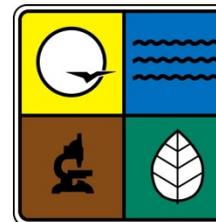


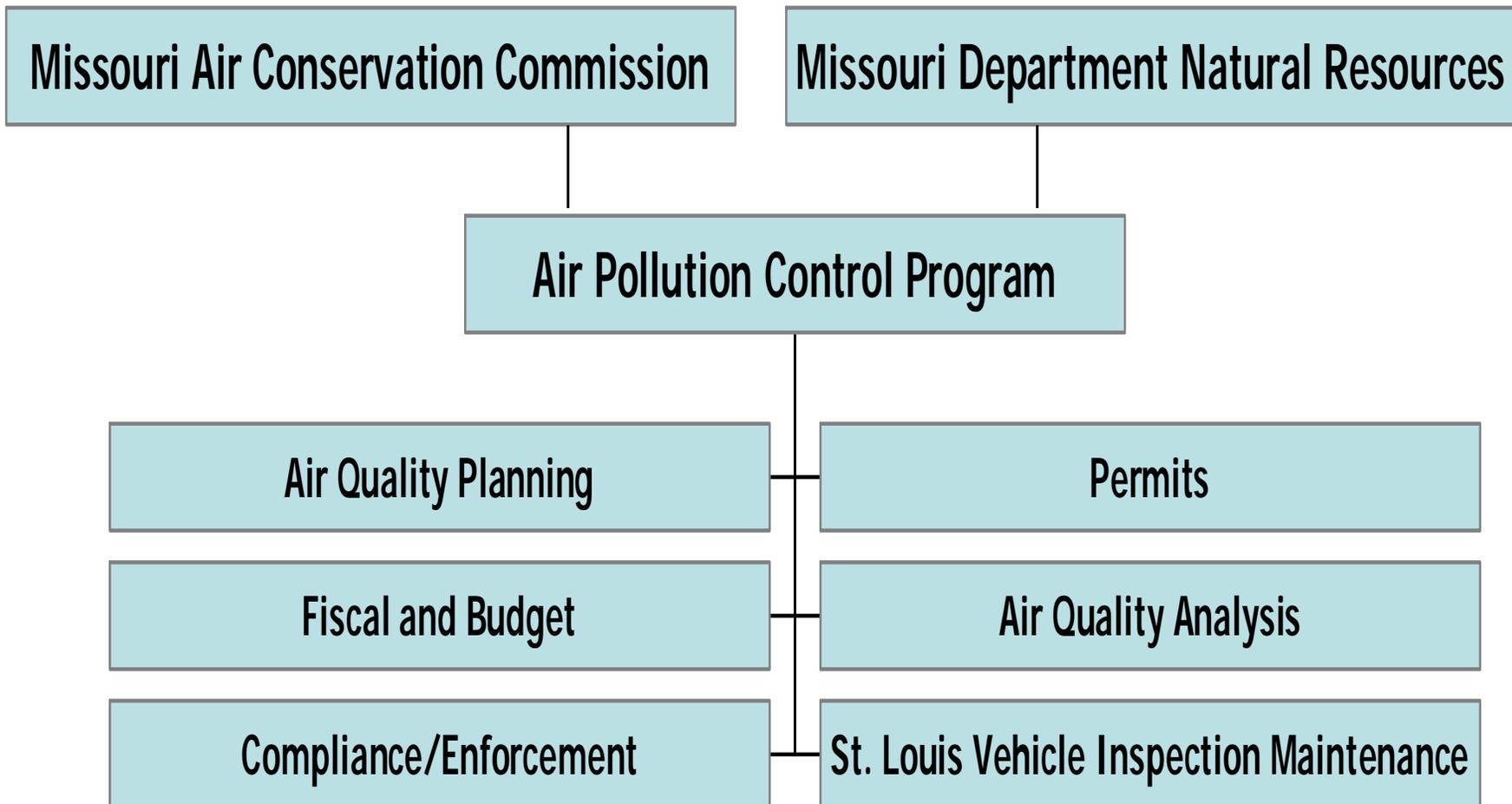
REGFORM Air Seminar

Air Pollution Control Program

Kyra Moore
Program Director
March 11, 2014



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES



March 2014

Missouri Air Conservation Commission

1. Gary Pendergrass, Chair
2. Mark Garnett, Vice Chair
3. David Zimmermann
4. Jack Baker

Three vacant positions

➤ Quorum = 4

March 2014

Air Program Statistics - 2014

Staff positions performing Air Work

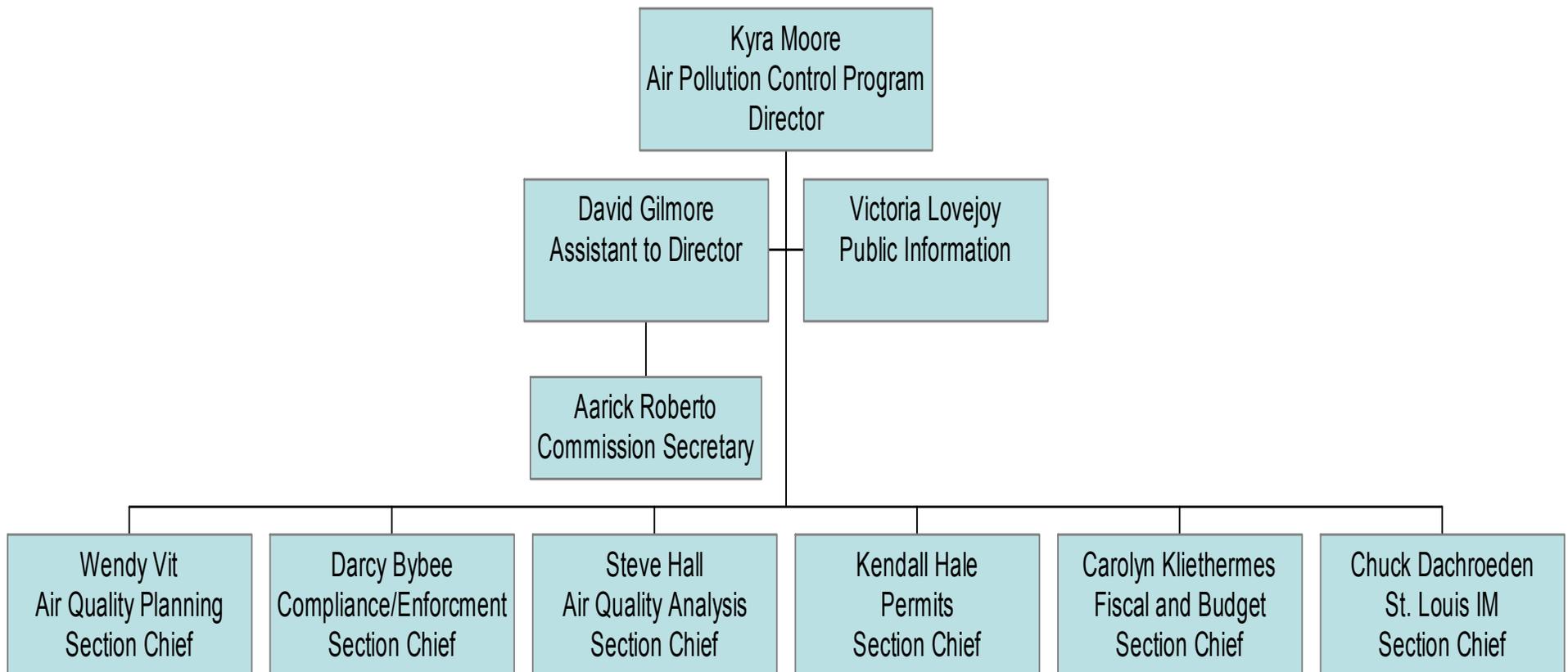
- Air Pollution Control Program – 108
(some part-time)
- Environmental Services Program ~20
- Regional Offices ~29
- Local Agencies ~9 (no funding from state)

Total ~ 154 (does not include locals)

Air Work

- **5 DNR Regional Offices**
 - St. Louis, Kansas City, Northeast (Macon), Southeast (Poplar Bluff), Southwest (Springfield)
 - Air Work includes inspections, complaint investigations, open burning permits
- **Environmental Services Program**
 - Air Monitoring
- **Local Air Agencies**
 - St. Louis County, St. Louis City, Kansas City, Springfield
 - Work dependent on agency

Air Pollution Control Program



March 2014

Air Quality Planning Section

- Rulemakings
- State Implementation Plan (SIP) development
- National Ambient Air Quality Standard (NAAQS) boundary recommendations

Air Quality Planning Section

Wendy Vit, Section Chief

Cheri Bechtel

Rules Unit

Wayne Graf

Aaron Basham

Paul Myers

Stan Payne

Shelly Reimer

Seanmichael Stanley

SIP Unit

Emily Wilbur

Assem Abdul

Adel Alsharafi

Ashley Jurgensmeyer

Mark Leath

Bob Randolph

Joe Winkelmann

March 2014

Air Quality is Improving...

- Efforts underway to redesignate St. Louis area to attainment
 - 1997 ozone standard of 80 parts per billion (ppb)
 - 1997 annual fine particulate matter (PM_{2.5}) standard of 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

...But Air Quality Challenges Continue

- Ozone
- PM_{2.5}
- Sulfur dioxide (SO₂)

Ozone

- 2008 ozone standard of 75 ppb
 - St. Louis marginal nonattainment area
 - SIP due July 2014 (primarily an emissions inventory)
 - Attainment date Dec 2015
- Voluntary efforts elsewhere in the state
- 2015 ozone standard?

PM_{2.5}

- 2012 annual PM_{2.5} standard of 12 µg/m³
 - Department recommended attainment/unclassifiable for entire state (submitted Dec 2013)
 - EPA's "120-day" letter expected Aug 2014
 - Final EPA designations Dec 2014
- SIPs for nonattainment areas due 18 months after final designations

SO₂

- SIPs for initial 1-hr SO₂ nonattainment areas (Kansas City & Herculaneum areas)
 - Conducting preliminary modeling
 - Developing new rule that consolidates existing & new 1-hr SO₂ requirements
 - Due to EPA by April 2015
- Attainment date Oct 2018
- Stay tuned for future phases of implementation

Permit Section

- Issues permits for all applicable sources of air pollution
 - Construction and Operating Permits
- Processes permit applicability requests
- Performs air quality analysis for proposed sources
- Oversees permitting for local air agencies

Permits Section

Kendall Hale, Section Chief

Operating Permits

Michael Stansfield

David Buttig

Tandi Edelman

Jason Dickneite

Bern Johnson

Don Murphy

Jill Wade

Nicole Weidenbenner

Berhanu Getahun – StL

Construction Permits

Susan Heckenkamp

Gerad Fox

Kathy Kolb

David Little

J Luebbert

Bryce Mihalevich

Alana Rugen

Cheryl Steffan

Daronn Williams

Chia-Wei Young

Permit Modeling

Dawn Froning

Kelly Robson

John Bullard

Linda McDonald

Kimberly Campbell

March 2014

2013 Permit Workload

Operating Permits		Construction Permits		Total	
Received	Completed	Received	Completed	Received	Completed
357	384	542	573	898	957

Air Pollution Control Program Permit's Webpage

- <http://dnr.mo.gov/env/apcp/permits.htm>
- Permits on Public Notice
- Issued Permits – since 2006
- Search Pending Projects
- Search Completed Projects
- Air Construction Permit Guidance
- Permit Modeling Guidance

Future Permit Projects

- Operating Permit Guidance Webpage
- Revise and improve both construction and operating permit application forms
- Written guidance for specific topics available on website

Basic Operating Permits

- State operating permits for installations with potential emissions less than 100 tons per year
- Currently 952 installations listed as needing a Basic Operating Permit
- Considering:
 - Removing requirement for installations to obtain a Basic Operating Permit due to an incinerator
 - Removing requirement for installations to obtain a Basic Operating Permit only due to applicable NSPS or MACT standards
 - Adding exemptions for grain elevators and associated operations

Focus Items for Permits

- More detailed Statement of Basis in Operating Permits
- More detailed record keeping pages in Operating Permits and also Construction Permits
- Increased effort to distinguish between fugitive and non-fugitive emissions when necessary

Focus Items for Permits, continued

- Increased emphasis on completeness review of application
- Continue to meet and exceed regulatory timeframes for permit issuance
- Timely response to permit writer's questions
 - Request response in 15 days
 - Will allow one extension of 30 days
- 10 days to review draft permits

Permitting Issues and Challenges

- $PM_{2.5}$
 - Quality emission factors and emissions inventory
 - NAAQS compliance
 - pre-construction monitoring
- 1-hour SO_2 and NO_2 NAAQS standards
- Increment

Air Quality Analysis Section

- Obtains, tracks and analyzes air emission inventory questionnaire (EIQ) data
- Develops point, area, and mobile sources emission inventory
- Coordinates statewide air monitoring network
- Develop Maximum Achievable Control Technology (MACT) databases and compliance assistance

Air Quality Analysis Section

Steve Hall, Section Chief

Data Management Unit

Stacy Allen

Jeanette Barnett

Jeanne Brown

Josh Martin

Nathan O'Neil

Jeffrey Stevens

Terry Stock

Brenda Wansing

Dan Williams

Monitoring Unit and MACT Unit

Patricia Maliro

Jerry Downs

Eric Giroir

Michael Maddux

Jennifer Martin

Compliance Assistance

Carlton Flowers

Lucy Thompson

March 2014

Air Quality Analysis Section

Emissions & Monitoring Trends

Recent Pollutants of Interest:

Sulfur Dioxide (SO₂)- 75 ppb

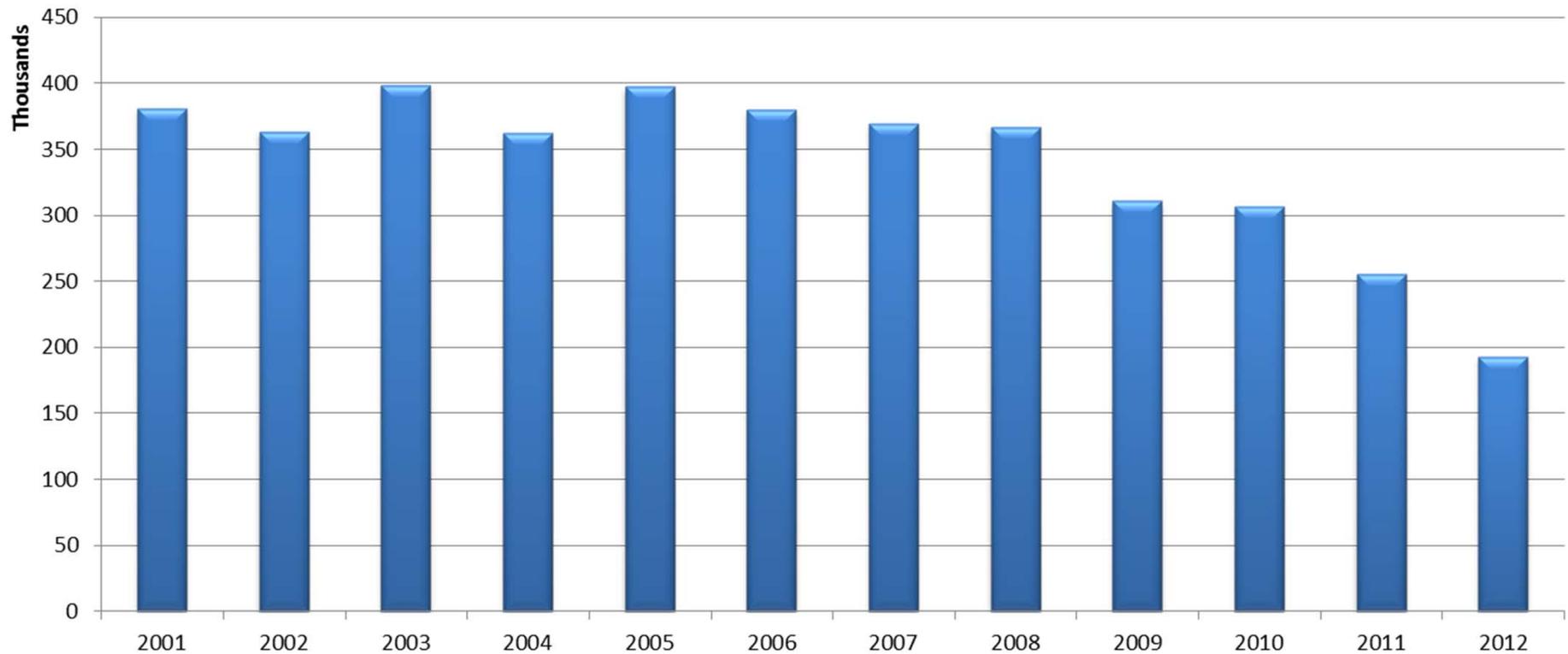
- 1-hour form of the NAAQS issues- '8760' (hours per year)
- 99th percentile – Typically the 4th highest daily maximum 1-hour average for each year averaged over three years.
- Not much room for 'episodes' or 'events'.

Particulate Matter (PM_{2.5})

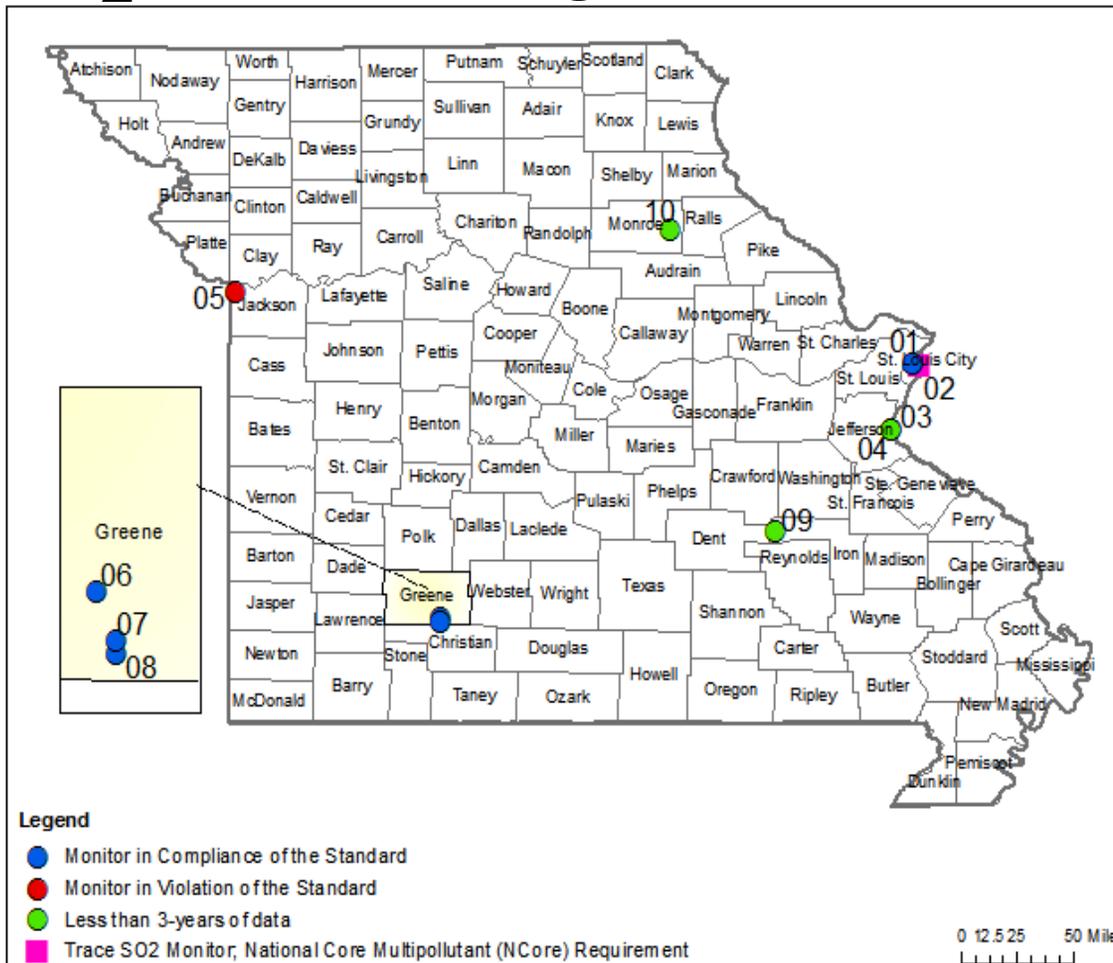
- Annual NAAQS- Lowest ambient concentrations are > 77% of the Annual 12 µg/m³ NAAQS (~ 9.2 µg/m³).

Sulfur Dioxide (SO₂) Point Source Emissions

Sulfur Dioxide
Thousand Tons per Year



SO₂ Monitoring Network, 2013



Site# Site Name (11-13 Design Values*(ppb))

St. Louis Area, MO

- 01 Margaretta (29)
- 02 Blair Street (47)
- 03 Herculaneum, Main Street** (172^{^^})
- 04 Herculaneum, Mott Street (192^{^^})

Kansas City, MO

- 05 Troost (162)

Springfield Area, MO

- 06 South Charleston (44)
- 07 Wildwood Lane^{^^} (49)
- 08 James River-South[^] (44)

Outstate Area

- 09 Buick NE (90^{^^})
- 10 Mark Twain State Park (8^{^^})

*Quality assured data through December 31st, 2013

**Discontinued monitor

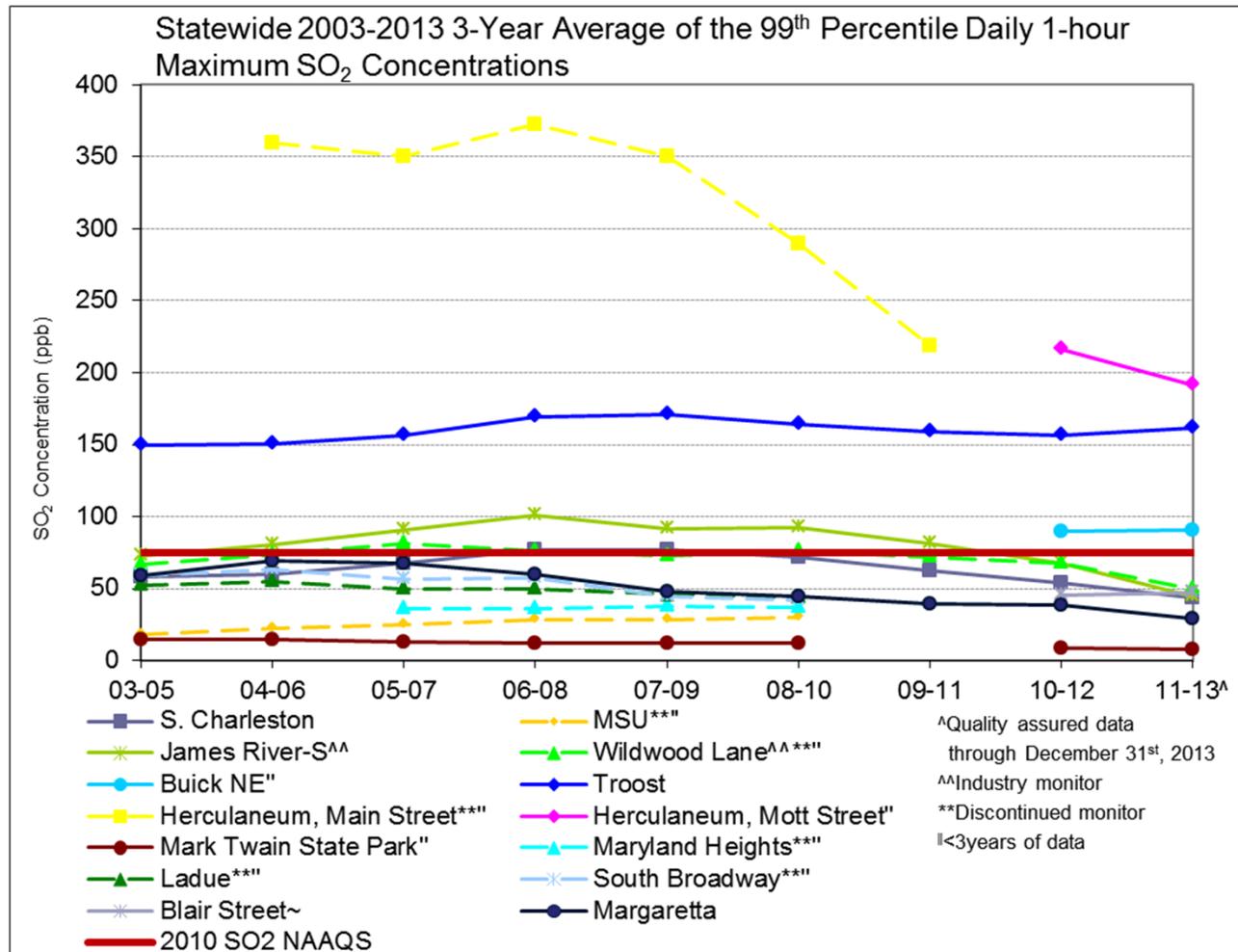
[^]Industry monitor

^{^^}Not a valid indicator due to data incompleteness

No violations of the 24-hour and annual NAAQS

Data Source: Environmental Protection Agency Air Quality System (EPA AQS), AMP480 Report

SO₂ Ambient Monitoring Trends



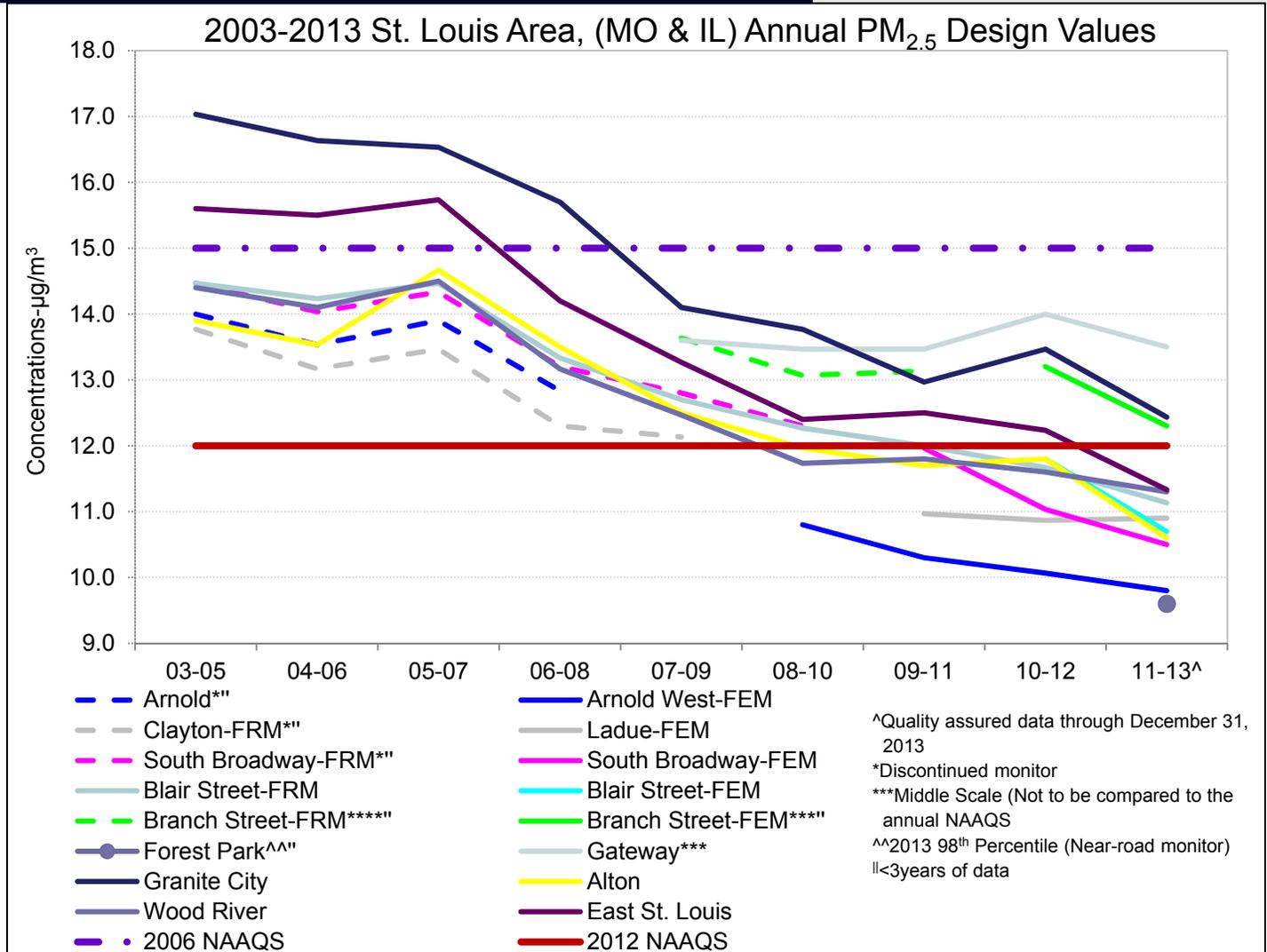
Data Source: Environmental Protection Agency Air Quality System (EPA AQS), AMP480 Report

PM_{2.5} Emissions Inventory

- Working to improve point source PM_{2.5} inventory.
- PM_{2.5} inventory is required to implement SIP & required by 10 CSR 10-6.110 Table 1.
- 2013 EIQ - Recommend that facilities review their PM₁₀ and PM_{2.5} EIQ carefully.
(PM_{2.5} > PM₁₀ ? No!) $PM_{10} = PM_{10-2.5} \text{ (coarse)} + PM_{2.5} \text{ (fine)}$
- If you have questions contact the EIQ help desk eiq@dnr.mo.gov or call (866) 663-4748.

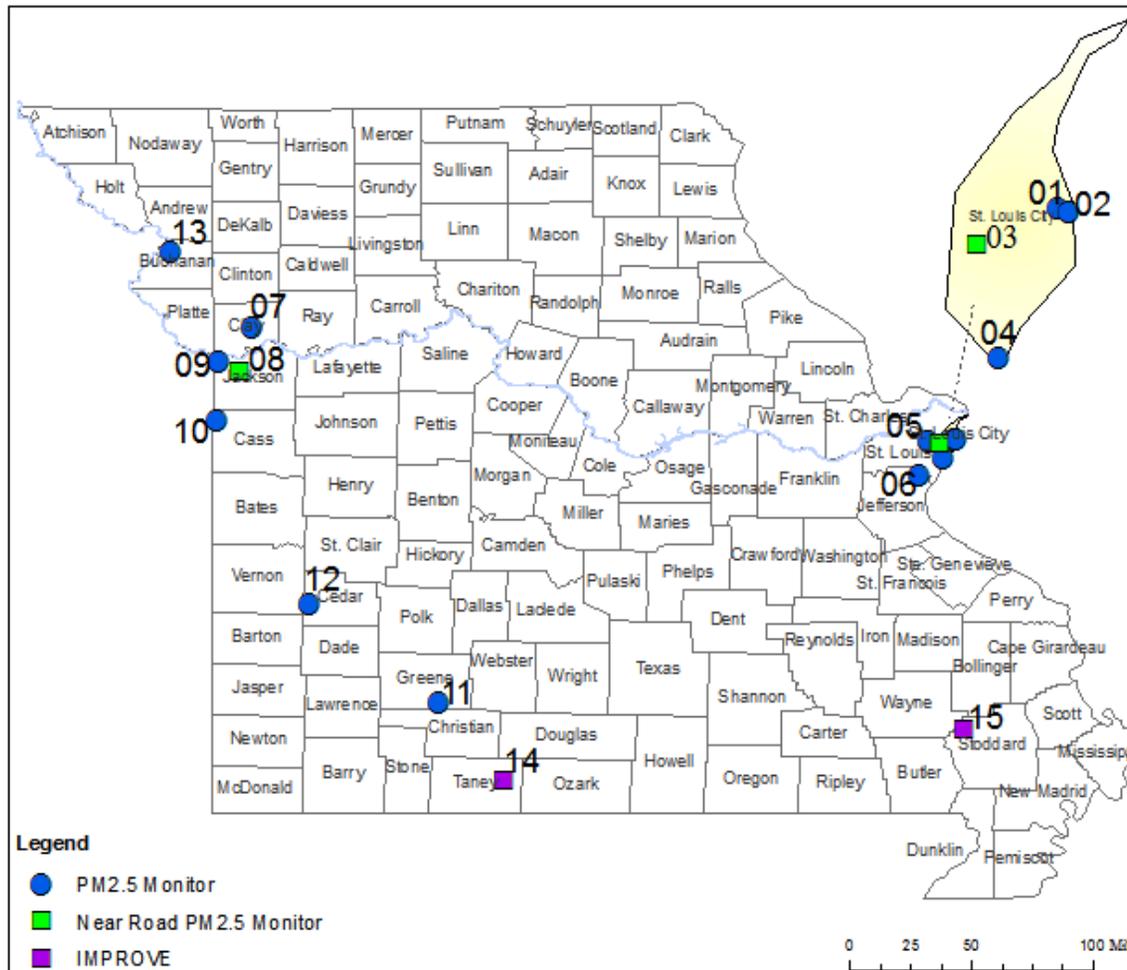
PM_{2.5} Annual Average Ambient Air Monitoring Trends

- MO Sites in Compliance
- One Illinois Site not Meeting Annual NAAQS



Data Source: Environmental Protection Agency Air Quality System (EPA AQS), AMP480 Report and AMP450 Report

PM_{2.5} Monitoring Network



Site# Site Name (2011-2013 Design Values (µg/m³))

St. Louis Area, MO

- 01 Blair Street (24, 11.1)
- 02 Branch Street** (28, 12.3)
- 03 Forest Park^ (21, 9.6)
- 04 South Broadway (23, 10.5)
- 05 Ladue^^ (23, 10.9)
- 06 Arnold West (23, 9.8)

Kansas City, MO

- 07 Liberty (21, 9.2)
- 08 Blue Ridge, I-70 (18, 7.6)
- 09 Troost (22, 9.9)
- 10 Richards Gebaur-South^^ (22, 10.7)

Springfield Area, MO

- 11 Missouri State University (21, 9.8)

Outstate Area

- 12 El Dorado Springs^^ (22, 10.2)
- 13 St. Joseph Pump Station^^ (24, 11.0)
- 14 Hercules Glades
- 15 Mongo

*Quality assured data through December 31st, 2013

**Middle Scale: Not to be compared to the annual NAAQS

^2013 98th Percentile (Near-road monitor)

^^Not meeting data completeness criteria

No violations of the 24-hour and annual NAAQS

Data Source: Environmental Protection Agency Air Quality System (EPA AQS), AMP480 Report

Air Quality Analysis Section Website Upgrades!

Air Pollutants Page:

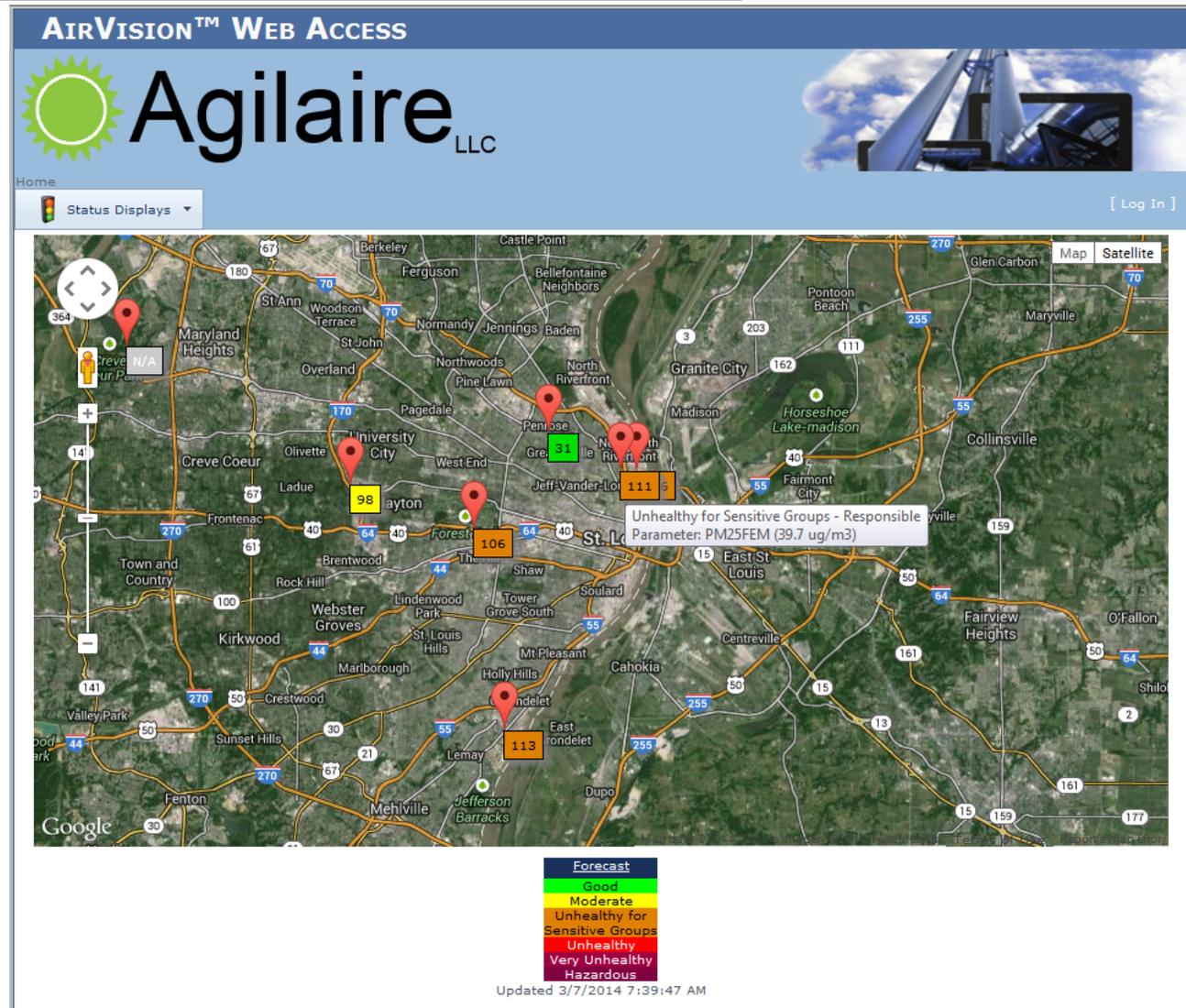
<http://dnr.mo.gov/env/apcp/airpollutants.htm>

- Design Value reports
- Preliminary hourly data reports
- Monitoring Network Plans & More
- More improvements coming...
- Air Quality Index (AQI) near real-time monitoring maps

Coming Soon!

Modernization!

- Near real-time Monitoring Maps.
- Reports preliminary AQI for the critical pollutant at each site.



Preliminary Design Value Reports

		1-HOUR Sulfur Dioxide (SO₂)					Report Date	3/4/2014			
<i>Site</i>	<i>County</i>	99th Percentile 1-hour Average (ppb)					CV - 75	# of Exceedances 75 ppb (2010 Std) 2014	Design Value Year-to-Date		
		2010	2011	2012	2013 [^]	2014 ^{^^}			10-12	11-13 [^]	12-14 [^]
<i>St. Louis</i>											
Herc. Main	Jefferson	199	172	***	***	***	N/A	***	***	***	***
Herc. Mott	Jefferson	**	164	268	143	16	CV exceeded	0	216	192	142
Blair St.	St. Louis City	38	43	56	42	32	130	0	46	47	43
Margaretta	St. Louis City	49	32	36	20	5	172	0	39	29	20
<i>Kansas City</i>											
Troost	Jackson	141	162	167	156	118	CV exceeded	13	157	162	147
<i>Springfield</i>											
Wildwood	Greene	83	67	52	29	[^] *	N/A	0	67	49	[^] *
James River	Greene	98	70	36	27	23	165	0	68	44	29
Charleston	Greene	62	59	41	31	18	156	0	54	44	30
<i>Outstate</i>											
Buick Northeast	Iron	**	94	91	85	34	52	1	**	90	70
MTSP	Monroe	11	****	8	8	6	212	0	**	8	7
								14			

* = Began in Jan. 2011
 ** = New Site start Dates, Herc. Mott St. 6/15/2011, Buick Northeast 9/23/2011
 *** = Discontinued 5/25/2011
 **** = Mark Twain State Park (MTSP) resumed background SO₂ monitoring on 7/1/2012. No monitoring was conducted in 2011 at this site.
[^] = Discontinued 12/03/2013
[^] Preliminary data through December 31st, 2013
^{^^} For 2014 the 1-hour SO₂ concentrations are the 4th highest daily maximum 1-hour SO₂ average concentration measured year-to-date.

Compliance/Enforcement Section

- Resolves enforcement actions from Regional Offices/Local Agencies; Refers cases to Attorney General, if necessary
- Conducts oversight of Vapor Recovery/IM
- Issues Asbestos Certifications, Contractor Registrations and Training Provider Accreditations
- Provides General Compliance Assistance
- Works with Regional Offices/Local Agencies to investigate citizen concerns and conduct routine inspections
 - asbestos, vapor recovery, open burning, dust, odors and general compliance

Compliance/Enforcement Section

Darcy Bybee, Section Chief

Asbestos Unit

Richard Hall

Stephanie Durbin

Cari Gerlt

Laura Guinn

Compliance Unit

Russell Sullivan

Amanda Horstmann

Cliff Johnson

Brian Newby

Jaime Rizo

Ernest Wilson

Testing &

Emissions Unit

Richard Swartz

Steve Sidebottom

Patrick Vavra

Josh Vander Veen

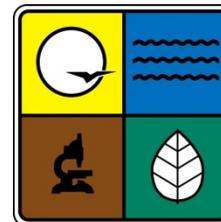
Diana Hill

Vicky Son

Lora Zimmerman

March 2014

Asbestos Information

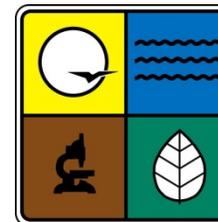


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Asbestos Information Resources

- Missouri Department of Natural Resources' Air Pollution Control Program: (573) 751-4817 or at <http://www.dnr.mo.gov/env/apcp/Asbestos.htm>
 - **New email address to use for these notifications:**
AsbestosNotifications@dnr.mo.gov
- Environmental Protection Agency—Asbestos: www.epa.gov/asbestos/
- Occupational Safety and Health Administration—Asbestos: www.osha.gov/SLTC/asbestos/index.html
- United States Consumer Product Safety Commission: www.cpsc.gov/

Stage II and Widespread Use in Missouri



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More Information:

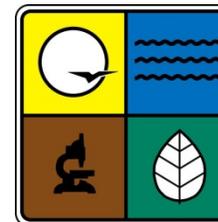
Vapor Recovery/Widespread Use

Web Page:

<http://www.dnr.mo.gov/env/apcp/vaporrecovery/epawidespreaduserule.htm>

- Click on the  Click to receive updates on this issue. to sign up for email updates

Federal Area Source Regulations (GACTs) and Enforcement



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What are GACTs?

- *'Generally Available Control Technology'*
- Found in 40 CFR Part 63
- Regulate Area Sources which are sources that emit:
 - less than 10 tons annually of a single hazardous air pollutant
 - or
 - less than 25 tons annually of a combination of hazardous air pollutants.
- ~70 GACTs

Who is enforcing them? (Cont'd)

- EPA is enforcing the far majority
 - There are some that the Air Program enforces
 - BUT! You will notice GACT requirements are included in P70 or Intermediate permits.

Federal CAA requirements (including GACTs) are still federally enforceable and EPA can and will enforce these standards.

Area Source Webpage Resource Table

Table 1 On-line Compliance Resources for Missouri Area Source Requirements

Regulating ↕ Agency	Description ↕	40 CFR 63 Subpart ▲	Title V ↕ Permit	Keyword ↕	Rule and Implementation Information	Regulation ↕	Helpful ↕ Links
MoDNR	Coke Oven Batteries (Reg refers to Sources, not area or major.)	(1L) - L	Major Permit assumed	Coke Ovens	Information	Regulation	
MoDNR	Dry Cleaning Facilities (Major and area sources)	(1M) - M	Exempt	Dry cleaning	Information	Regulation	Link
MoDNR	Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (Major and area sources)	(1N) - N	Exempt	Chromium	Information	Regulation	

Useful Links:

- EPA's Area Source Standards Page:
<http://www.epa.gov/ttn/atw/area/arearules.html>
- EPA R7's MACT (and GACT) Contact List:
http://www.epa.gov/region07/air/toxics/mact_standard_contacts.htm
 - EPA R7's NSPS Contact List:
http://www.epa.gov/region07/air/nsps/nsps_standard_contacts.htm
- The Air Program's Area Source Webpage:
<http://dnr.mo.gov/asp/apcp/areasource/areasource-list.asp>

Fiscal and Budget

- Prepares budget, cash management, time accounting, accounts payable & accounts receivables
- Administers federal grant projects; seeks new grant opportunities
- Coordinates state and federal workplans and local memorandum of agreements
- Maintains record retention and responds to Sunshine Requests
- Administers program human resource personnel actions
- Reviews legislation and fiscal note requests

Fiscal and Budget

Carolyn Kliethermes, Section Chief

Grant Management

Deedra Beye

Receptionist

Debbie Heinrich

Fileroom Management

Derek Apel

Financial Operations Unit

Sara Pringer, Unit Chief

Tim Largent

Tara Overbey

March 2014

Fiscal and Budget - Contacts

- Construction Permit & Asbestos Inspection
Fee Invoices & EIQ Inquiries
 - Tim Largent
- Cash Receipt Deposits and Credit Card
Processing
 - Tara Overbey

» Section # (573) 751-8428

Electronic Payment Methods

- Effective July 1, 2014, per Chapter 37, Section 37.007 RSMo, State agencies and departments shall not incur any additional fees for utilizing such payment methods.
- The customer shall pay the third party vendor the transaction fee for processing electronic payments i.e., credit cards, debit cards or electronic checks.
- The fee is paid to Collector Solutions, Inc., not to the Missouri Department of Natural Resources.

St. Louis Inspection and Maintenance

- Oversees vehicle inspection and maintenance program
- Performs covert and overt audits of emissions testing facilities
- Provides technical assistance and customer education

St. Louis Inspection and Maintenance Chuck Dachroeden, Section Chief

Technical Services Unit

Neil Jost

Jeffrey Hillis

Angelo Vitullo

Debra McPeeks

Inspection Services Unit

Dan Rethemeyer

Travis Glueck

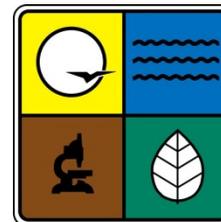
David Offu

Allen Logan

Shawna Fuhrman

March 2014

Carbon Pollution Standards for the Power Industry



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Clean Air Act Section 111

- Lays out different approaches for new versus existing sources
- Categories of sources – industry specific versus pollutant specific
- Two parts of Section 111:
 - **New Sources – Section 111(b)**
 - *Existing Sources – Section 111(d)*

Section 111(b) – New Sources

- New Source Performance Standards - NSPS
- Most Section 111 Standards → 111(b)

Process of 111(b):

- EPA issues federal standards
- State adopts federal standards by reference
 - Enforcement authority
- State cannot change 111(b) regulation – no stricter than federal

Carbon Pollution Rule for New Power Plants – 111(b)

- September 20, 2013 – EPA issued a proposal
- 60 day comment period started January 8, 2014 – ends May 9, 2014

Highlights of Carbon Pollution Rule for New Power Plants – 111(b)

- Proposed separate emission limits for coal fired and natural gas plants
- Requires partial Carbon Capture Sequestration for new coal units

Section 111(d) – Existing Facilities

Process of 111(d)

- EPA issues guidelines for existing sources - turns over to states to develop plans and rule for sources in their state
- EPA approves plan
- Section 111(d) allows for more flexibility than other air quality rules
 - Flexibility untested

Section 111(d) – Existing Power Plants

EPA's schedule for existing power plant
111(d) Guidelines:

- June 2014 - Issue proposed guidelines
- June 2015 - Finalize guidelines
- June 2016 - State plans due to EPA

Note: EPA has stated Carbon Capture
Sequestration will not be a part of 111(d)

MDNR's schedule for Power Plant 111(d)

- Now to June 2014 – Research options, gather information, talk with stakeholders
- June 2014 – June 2015: Review EPA's draft, comment if applicable, draft plan/rule
- June 2015 – June 2016: Finalize rule/plan
 - 12 months to finalize and adopt rule/plan
 - Typically takes 18 months

Air Program Contact Information

- firstname.lastname@dnr.mo.gov
- Front Desk (573) 751-4817
- Air Program Director's office (573) 751-7840
- List Serve information – to receive email updates on air quality issues, click on the red envelope on any of our web pages.



Air Program web pages with List Serves include:

- <http://www.dnr.mo.gov/env/apcp/index.html>
- <http://www.dnr.mo.gov/env/apcp/public-notice.htm>
- <http://www.dnr.mo.gov/env/apcp/AirAdvisory/APCPstakeholder.htm>



Questions?

