



Air Quality Regulations: The Year in Review

MPCA Update

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A&WMA Conference on the Environment

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Overview

- Federal Programs
 - NAAQS and SIPs
- Current State Initiatives
 - State Rulemakings
- Federal Rules
 - NSPS and NESHAPS
 - 111(d)
 - CSAPR
- Transformation Project: TEMPO
- Closing





NAAQS & SIPs

FEDERAL PROGRAMS

Anticipated NAAQS Implementation Milestones

(updated
September 2014)

Pollutant	Final NAAQS Date	Infrastructure SIP Due	Designations Effective	Attainment Plans Due	Attainment Date
PM _{2.5} (2006)	Oct 2006	Oct 2009	Dec 2009	Dec 2014	Dec 2015 (Mod) Dec 2019 (Ser)
Pb (2008)	Oct 2008	Oct 2011	Dec 2010-2011	June 2012/2013	Dec 2015-2016
NO ₂ (2010) (primary)	Jan 2010	Jan 2013	Feb 2012	N/A	N/A
SO ₂ (2010) (primary)	June 2010	June 2013	Oct 2013 (+2 rounds)	April 2015	Oct 2018
Ozone (2008)	Mar 2008	Mar 2011	July 2012	Mid 2015-2016	2015-2032
PM _{2.5} (2012)	Dec 2012	Dec 2015	Early 2015	Mid 2016	Dec 2021 (Mod) Dec 2025 (Ser)
Ozone (2015)	Oct 2015	Oct 2018	Dec 2017	Dec 2020-21	2020-2037

Sulfur Dioxide (SO₂)

- EPA actions
 - Final designations technical assistance documents: December, 2013
 - Monitoring and modeling
 - Proposed SO₂ Data Requirements Rule: April 17, 2014
 - Final expected mid-2015
- MPCA continues to monitor/revise SO₂ SIP
 - Existing SO₂ maintenance areas
 - Current projects re-model using same protocols

Proposed SO₂ Data Requirements Rule - Details

- Remaining designations based on *either* modeling or monitoring data
- January 15, 2016, States will be required to:
 - Identify list of “applicable sources” and method of analysis
 - Monitored sources:
 - Monitoring network plan due July 1, 2016; monitors running January 1, 2017
 - Designation recommendations due by May 1, 2020
 - Modeled sources:
 - State agency’s modeling protocol due January 15, 2016
 - Modeling/designation recommendations due January 13, 2017

Proposed Data Requirements Rule – “Applicable Sources”

- EPA’s Proposal:
 - Based on annual emissions
 - Population-based aspect to source-threshold concept
 - Presents 3 options:

Option	Emissions threshold for sources	
	Inside CBSAs greater than 1M	Outside CBSAs greater than 1M
1*	1,000 TPY	2,000 TPY
2	2,000 TPY	5,000 TPY
3	3,000 TPY	10,000 TPY

* EPA’s preferred option

Proposed Data Requirements

Rule Designations Modeling

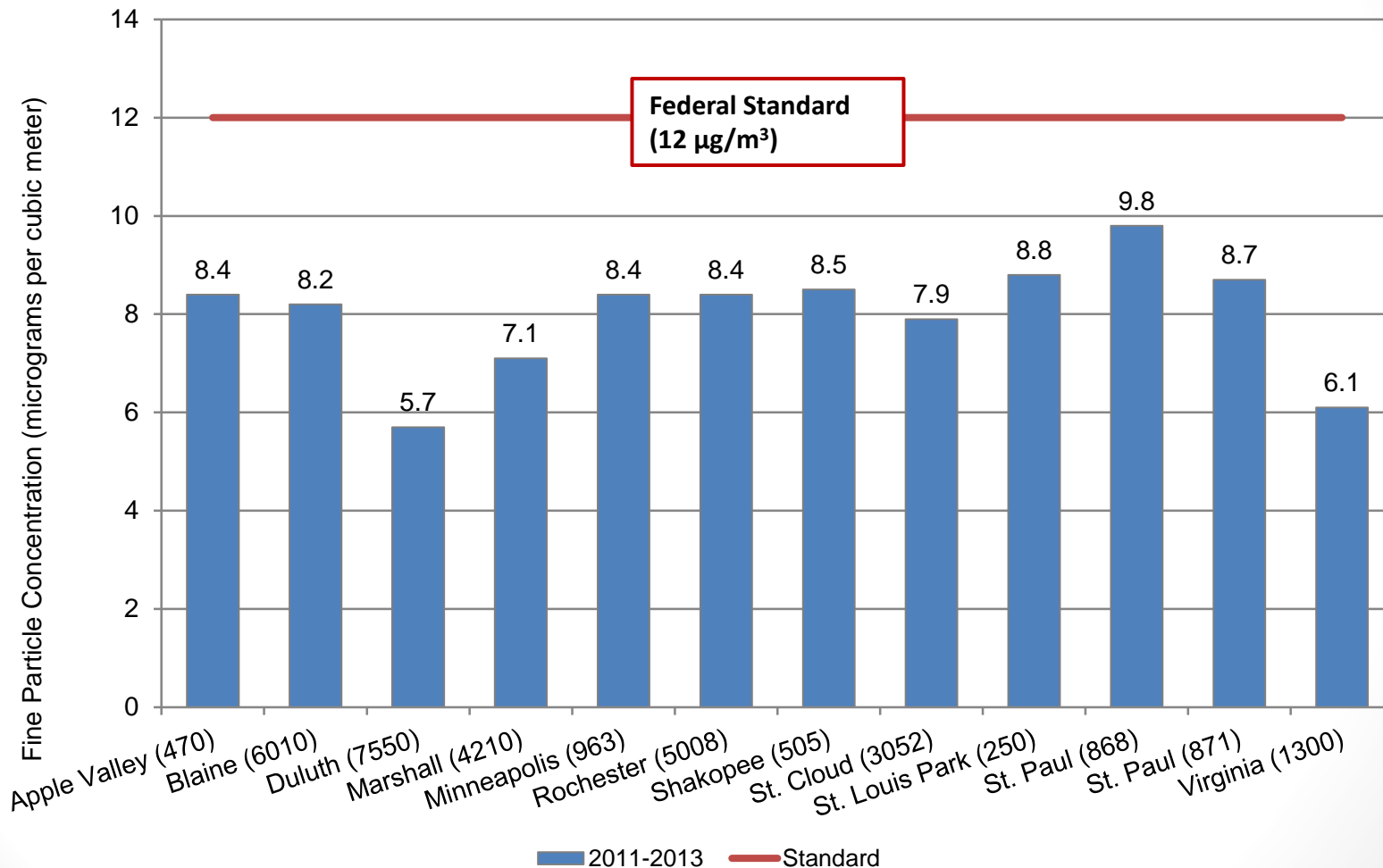
- EPA proposes modeling analyses be based on either:
 - Actual 1-hour SO₂ emissions from the most recent 3 years, or
 - Federally enforceable allowable emissions
- Continued verification of attainment
 - For areas designated attainment based on monitoring data or modeling of allowable emissions, no new requirements
 - For areas designated attainment based on modeling of actual emissions
 - Annual emissions of modeled sources
 - Updated modeling every 3 years

Fine Particulate Matter (PM_{2.5})

- January 15, 2013: EPA published final rule - PM_{2.5} NAAQS
 - Annual standard: 12.0 micrograms per cubic meter
 - Retained 24-hour standard and PM₁₀ standards
- December 6, 2013: MPCA submitted designation recommendation for revised annual standard - all counties attaining
- August 19, 2014: EPA notifies Minnesota that it intends to designate entire state attainment/unclassifiable
- December 2014: EPA expected to finalize designations for 2012 NAAQS

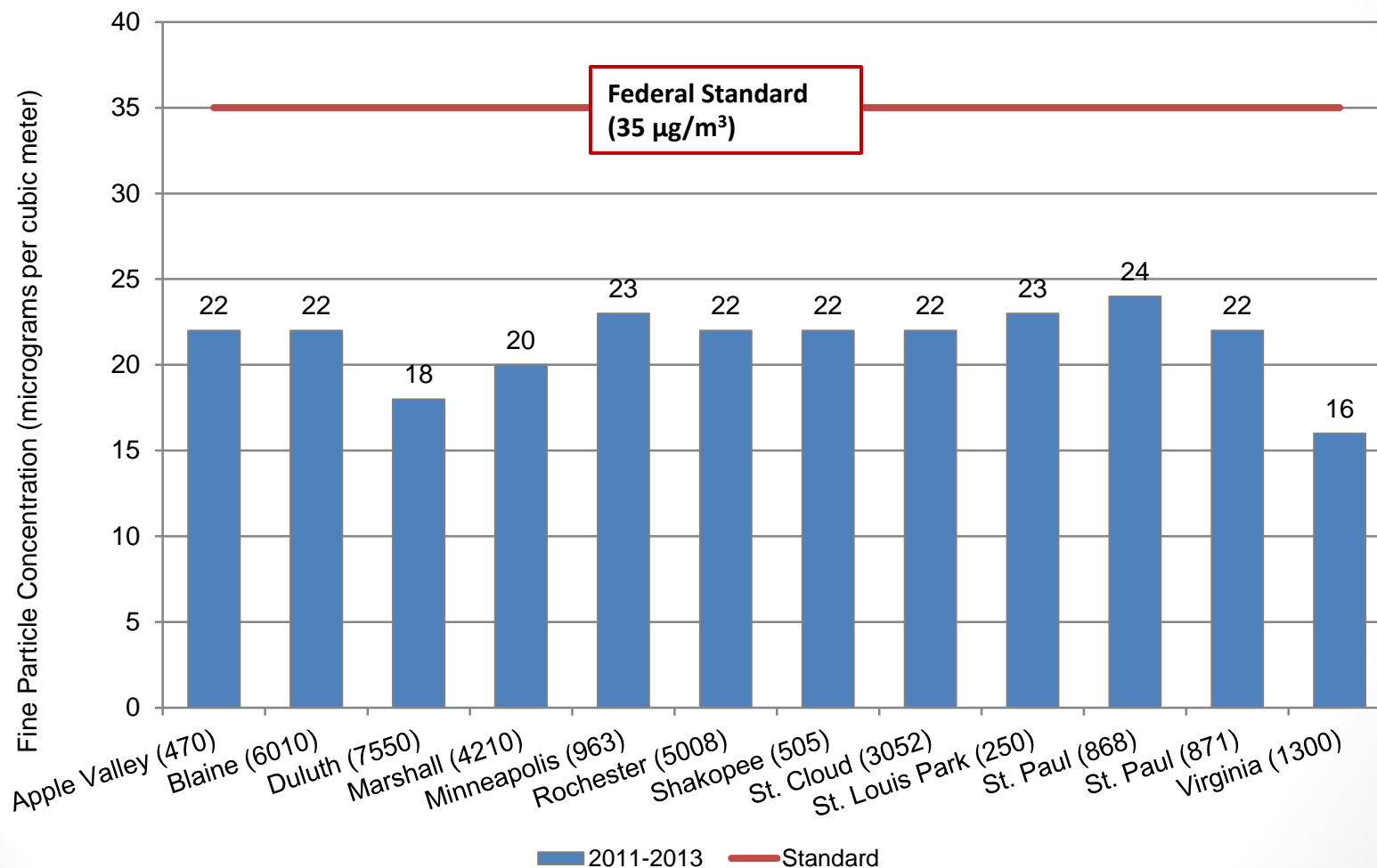
Annual PM_{2.5} Design Values

Final 2011-2013 Design Values



Daily PM_{2.5} Design Values

Final 2011-2013 Design Values



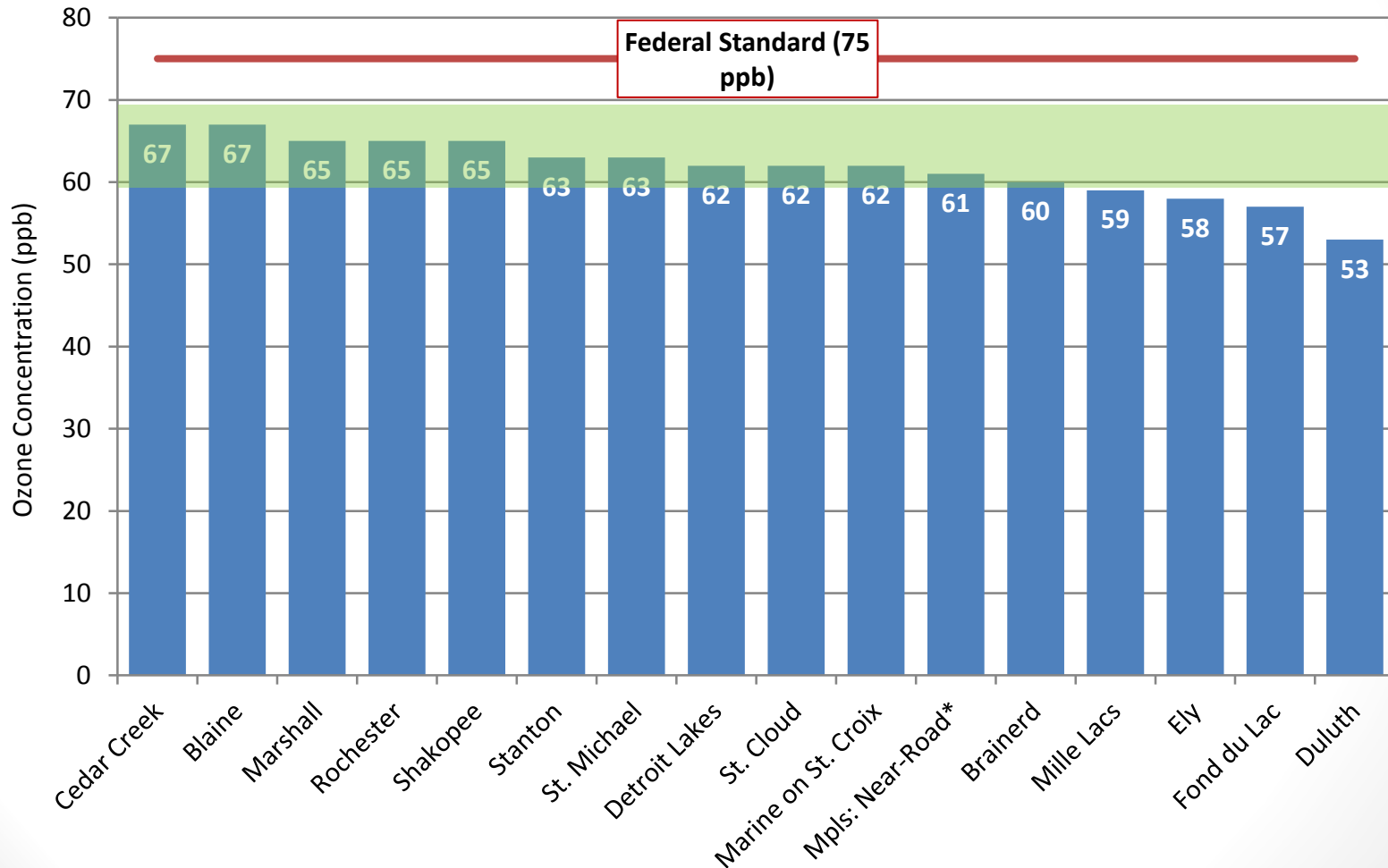
Ozone

- 2008 Standard: 75 ppb (primary standard)
 - Designations finalized July 2012
 - Minnesota designated attainment
- 2015 Standard: promulgation deadlines set by Court
 - Proposal: December 1, 2014
 - Final: October 1, 2015
 - Revised primary standard: likely between 60-70 ppb
 - Don't forget secondary standard: likely W126 between 7-17 ppm-hours

Ozone Concentrations

Preliminary Ozone Design Values: 2012-2014

3-year average of the annual 4th high daily maximum 8-hour ozone concentration



Voluntary Efforts for Ozone and PM

- EPA's Ozone Advance and PM Advance – Annual report June 2014
 - 55 Clean Diesel and 14 Project Green Fleet retrofits, saving a total of 1.8 tons of particulates and 15 tons of NOX
 - Legislative funding of grants to small & mid-size businesses for VOC reduction projects with \$320,000 available
 - Installation of 92 new electric vehicle charging stations
- Clean Air Minnesota – High priority project areas selected January 2014 include:
 - Education & outreach to reduce VOC emissions from small to mid-sized businesses
 - Incentives for Diesel Engine Retrofit/Power/Rebuild/Replace
 - Wood stove/fireplace change-outs; wood smoke reduction education/outreach

Regional Haze SIP

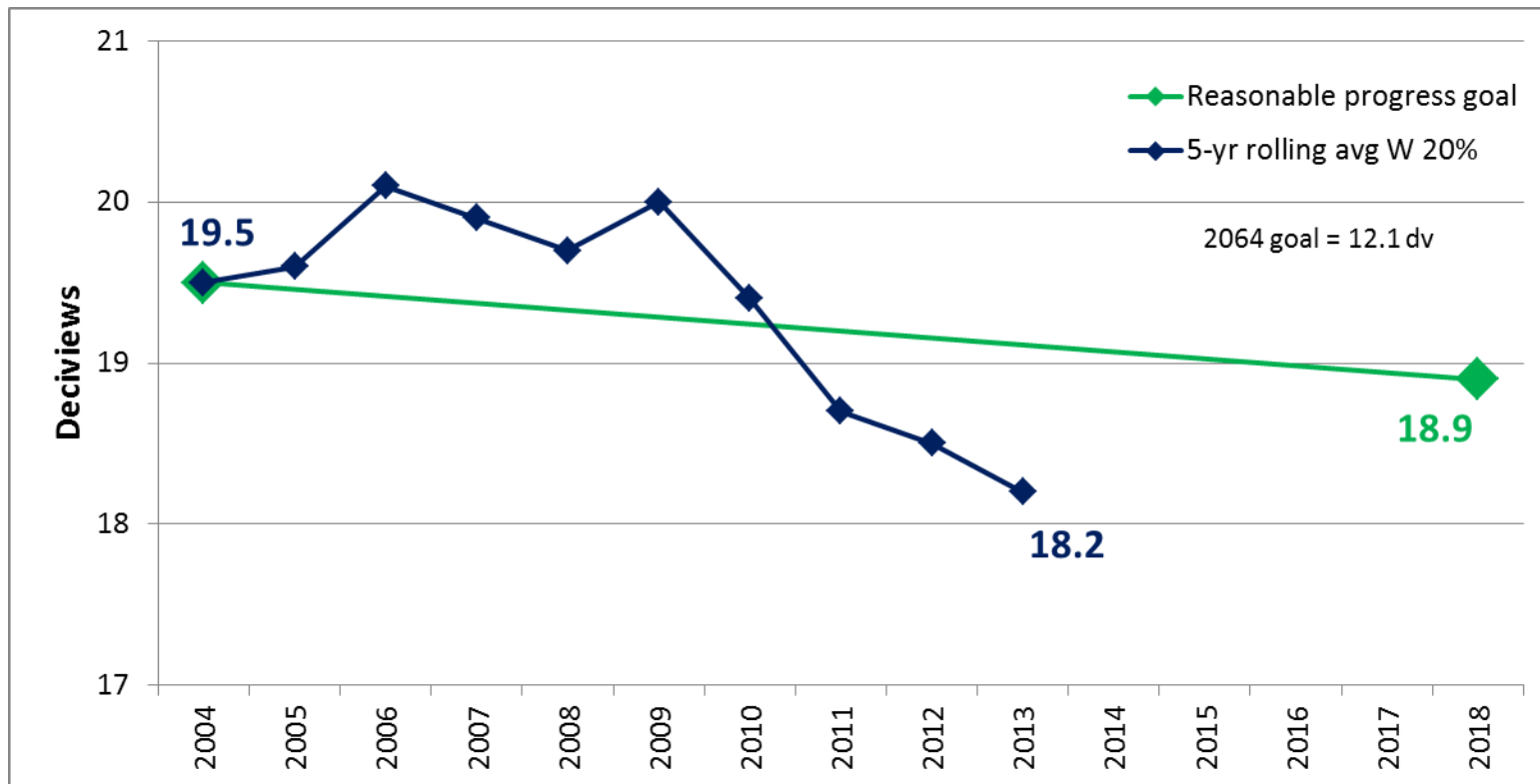
Establishes goals and strategies to reduce visibility-impacting pollutants

- Addresses visibility impairment in mandatory Class I areas
- Requirements:
 - National visibility goal by 2064
 - Best Available Retrofit Technology (BART) determinations
 - Reasonable Progress Goals, Long Term Strategy
- Minnesota's SIP approved 2012 – except taconite BART
 - Five-Year Progress Report due December 2014
- Revisions to Regional Haze SIPs: July 2018
 - EPA considering extension of deadline



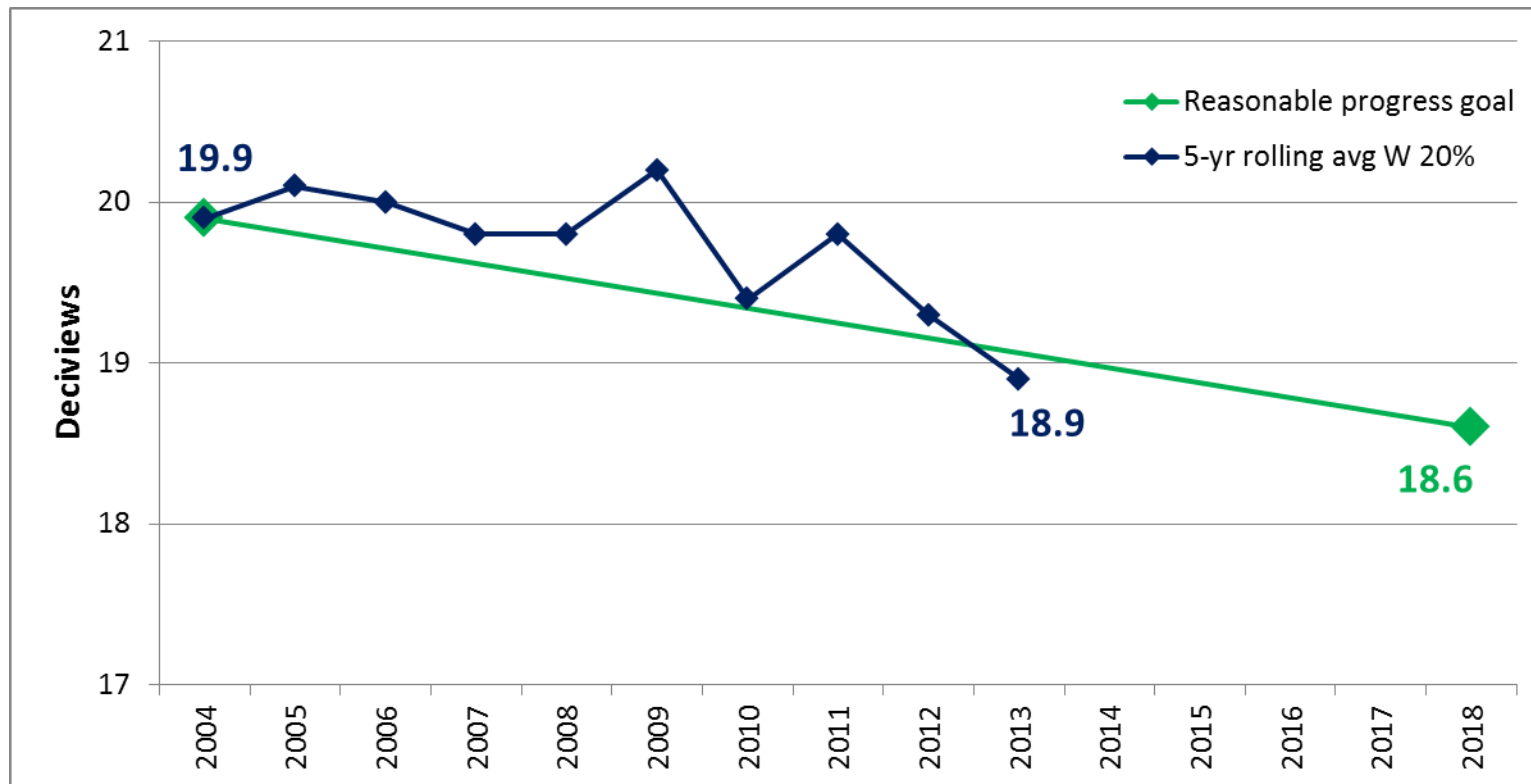
Five-Year Review: Voyageurs Visibility Progress

Measured progress toward meeting the 2018 RPG at Voyageurs for the 20% worst visibility days



Five-Year Review: Boundary Waters Visibility Progress

Measured progress toward meeting the 2018 RPG at Boundary Waters for the 20% worst visibility days





Non-Point Sources
State Rulemakings
TEMPO

STATE INITIATIVES

Mercury Reduction and Inventory Rule—effective September 22, 2014

- Mercury Emission Inventory
- Mercury reduction plans
- Incorporated federal NESHAPs
- Define “mercury emissions source=
actual emission gt 3 lbs/yr
- Statewide target = 789 lb/yr by 2025



Emission Inventory and Testing

- Report 2015 mercury emissions to inventory CEDR in 2016
 - Annual reports for “mercury emission source”
 - Smaller sources on 3-year cycle
- Baseline and periodic testing if “mercury emission source”
 - If no other requirement for test or CEMs

Mercury Rule:

Mercury reduction plans

Industrial Sector	Reduction Required	Plan Due	Reduction Due
Ferrous Mining	72%	December 2018	2025
Metal Melting	*	June 2015	2016
Industrial Boilers	70%	June 2015	2018
Other Sources	70%	June 2015	2025



Omnibus Rulemaking: Deep-Clean Housekeeping Underway

- Permitting Rule Changes:
 - related to EPA's 2009 flexible permitting rule
 - to ensure consistency with Part 70 rules and other federal requirements
 - to clarify where there has been confusion
 - allows MPCA to meet new statutory requirements for completeness and issuance
- Ambient Air Standards incorporated
- Evaluating Standards of Performance
 - Incorporate ULSD where possible
- Modifications to Performance Testing Rules

TinyURL: www.pca.state.mn.us/enzq146d



State of Minnesota Silica Sand Information

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Silica Sand Mining, Processing and Transportation in Minnesota

The 2013 Minnesota Legislature passed and Governor Mark Dayton signed new legislation to address silica sand mining, processing and transportation operations in Minnesota. The legislation directs state agencies to provide local units of government with technical assistance on regulation and permitting. In addition, the legislation sets new thresholds for environmental review of silica-sand-related operations and requires development of a number of new regulations. Several state agencies will be involved in implementing this legislation. This web site will highlight each agency's progress; follow links below.

- [Minnesota Environmental Quality Board](#)
- [Minnesota Pollution Control Agency](#)
- [Minnesota Department of Natural Resources](#)
- [Minnesota Department of Transportation](#)
- [Minnesota Department of Health](#)
- [Minnesota Department of Agriculture](#)

The Rulemaking Process

The legislation directs the Department of Natural Resources, Pollution Control Agency, and Environmental Quality Board to develop new state rules on silica sand (often called "frac sand" or "frack sand"). Rulemaking in Minnesota follows procedures outlined in the [Minnesota Administrative Procedures Act](#) (Minn. Stat., Ch. 14).

Mechanisms for soliciting public input on new rules are outlined in the APA; significant participation in silica sand rulemaking will be noticed on this page. Interested parties and individual agencies to be notified of significant developments. The agencies have rulemaking; for updates, check this page or visit the agency links above. A new rule will be developed and two years to develop.

Rulemaking Public Meetings

There are no rulemaking public meetings scheduled at this time. Watch this spot for meeting times as they become available.

Public Notices

- [DNR - Request for comments on possible rules governing reclamation of silica sand mines](#)
- [Closed: EQB - Request for comments on possible amendments to rules governing the Environmental Review program, Minnesota Rules, Chapter 4410](#)
- [Closed: MPCA - Request for comments on planned amendments to rules pertaining to develop rules for the control of](#)

silicasand.mn.gov



NSPS & NESHAPS

111(d)

FEDERAL RULES

Cross-State Air Pollution Rule (CSAPR)

- It's baaaaaaaack
 - April 29, 2014: Upheld by U.S. Supreme Court and remanded to Circuit Court for remaining issues
 - October 23, 2014: Circuit Court lifted stay of the rule and set schedule to address outstanding issues
 - EPA sought 3 year extension of deadlines when it requested the stay be lifted
 - EPA intends to complete administrative action to finalize implementation of the rule (beginning 2015)
 - Regulates SO₂, NO_x from fossil fuel power plants to address PM_{2.5} and ozone
 - Minnesota is included due to contributions to PM_{2.5} problems in Milwaukee

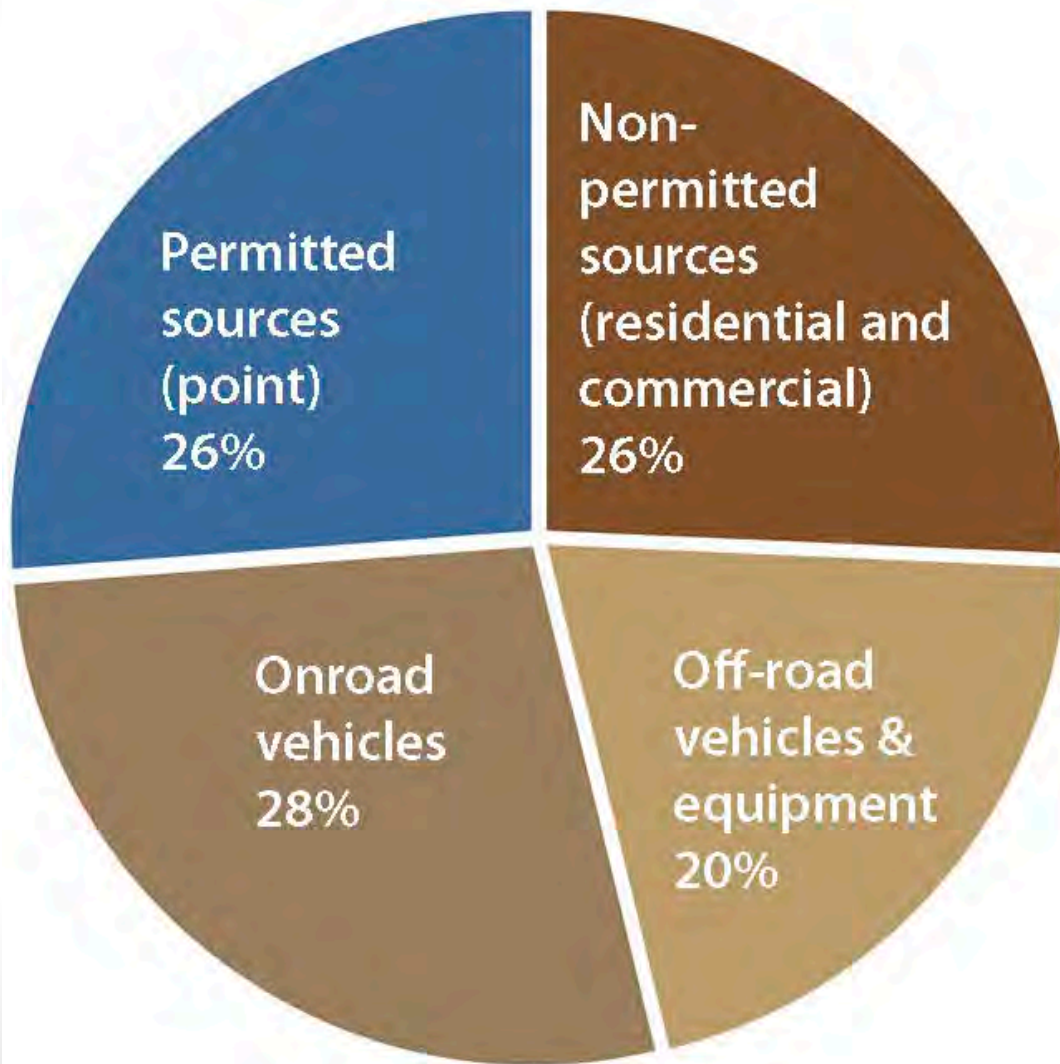


Federal Rulemaking 2014

- NESHAPs—
 - Continues Residual Risk rulemaking
 - When conducting rulemaking, address startup, shutdown provisions.
- Clean Power Plan for existing electricity generating units (EGUs)—proposed June 2014
 - 30% national reduction in CO₂ by 2030
 - States to submit a plan one or two years after final promulgation
- NSPS Proposed—
 - Revise Wood Heaters (Part 60 Subp AAA)
 - New Standard for Residential Hydronic Heaters and Furnaces (Part 60 Subp QQQQ)
 - New standard for Residential Masonry Heaters (Part 60 Subp RRRR)



MN Air Emissions Sources

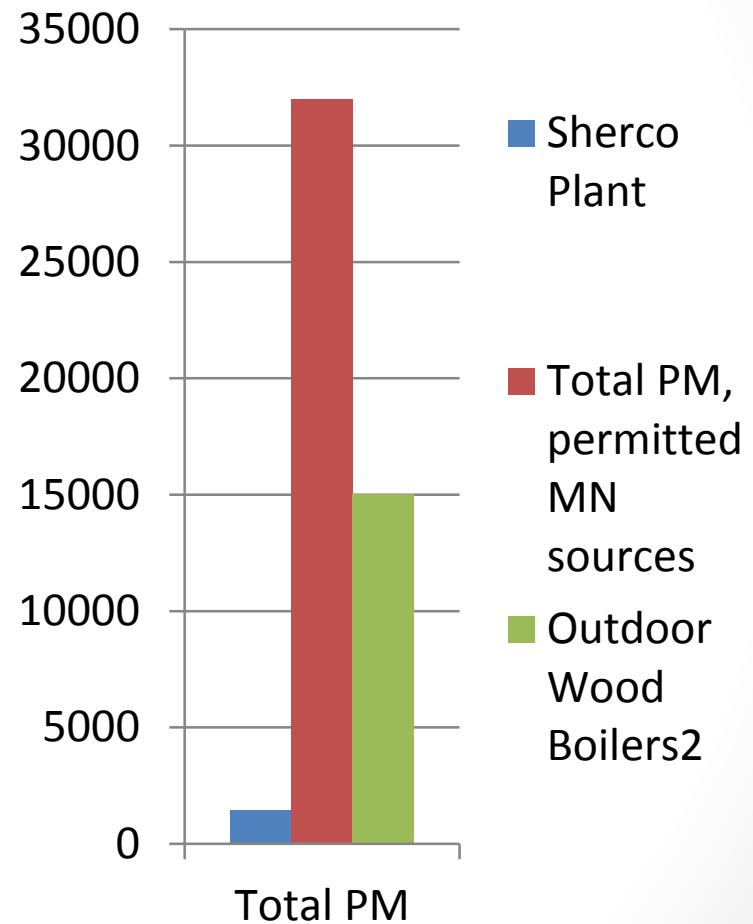


Point sources are becoming a smaller part of the air quality problems in Minnesota.

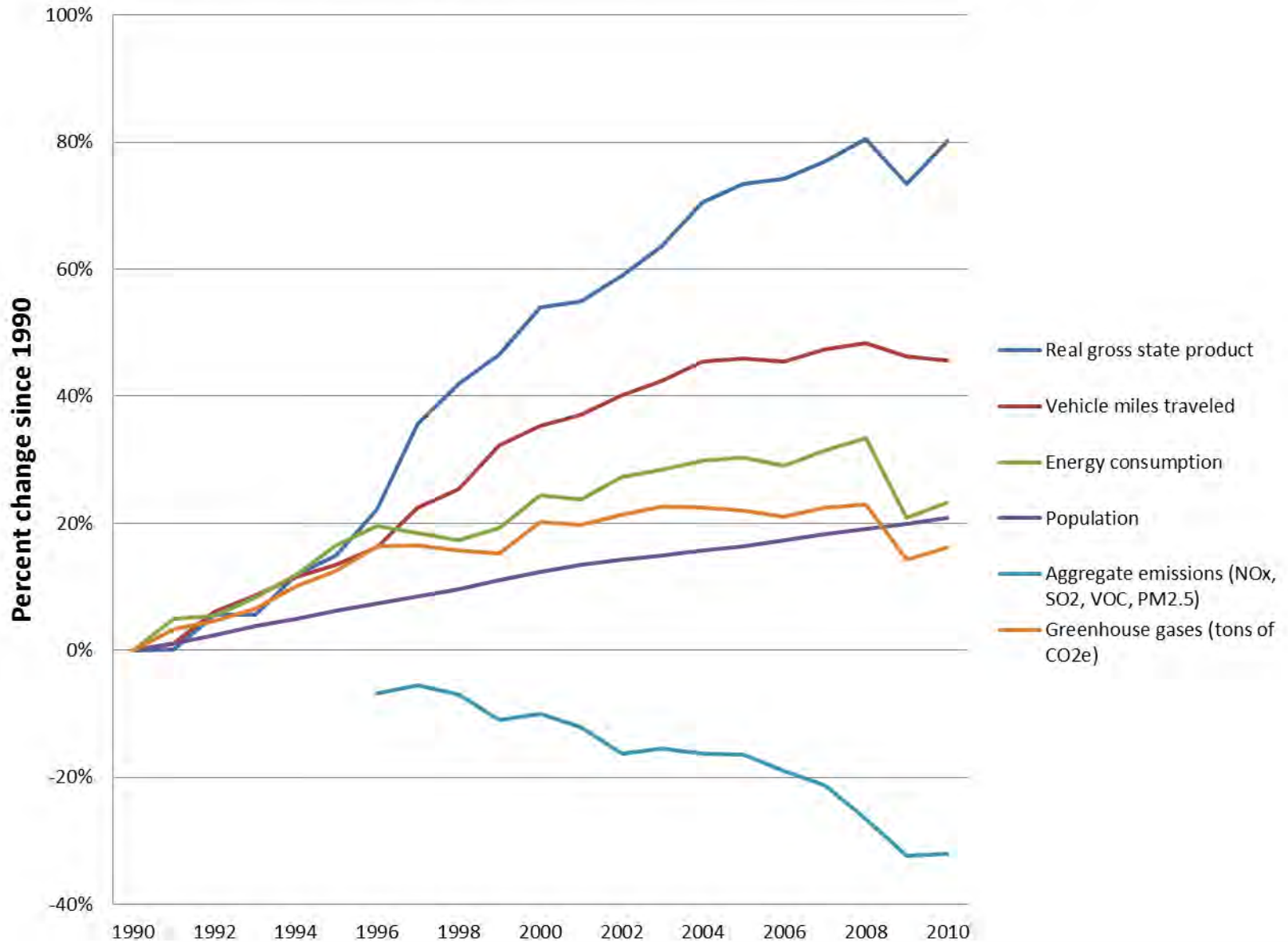
MN 2008 Emissions Inventory: NO_x , SO_2 , $PM_{2.5}$, VOCs

The scale of sources...

- MN survey suggests there might be 30,000 OWB operating in the heating season.
- Each OWB emits about 0.5 ton of PM during that period.
- $30,000 \times 0.5 = 15,000$ tons of filterable PM.
- Xcel Sherburne county plant burned 5.2 million tons of coal in 2013. It emitted 1,461 tons of PM.



Comparison of growth areas and emissions in Minnesota



MPCA e-services (TEMPO)

- New data and information management system
- More online services
- Improve data quality
- Grand Online Opening: February 2015
 - Reissuance of Air Quality Title V permits
 - Air Quality permit administrative amendments



Air Mail

Air quality topics

In this issue:

- [Regulatory updates](#)
- [Upcoming event: Keeping Healthy Skies](#)
- [MPCA begins pilot to improve Minneapolis air quality](#)
- [New asthma maps available](#)
- [Opportunities for reducing volatile organic compounds at your business](#)
- [Another successful year for air quality at the State Fair EcoExperience](#)
- [MPCA releases Winona air monitoring report](#)
- [Community Air Monitoring Project update](#)

Sign up today!

<http://www.pca.state.mn.us/6xa9cq3>

Questions?

