



Montana DEQ

Air Resources Management Bureau

Air Quality Regulation Update

Greenhouse Gas, National Ambient Air Quality Standards for O₃, NO₂, and SO₂

Western Environmental Trade Association

July 1, 2010

Helena, Montana

GHG Regulatory Update

- Where are we at today?
- When do I need to do something?



GHG Tailoring Rule

- June 3, 2010 EPA published the final "Tailoring Rule"
- Phased-in approach to permitting GHG under the NSR and Title V Operating Permit Programs
- Intended to first apply to larger industrial source category/GHG emitters

GHG Tailoring Rule Step 1

January 2, 2011-June 30, 2011

- “Anyway sources” - current PSD sources subject to permitting requirements for GHG emissions
- Anyway sources triggering PSD w/ a project will need to look at GHG with a significant emissions increase in GHG (75,000 tpy CO_{2e})

GHG Tailoring Rule Step 1

January 2, - June 30, 2011

- Title V applicability treated the same as PSD
- No sources would be subject to air quality permitting requirements due solely to GHG emissions

GHG Tailoring Rule Step 2

July 1, 2011-June 30, 2013

- New PSD source - 100,000 tpy CO_{2e}
- Modified PSD source significant emission increase 75,000 tpy CO_{2e}
- Title V source- 100,000 tpy CO_{2e}

GHG BACT

- EPA to issue supporting guidance by the end of 2010
- BACT case-by-case with review of actions nationally
- [GHG Information on EPA website](#)

Next Steps

- Workshops?



Revised National Ambient Air Quality Standards (NAAQS)

- Ozone (O_3)
- Nitrogen Dioxide (NO_2)
- Sulfur Dioxide (SO_2)

NAAQS Revision Schedule

- NAAQS: EPA must establish NAAQS for pollutants considered harmful to public health and welfare / environment (CAA §108)
 - NAAQS limit allowable pollutant concentration in ambient air (the air we breath)
- EPA is required to review and, as necessary, revise each NAAQS every 5 years (CAA §109)

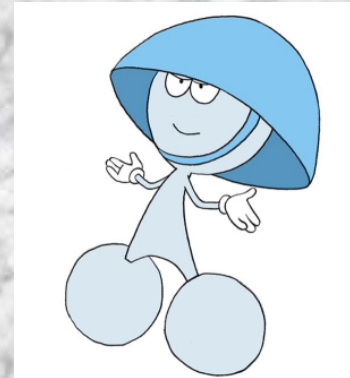
Anticipated NAAQS Revision Milestones

Pollutant	NAAQS Promulgated	Gov. Designation	EPA Designation	SIPs Due	Attainment Demo	Attainment Date
Pb	10 / 2008	10 / 2009	6 / 2011	10 / 2011	6 / 2012	11 / 2015
NO₂	1 / 2010	1 / 2011	2 / 2012	1 / 2013	8 / 2013	2 / 2017
SO₂	6 / 2010	6 / 2011	7 / 2012	6 / 2013	1 / 2014	7 / 2017
O₃	8 / 2010	1 / 2011	8 / 2011	8 / 2013	12 / 2013	12 / 2017
CO	5 / 2011	5 / 2012	6 / 2013	5 / 2014	12 / 2014	5 / 2018
PM_{2.5}	7 / 2011	7 / 2012	8 / 2013	7 / 2014	8 / 2016	8 / 2018
NO₂ (secondary)	3 / 2012	3 / 2013	4 / 2014	3 / 2015	10 / 2015	N / A
SO₂ (secondary)	3 / 2012	3/2013	4 / 2014	3 / 2015	10 / 2015	N / A

Current and/or very near-term implementation issues

Proposed Primary O₃ NAAQS Revision

- Current O₃ NAAQS (2008):
 - 75 parts per billion (ppb)
- Proposed NAAQS Revision:
 - Between 60-70 ppb
 - Final rule August, 2010

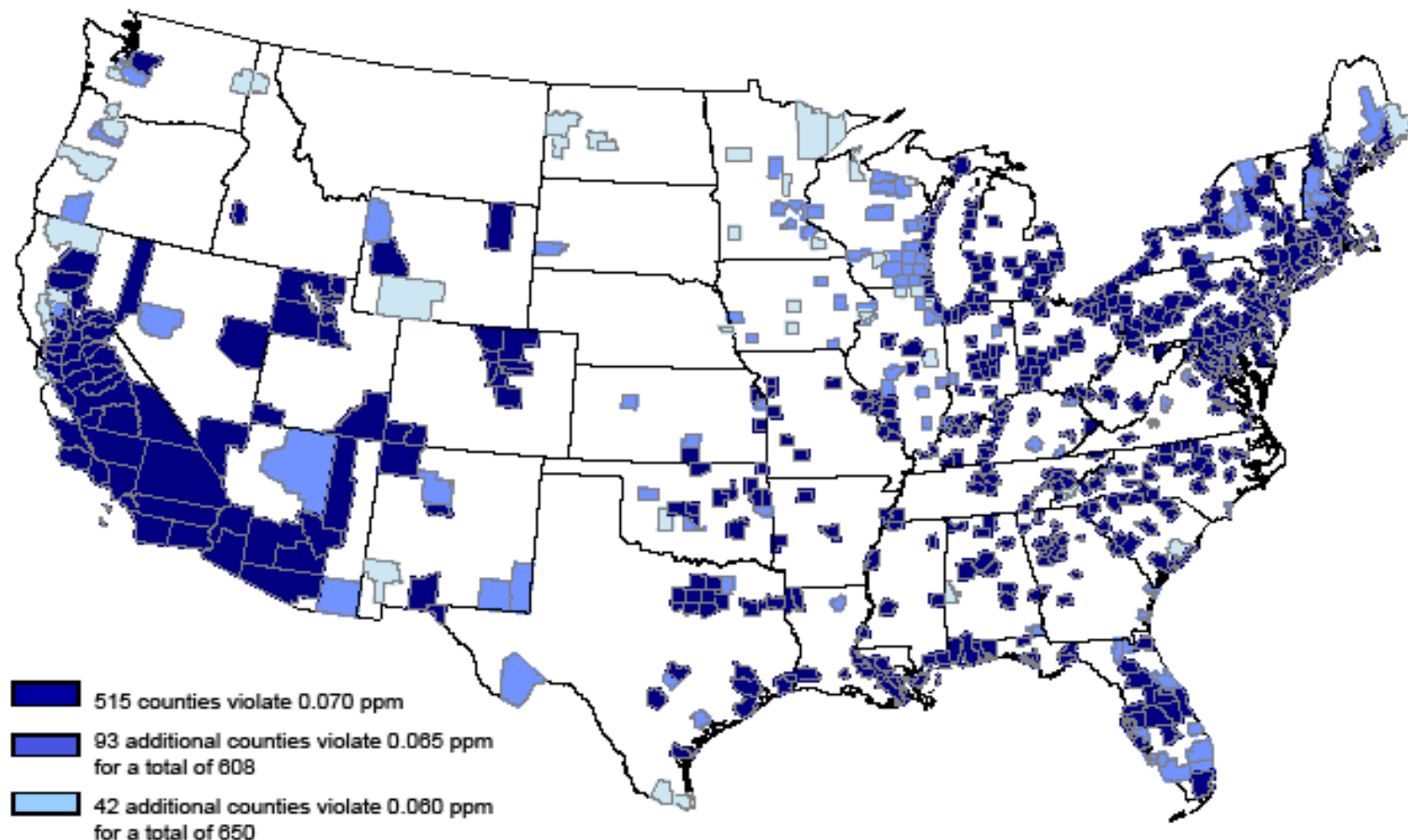


Ozzy Ozone

Counties With Monitors Violating Proposed Primary 8-hour Ground-level Ozone Standards 0.060 - 0.070 parts per million

(Based on 2006 – 2008 Air Quality Data)

EPA will not designate areas as nonattainment on these data, but likely on 2008 – 2010 data which are expected to show improved air quality.



Notes:

1. No monitored counties outside the continental U.S. violate.
2. EPA is proposing to determine compliance with a revised primary ozone standard by rounding the 3-year average to three decimal places.

Where Do We Stand: Montana Monitored O₃ Concentrations

Monitoring Station/Years Monitored	Monitored Concentration (ppb)	Proposed NAAQS (ppb)	Anticipated NAAQS Designation
Billings 2005-2007	59	60-70	Attainment
Missoula 2001- 2002	56*	60-70	Unclassifiable
Sidney 2009	58*	60-70	Unclassifiable
Glacier NP 2007-2009	57	60-70	Attainment

* Represents incomplete Design Value (3-yr rolling avg of the annual 4th highest 8-hour average). Design Value used to determine NAAQS compliance status.

Impact of Revised O₃ NAAQS?

■ State Implementation Plan / Designations

- All MT Counties Attainment and/or Unclassifiable?
 - Department/Industry opportunity to work together to maintain NAAQS compliance
 - Maintain existing state regulatory oversight

■ Monitoring

- 2 to 3 new monitoring sites?
 - All MSAs (50-350K population) – Missoula, Great Falls, Billings
 - Non-Urban Monitoring Sites – Glacier NP, Micropolitan (<50K pop.)
 - Special purpose – Ncore, Broadus, Birney, Sidney

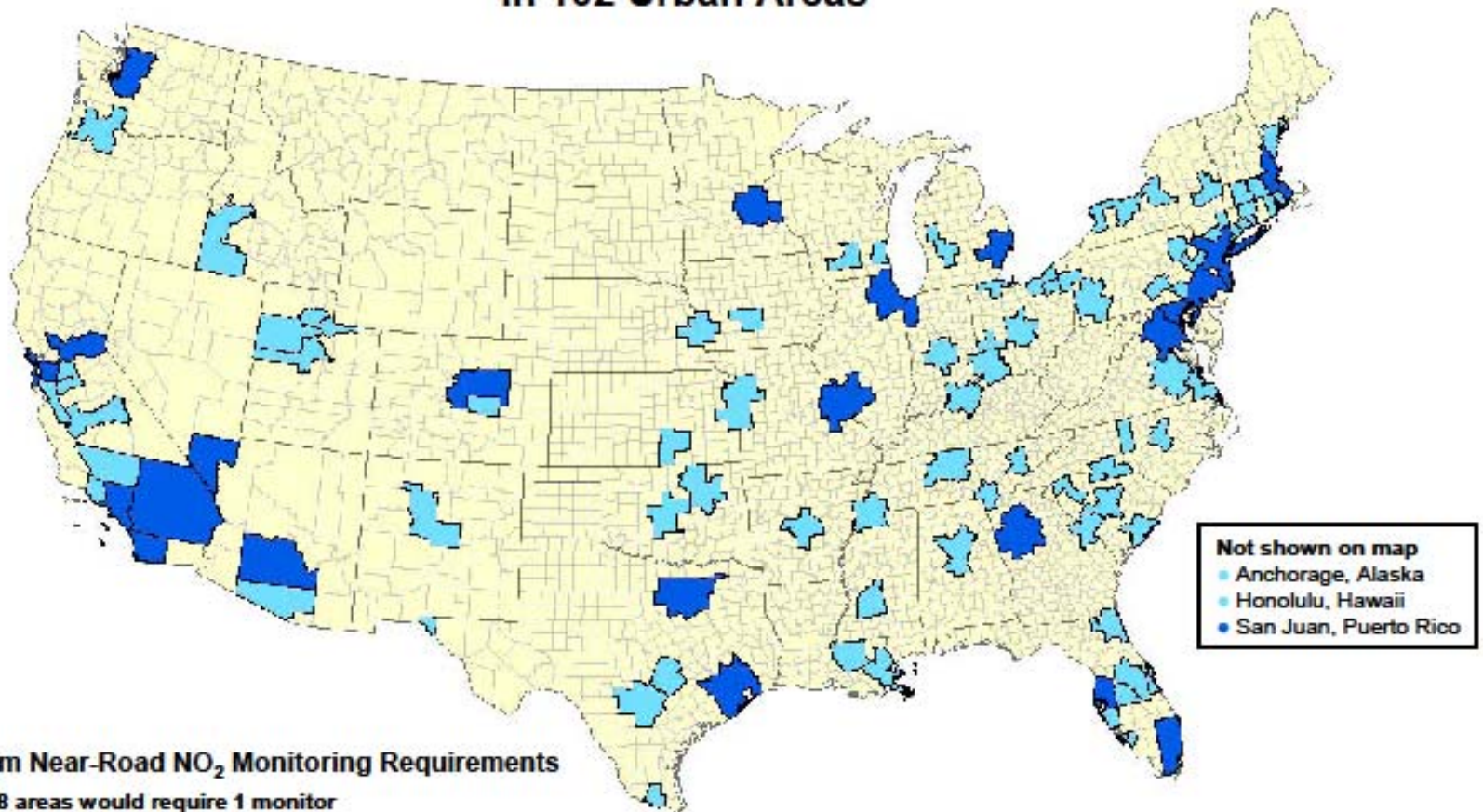
■ Industry / Permitted Source Impacts

- Major and minor permitted sources must demonstrate compliance with the NAAQS in order to obtain a permit
- Highly complex modeling demonstration
- Registration Program applicability in NAA?

NO₂ Primary NAAQS Revision

- New 1-hr NAAQS = 100 ppb
- Annual NAAQS = 53 ppb
- Final Rule January 2010

EPA Plans to Monitor NO₂ Concentrations Near Roads in 102 Urban Areas



Minimum Near-Road NO₂ Monitoring Requirements

- ◆ 78 areas would require 1 monitor (≥ 500,000 population)
- ◆ 24 areas would require 2 monitors (≥ 2.5 million population or road segments with annual average daily traffic counts ≥ 250,000 vehicles)

126 total monitors

Approximately 40 additional monitors will be placed in locations to help protect communities that are susceptible and vulnerable to NO₂-related health effects

Impact of Revised NO₂ NAAQS?

■ State Implementation Plan / Designations

- Designations: Attainment or Unclassifiable all Counties?

■ Monitoring

- No monitoring required under revised NAAQS.
- O&G development concerns / BLM (Broadus, Birney, Sidney)
- Ncore (40 CFR 58)

Impact of Revised NO₂ NAAQS?

■ Industry / Permitted Source Impacts

- Montana existing 1-hr NO₂ NAAQS
- New standard more stringent
- Permitted sources must demonstrate compliance w/ the NAAQS in order to obtain a permit (AERMOD)
- Need interim approach for defining significant impact levels (SILs) and increments
- Evaluating modeling guidance for minor sources
- Registration program rule change for 1-hr limits?

SO₂ Primary NAAQS Revision

- **New 1-hr NAAQS = 75 ppb**

- Final Rule June 2, 2010
- Effective August 2010

- **3-hr NAAQS = 500 ppb**

- **24-hr NAAQS = 140 ppb**

- Repealed under current action
- Applies in existing NAA

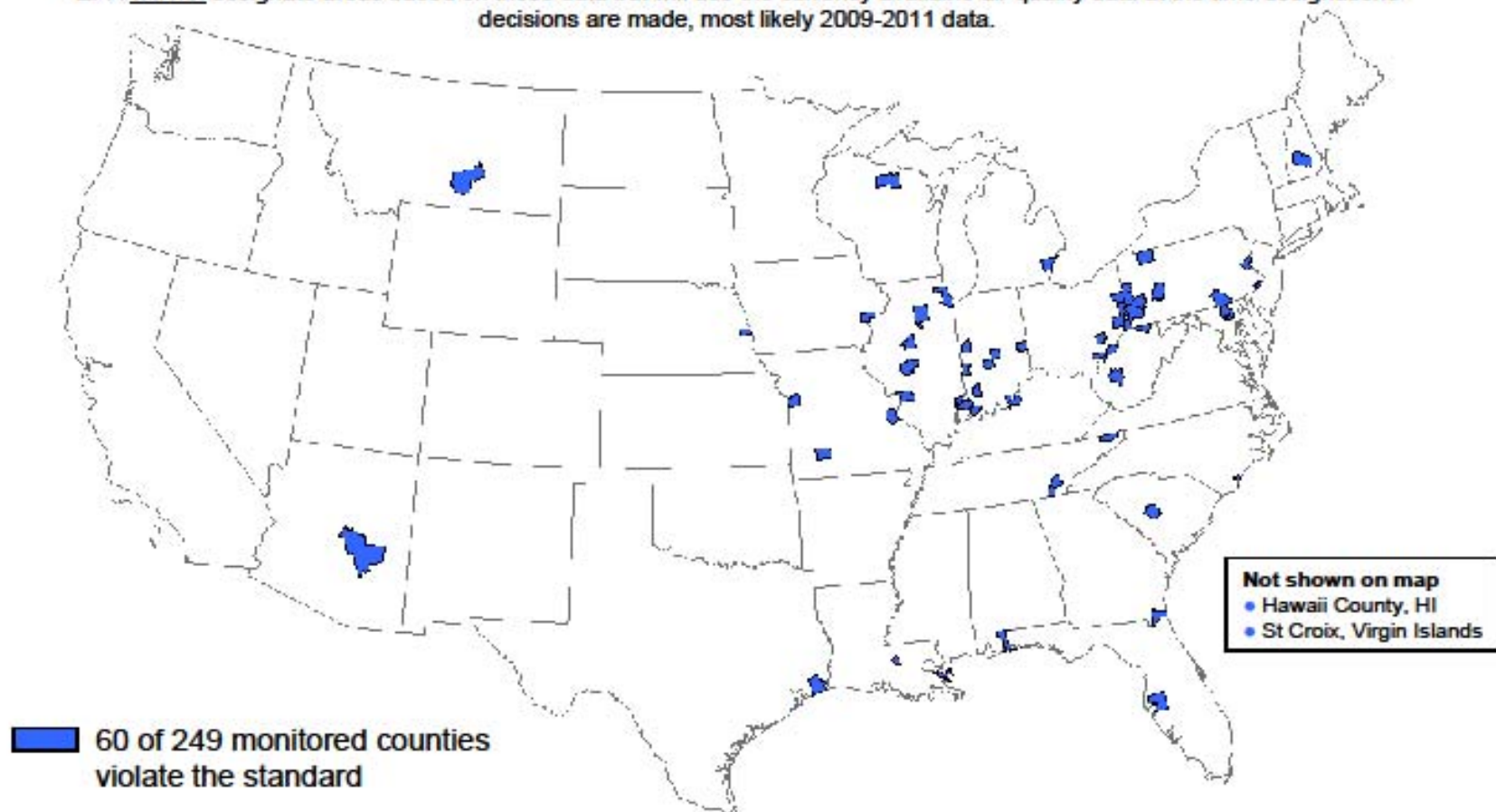
- **Annual NAAQS = 30 ppb**

- Repealed under current action
- Applies in existing NAA

Counties With Monitors Currently Violating the Revised Primary 1-Hour Sulfur Dioxide (SO₂) Standard of 75 ppb

(Based on 2007 – 2009 Air Quality Data)

EPA will not designate areas based on these data but will use the currently available air quality data at the time designations decisions are made, most likely 2009-2011 data.

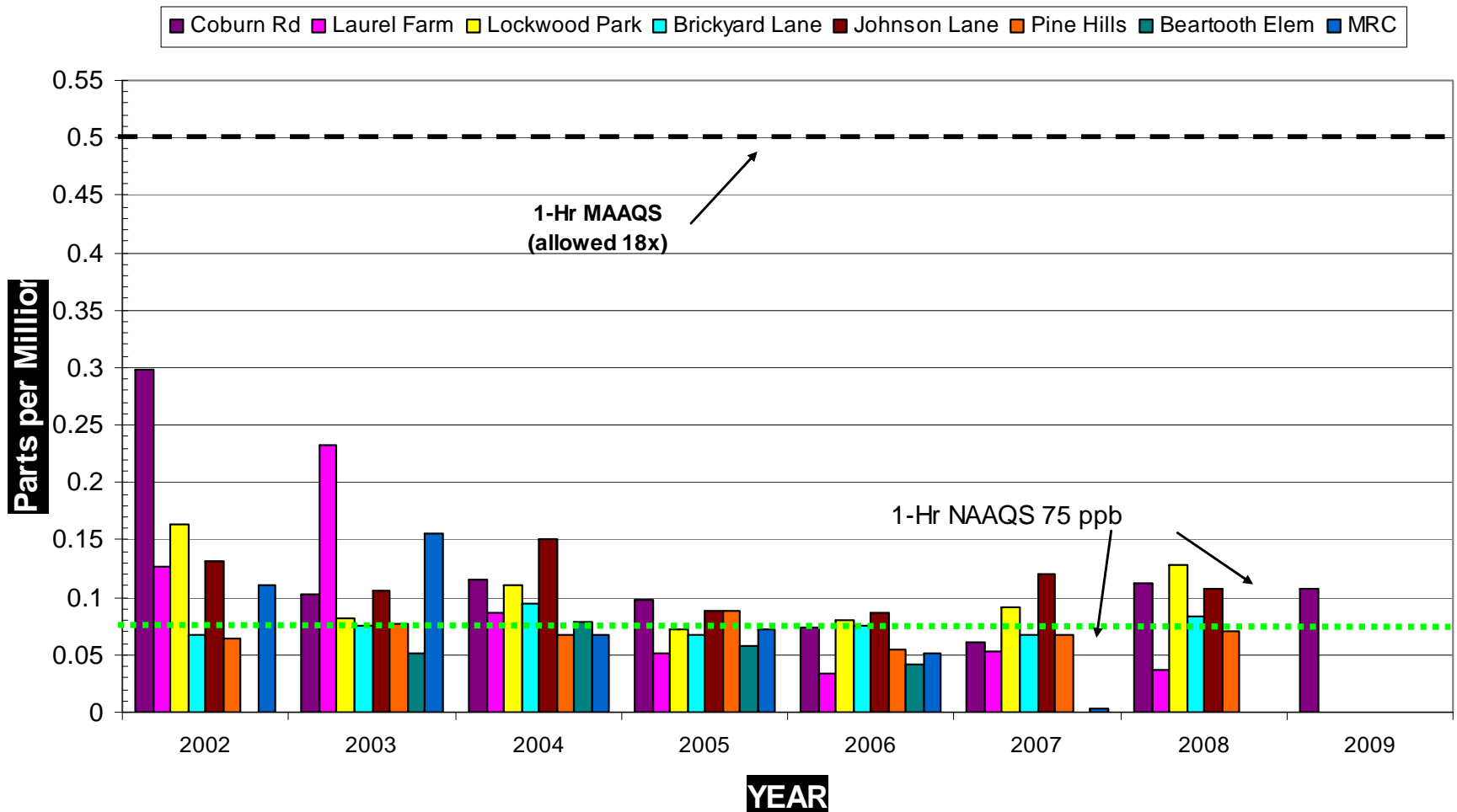


Notes:

1. Data are shown for monitors that met the following criteria: 75% of the day has valid hourly values, 75% of the days in a quarter are valid, and all 4 quarters for each of the three years are valid as well as other applicable data handling conventions included in 40CFR50 Appendix T.

Where Do We Stand: Montana Monitored SO₂ Concentrations

2002-09 SO₂ Review 2nd Max 1-Hr



Impact of Revised SO₂ NAAQS?

■ State Implementation Plan / Designations

- Attainment: Requirements to designate
 - Monitoring data, enforceable emission limits, modeled compliance
- Nonattainment: Yellowstone County?
 - SIP / Control Plans due early 2014
 - Modeling / Source Apportionment
 - Monitoring / High Impact
 - SIP / Control Plan Development
 - Meetings, meetings, meetings w/industry & other stakeholders

Impact of Revised SO₂ NAAQS (Continued)?

- **Unclassifiable: Counties with Sources > 100 tpy PTE?**
 - Maintenance SIP due June 2013
 - Modeling demonstration (AERMOD)
 - Enforceable emission limits for 100 tpy sources
 - Rosebud (Colstrip), Richland (MDU - Lewis & Clark), Cascade (MRC), Jefferson County (Ash Grove), Others?
- **Unclassifiable: All Other Montana Counties?**
 - 110(a) SIP adequacy demonstration due June, 2013
 - Maintenance SIPs?

Impact of Revised SO₂ NAAQS (Continued)?

■ Monitoring

- No additional monitor siting requirements / nonattainment area monitoring
- Report hourly average and maximum 5-minute block average each hour

■ Industry / Permitted Source Impacts

- Montana existing 1-hr SO₂ NAAQS
- New standard more stringent
- Major and minor permitted sources must demonstrate compliance with the NAAQS in order to obtain a permit (AERMOD)
- Nonattainment and Maintenance SIP requirement. Title V permits must include enforceable emission limits showing modeled compliance with NAAQS
- Registration program rule change for 1-hr limits?

NAAQS Revisions On the Horizon

- CO – NAAQS Promulgation May, 2011
- PM_{2.5} - NAAQS Promulgation July, 2011
- NO₂ / SO₂ – Secondary NAAQS Promulgation March, 2011

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