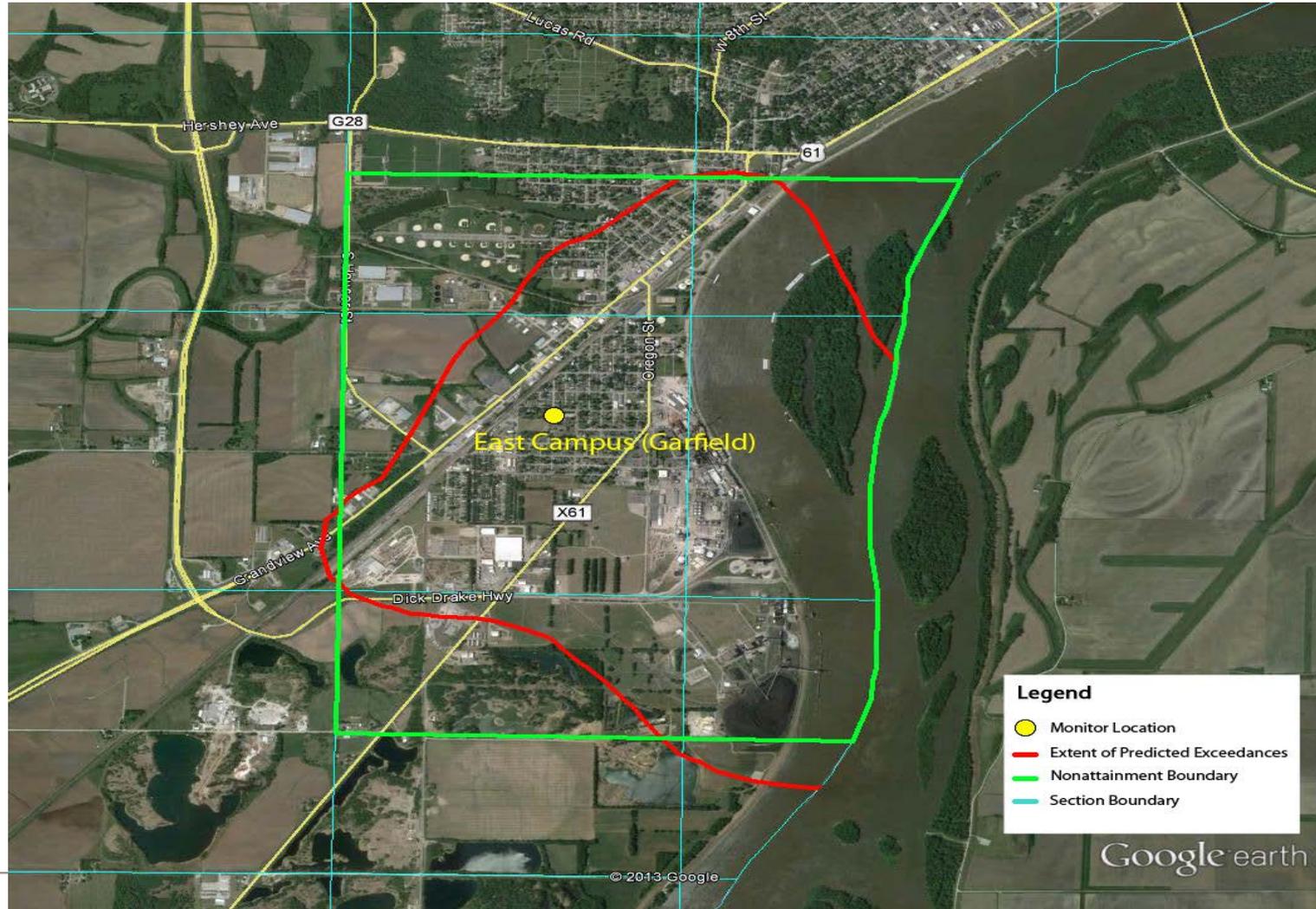
State designation recommendations submitted on December 13, 2013

- Unclassifiable/attainment
 - Based on 2010-2012 monitoring data
- Exception: Muscatine County
 - Garfield School (East Campus) Monitor: 12.2 $\mu\text{g}/\text{m}^3$
 - Portion in City of Muscatine recommended nonattainment
 - Rest unclassifiable/attainment

EPA designation recommendations due August 2014

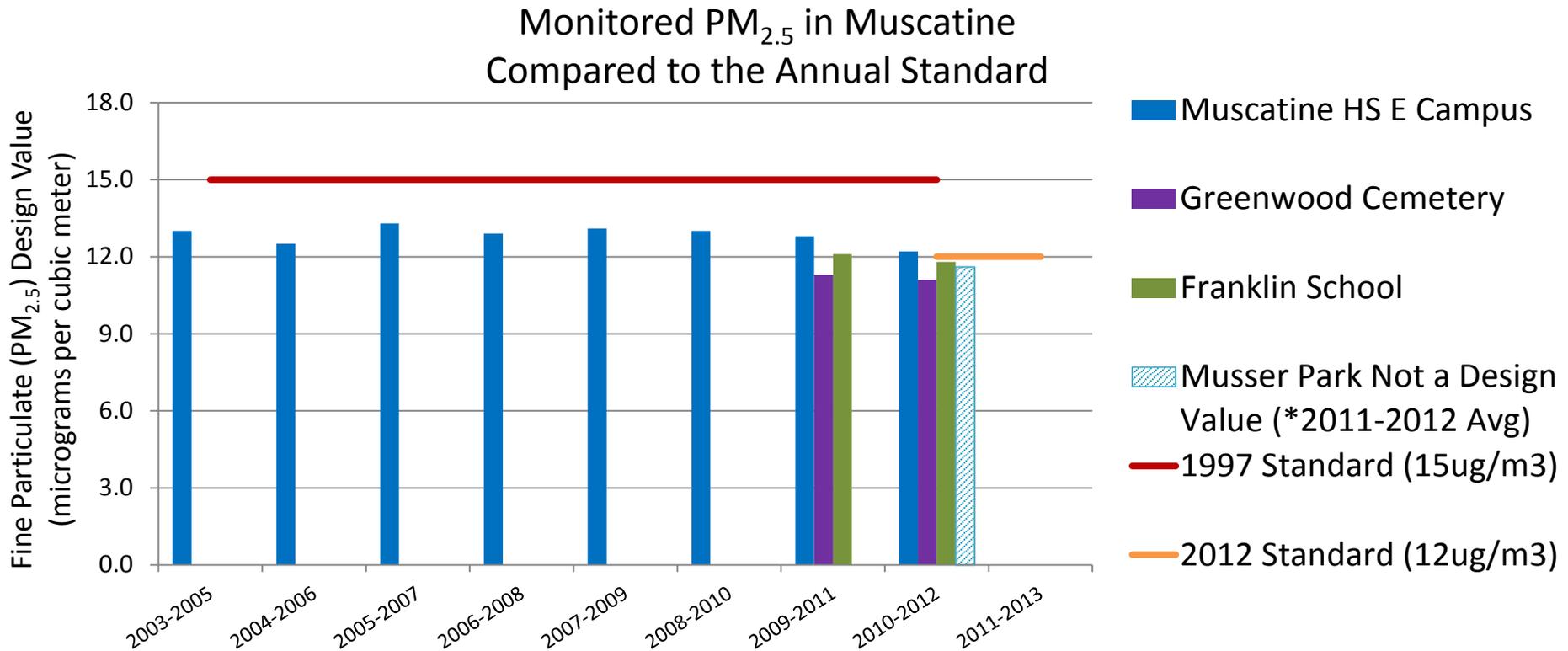
- Final designations December 2014

Proposed Muscatine Nonattainment Boundary



Proposed Muscatine Nonattainment Boundary

- 24-hr PM_{2.5} SIP call modeling used for nonattainment boundary development
- Recommendation may be amended pending 2011-2013 design value



Infrastructure SIP*

State demonstration to EPA that revised NAAQS can be implemented, maintained, and enforced in IA.

- Discusses the basic (infrastructure) elements of air quality management, such as:
 - Enforceable emission limitations,
 - Air quality permitting and modeling,
 - Enforcement program,
 - Ambient monitoring program,
 - Adequate personnel, resources, and legal authority.

*The specific infrastructure elements are in CAA Sections 110(a)(2)(A) – 110(a)(2)(M).

Next Steps

- Stakeholder Meetings
 - Required by Iowa Code
 - February and May AQ Client Contact Meetings
- Amend Muscatine designation recommendation as appropriate
 - New data (2011-2013)
- DNR report to governor and General Assembly
- Review, update rules (if applicable)
 - Permitting exemptions
- Update guidance as needed
- Draft Infrastructure SIP document
 - Public comment period

Stakeholder Meetings

Convene meetings no later than June 1 during the second calendar year following EPA adoption of a new or revised NAAQS.

- **Review emission limitations or standards relating to the maximum quantities of air contaminants that may be emitted from any air contaminant source as provided in section 455B.133, subsection 4.**

Seeking input from stakeholders:

- Discuss today and at May AQ Client Contact meeting,
- State Law Requirements: Iowa Code 455B.134(14).

Stakeholder Meetings

Review emission limitations or standards relating to the maximum quantities of air contaminants that may be emitted from any air contaminant source as provided in section 455B.133, subsection 4.

Chapter 22. Controlling Pollution

22.1 (1) Permit required

22.1 (2) Exemptions

Chapter 23. Emissions Standards for Contaminants

23.2 Open burning

23.3(2) Particulate matter

Chapter 26. Prevention of Air Pollution Emergency Episodes

Questions/Discussion

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<http://www.iowadnr.gov/InsideDNR/RegulatoryAir.aspx>