



IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Air Quality Bureau

Implementation Update for the 2015 Ozone NAAQS

AQ Client Contact Meeting

February 23, 2017

Air Quality Standards

Clean Air Act (CAA)

- Requires the U.S. EPA to establish health based (primary) and welfare (secondary) standards for criteria pollutants
- National Ambient Air Quality Standards (NAAQS)
 - Establish maximum concentrations of pollutants that are acceptable in the general air we breathe
- Review NAAQS every 5 years

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”)

Ozone Standard

- EPA revised in 2015
 - Level reduced from 75 to 70 parts per billion (ppb)
 - Form and averaging period not changed
 - Daily maximum 8-hour average
 - 3-year average of 4th highest value
 - Secondary standard equal to the primary standard
- NAAQS revisions trigger a series of implementation events

DNR Actions to Implement Revised Ozone Standard

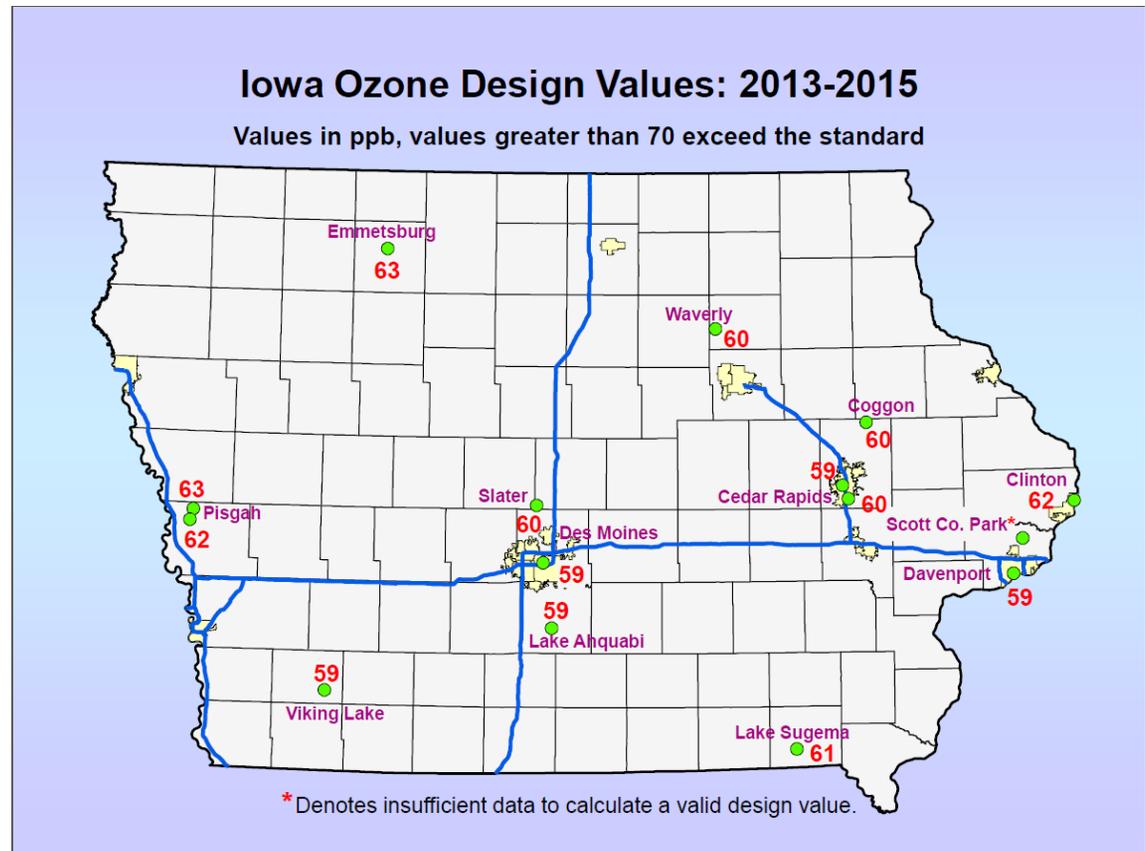
- Recommending area designations
- Stakeholder meetings to review emissions limitations
- DNR report to Governor and General Assembly
- Implementation for PSD projects
- Develop and submit to EPA a revision to the State Implementation Plan (SIP): Infrastructure SIP
 - Updating permitting requirements, if needed
 - Review and update administrative rules, as needed
 - Address interstate transport

Ozone Implementation Timeframes and Deadlines

- ✓ Standard promulgated: Oct. 1, 2015
- ✓ State designation recommendations due: Oct. 1, 2016
- Convene stakeholder meetings by: Jun 1, 2017
- EPA's final designations due: Oct. 1, 2017
- State report due: Nov. 1, 2017
- Infrastructure SIP due: Oct. 1, 2018

2015 Ozone NAAQS Designations

- State recommendation sent to EPA Sep. 20, 2016
 - Attainment for all counties
 - 2013-2015 data
- EPA’s final designations will include more recent data
 - 2014-2016
- “Unclassifiable/Attainment” expected
 - Equivalent to attainment



Infrastructure SIP

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

- 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
 - Good neighbor provisions (interstate transport, visibility, haze)
 - See CAA Sections 110(a)(2)(A)-(M) for a list of elements

Interstate Transport

- CAA 110(a)(2)(D)(i)(I) – the “Good Neighbor” Provisions
 - Emissions shall not contribute significantly to nonattainment, or interfere with maintenance, of the NAAQS in any other state
 - Historically addressed at the Federal level
 - CAIR, CSAPR, CSAPR Update Rule
 - EPA’s “4”-step methodology
 1. Identify downwind nonattainment and maintenance areas
 2. Determine which states contribute (threshold is 1% of the NAAQS)
 3. Identify cost effective emission reductions
 4. Develop methods that eliminate such emissions
 - This process is complex and data intensive

2015 Ozone – Interstate Transport

- EPA published a Notice of Data Availability (NODA) Jan 6, 2017
 - Contains information concerning Steps 1 and 2
 - Identifies potential areas of interest and linkages
 - Iowa's largest contribution is below the 1% (0.70 ppb) threshold
 - 0.60 ppb - Allegan Co., Michigan
 - Based on this
 - Iowa does not cause/contribute to downwind air quality problems for the 2015 ozone NAAQS
 - Would not be subject to a FIP (*e.g.* an update to the CSAPR Update rule)
 - Note: the EPA data is preliminary and out for public comment

Next Steps

- Stakeholder Meetings
 - Required by Iowa Code
 - February and May AQ Client Contact Meetings
- DNR report to Governor and General Assembly
- Review rules and update if necessary
 - Tentatively none identified
- Update guidance as needed
- Draft Infrastructure SIP document
 - Next year

PSD Implementation

- Modeling ozone formation (PSD projects only)
 - VOC and NOx ozone precursors
 - (and a small number of sources that directly emit ozone)
 - Appendix W revision (currently delayed): 2-tiered approach
 - Tier 1: Using existing information (source/receptor relationships)
 - Draft Modeled Emission Rates for Precursors (MERP), *e.g.*:
 - » 126 tpy NOx
 - » 948 tpy VOC
 - Tier 2: Chemical Transport Model (CTM)
 - Regional photochemical grid modeling
 - » CAMx
 - » CMAQ
 - Tier 2 analyses not anticipated

Stakeholder Meetings

Convene meetings no later than June 1 during the second calendar year following EPA adoption of a new or revised NAAQS (HF2418, 2010)

- **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

Chapter 26. Prevention of Air Pollution Emergency Episodes

Questions/Discussion

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<http://www.iowadnr.gov/Environmental-Protection/Air-Quality>