

EPA UPDATE

MAY 2016

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EPA REGION 7



Compliance is
the goal . . .

ENFORCEMENT IS JUST A TOOL TO
GET IT.



Why Enforcement?

- Respect for Rule of Law
- Protect Communities: Reduce pollution and stop noncompliance
- Level playing field for those who play by the rules
- Remedy the harm caused by the violation
- Deterrence
 - Deter the violator
 - Deter others

EPA Enforcement Role In Delegated States

States - Primary day-to-day implementation of most Clean Water Act, Clean Air Act, RCRA programs

EPA - Ongoing responsibility to ensure adequate implementation

- Congress mandated role for EPA in permitting, enforcement, and standards
- Ensure base level of protection for all citizens

Core level of independent federal presence - inspections/enforcement

EPA Enforcement Role

National Priorities/Initiatives

Gaps in state programs: Resources, Expertise, Will

Interstate issues

- Pollution across state lines
- Companies operating in multiple states

EPA Enforcement Role

EPA Direct Enforcement Programs:

- Tribal
- Wetlands
- CAA Section 112r
- TSCA Lead Paint
- FIFRA
- OPA/SPCC
- States w/o delegated program authority

EPA Inspections in NE: FY 2015

CAA 112(r)	7
CAA Stationary Sources	11
CWA 311 SPCC	12
CWA NPDES	24
CWA Pretreatment IUs	2
FIFRA	3
RCRA Hazardous Waste	15
RCRA UST	29
TSCA Lead	19
Sum:	122

Flint

National Enforcement Initiatives: 2017-19

Existing NEIs that Continue:

- NSR/PSD: coal, glass, acid plants, cement
- CAFOs
- Raw Sewage (CSOs/SSOs)

Air Enforcement: Reduce Pollution from Largest Sources

In Iowa, Missouri, Kansas, and Nebraska:

- 65% of our electricity comes from coal-fired power generation
- 90% of our coal-fired units are over 30 years old
- Only 35% have advanced NO_x controls (SCR/SNCR)
- Only 40% have SO₂ scrubbers

Interstate/Alliant Settlement

- Reduce SO₂ and NO_x emissions by 32,000 tons per year
- Covers seven plants that generate 30% of Iowa's electricity



Mitigation projects



UTILITY-SCALE
PHOTOVOLTAIC ARRAY

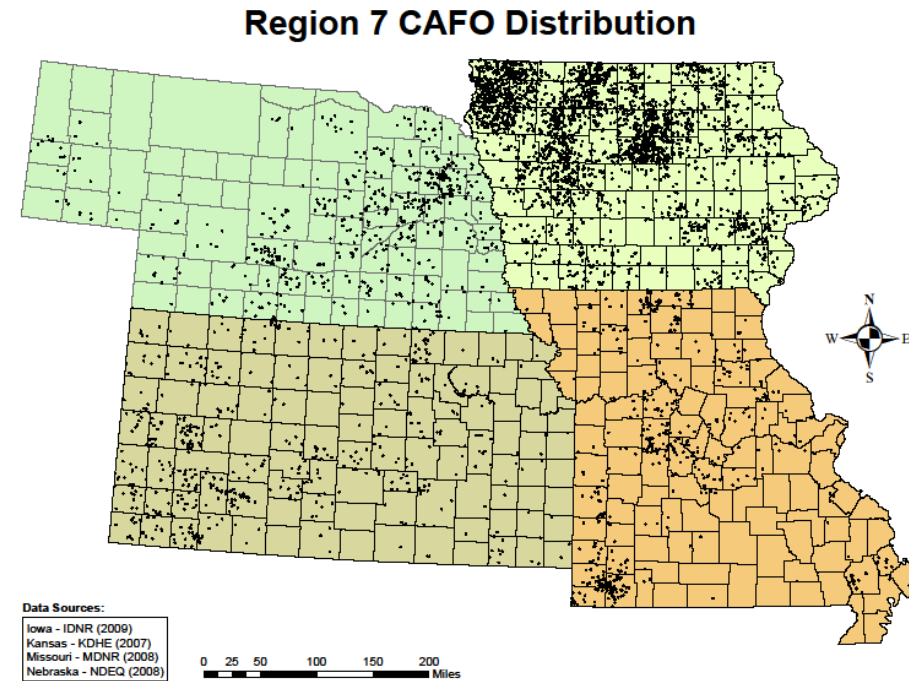


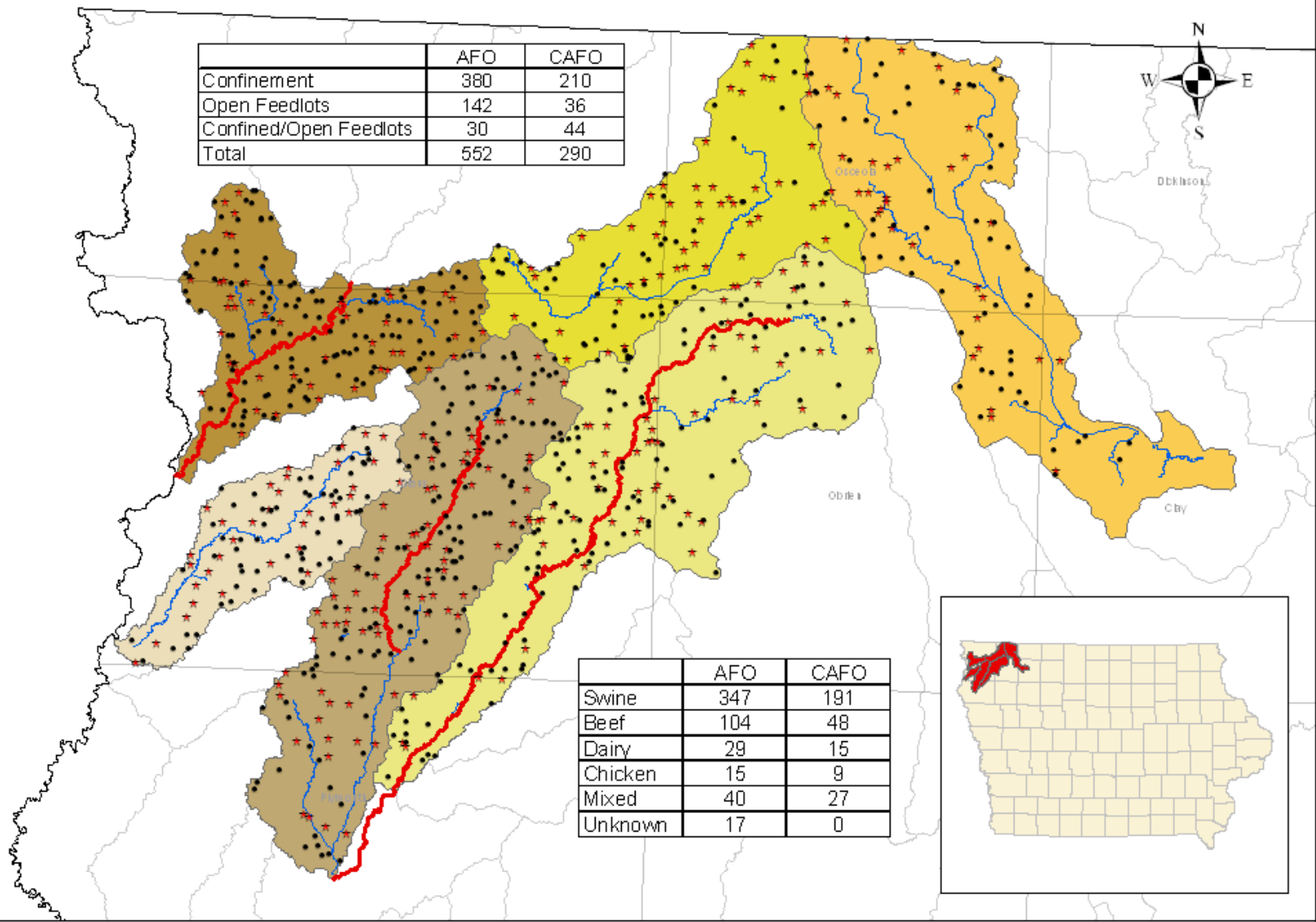
ANAEROBIC MANURE
DIGESTION

PHOTO BY DEAN HOUGHTON

Ameren Litigation

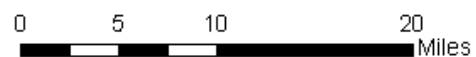
Water: Keep Manure out of Streams and Rivers





AFO/CAFO Distribution in Priority Area #1

- AFOs
- ★ CAFOs
- Impaired Streams
- NHD Permanent Streams



Sources:
 AFO/CAFO Data
 - Iowa Department of Natural Resources (10/2009)
 HUC 10 Watersheds
 - U.S. Department of Agriculture (2003)
 Impaired Waters
 - Iowa Department of Natural Resources (2008)
 Streams/NHD Data
 - U.S. Geological Survey (1999-2000)



Region VII

Expanded NEI: Cutting Toxic Air Pollution

Styrene and TCE/PCE emitters

VOC emitters in high population areas

Tank farms

Landfills

Sources contributing to Ozone, SO₂,
and Lead attainment concerns

Air emissions from leaking vents,
equipment and units at TSDs and LQGs
(Part 265 Subparts AA, BB, and CC)



New NEI: Industrial Wastewater Dischargers

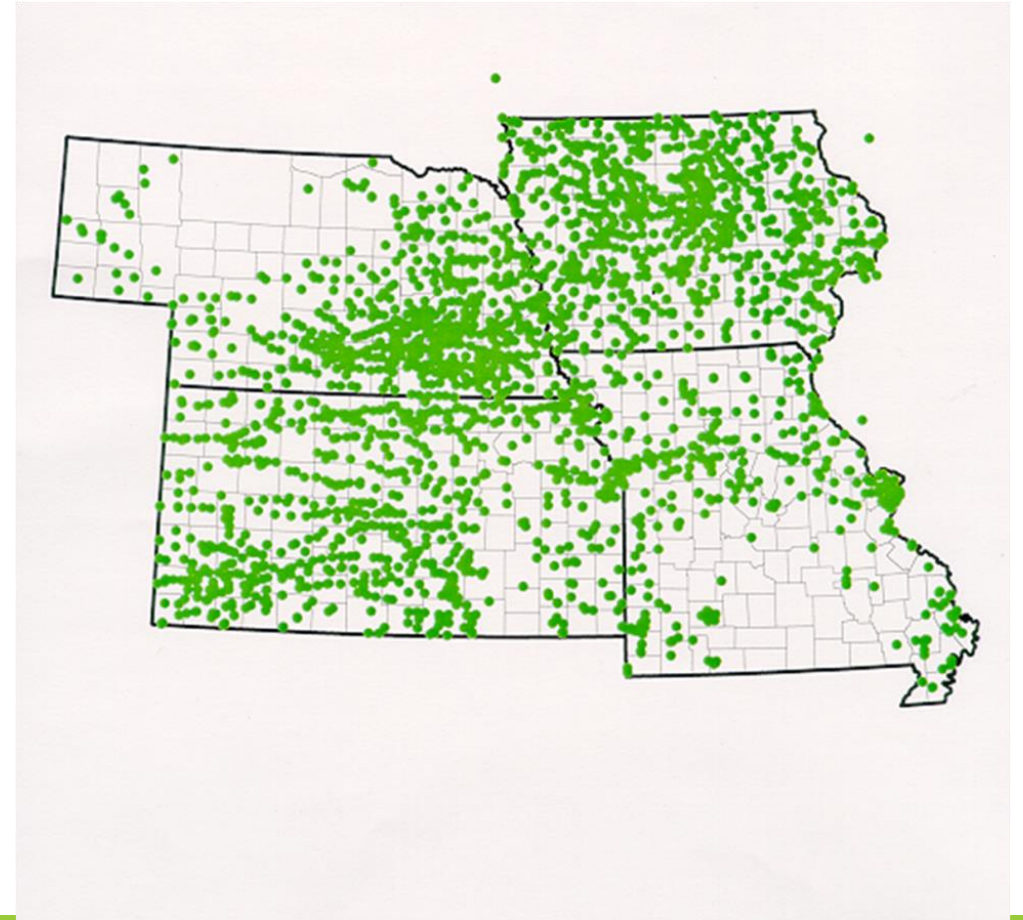
Reduce sources of water body impairment:
nutrients, metals, organic enrichment

Focus on four sectors:

- Chemical Manufacturing - 139 facilities
- Food Processing – 198 facilities
- Mining – 229 facilities
- Primary Metal Manufacturing – 16 facilities



New NEI: Ensuring Safe Handling of Dangerous Chemicals



Barton Solvents Settlement



New NEI: 112r and General Duty Clause

Focus on high-risk facilities in five sectors:

- Refineries
- Chemical Manufacturing
- Ammonia Refrigeration
- Fertilizer Distribution
- Gas Processing Plants



Number of Facilities in Proposed PRIORITY Sectors

NAICS DESCRIPTION	Number of Total Facilities	Number of Total Facilities – R7
Petroleum Refineries	139	3
Ammonia Refrigeration	890	72
Organic and Inorganic Basic Chemical Manufacturing	307	9
Fertilizer Distribution	3,155	1,426
Gas Processing Plants	732	27

Core Enforcement: Reduce Stormwater Runoff Pollution

- Scrapyards/recyclers
- Railyards
- Sand and gravel
- DOTs



Stormwater Settlement Example: Auto Salvage Facility in Northwest Iowa

- Reconfigure facility to move most operations and materials under roofs
- \$120,000 penalty
- Clean debris from the park and the banks of the pond, followed by laying sod in park.



Level Playing Field and Deterrence: *U.S. v STABL*



- Pretreatment case involving Lexington, NE meatpacker
- District Court: \$1.15M economic benefit, \$1.15M gravity
- “Stabl’s violations were serious . . .the Court concludes that a civil penalty in an amount twice Stabl’s economic benefit will serve the interests of justice and help deter others from engaging in similar non-compliance
- ***8th Circuit affirmed***

FY16 CWA Inspections		State					
Inspection Type	IA	KS	MO	NE	Tribal	Total	
CAFO	9	5	16	14		39	
CSI	11	15	14	3	2	45	
IU-CSI	3		2		2	7	
Pretreatment	3	3	4			10	
SSO	2		2			4	
SW Construction	1		6	2		9	
SW Industrial	6	7	5	4		22	
Total	35	30	49	23	4	141	

Core Enforcement: SPCC and FRP

Bulk storage facility in Willow Springs, Missouri

Violations:

- No Facility Response Plan
- Inadequate secondary containment
- Stormwater violations

Settlement:

- Five foot berm
- \$25k cash penalty
- \$180k of SEPs
 - **Leak detection w/remote notification**
 - Emergency response equipment for locals



Improper Oil Storage: BF By-Products



Core Enforcement: TSCA Pb Paint Rule Enforcement



Core Enforcement: RCRA

In FY 2015, EPA conducted 183 RCRA inspections:

- About 50% of those in Iowa
- 75% of those inspections (138) documented RCRA violations
- 12 penalty actions
- Total Penalties: Approx \$350,000

Vast majority of facilities found to be in violation returned to compliance without formal enforcement or penalty

RCRA Enforcement Priorities

Under-reporters/non-filers

Large TRI Reporters

Pesticide Mfg. & Formulators

Contaminated Sites: Vapor Intrusion



Next Generation Compliance

2

THE ROAD AHEAD

Compliance Challenges

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- Pollution
- Noncompliance
- Information gaps
- Single facility inspection model
- Larger universe
- Budgets declining



Technology Paradigm Change

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The screenshot shows a web browser window displaying the Village Green Project website. The browser's address bar shows the URL <http://www.airnow.gov/index.cfm?action=airnow.villagegreen>. The website features a header with the Village Green Project logo and a navigation menu. The main content area displays a photograph of a wooden bench with solar panels mounted on its backrest, situated in an outdoor community space. A dark overlay box on the right side of the image provides the following data:

Most Recent Observations Kansas City, KS	
43 Ozone ppb	69.1 °F
3 PM _{2.5} µg/m ³	72.3% humidity
	4.3 mph SE

observed Wed 8:21 AM CDT
[Explore Kansas City, KS](#)

Below the photograph, a blue banner reads: "Welcome to the Village Green Project" followed by "a research effort to discover new ways of measuring air quality and weather conditions in community environments." Three icons illustrate the project's goals:

- Measuring and communicating on-the-spot air quality and weather conditions for research and awareness:** Represented by an icon of a clock and a line graph.
- Developing small and rugged data collection systems that can be powered by the wind and sun:** Represented by an icon of a wind turbine and a sun.
- Partnering with communities to pilot test the new technology in outdoor community spaces:** Represented by an icon of the solar-powered bench.

Real Time Data + Transparency

=

Changed Behavior

Next Gen Enforcement Tools

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- Advanced Monitoring
- E-Reporting
- Transparency
- Third Party Verification

Advanced Monitoring

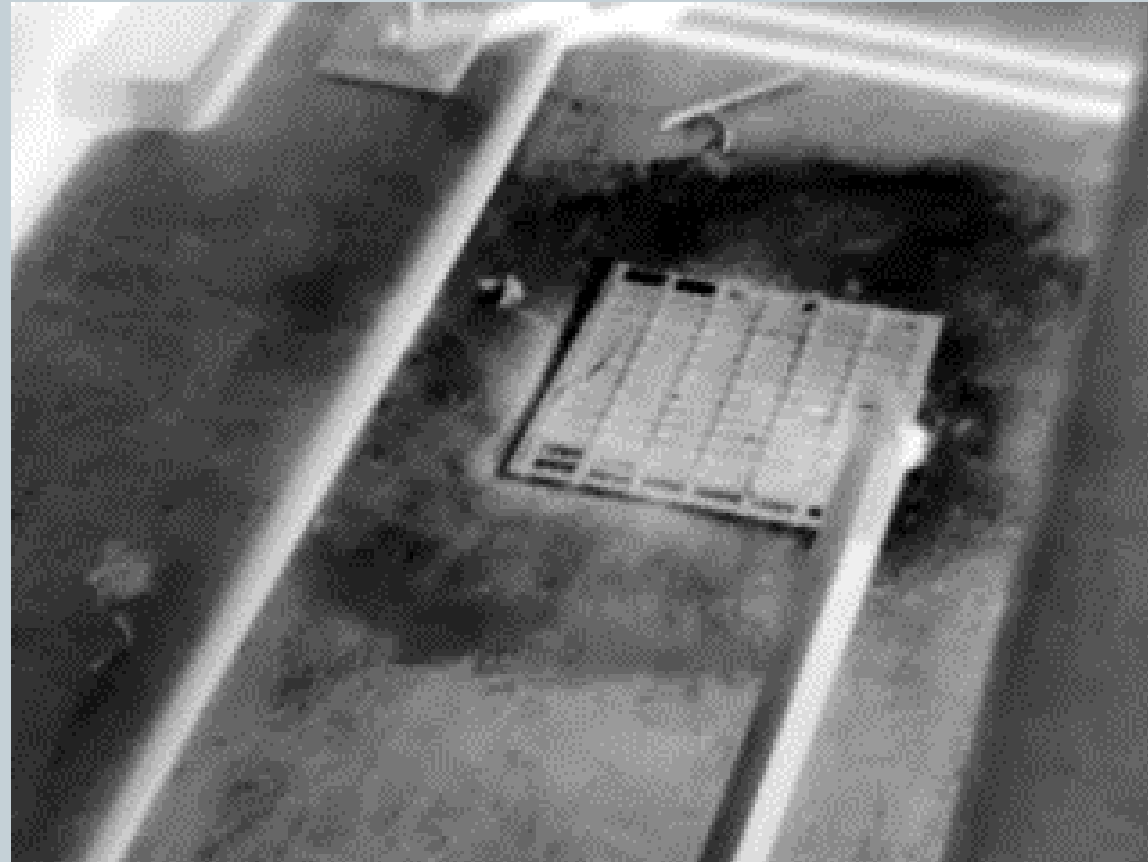
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Example from EPA Region 10

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Leaking equipment at bulk gasoline distribution terminal.



Innovative Enforcement

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Clean Air Act Settlement with Noble Energy

- Infrared camera inspections of vapor control systems and tanks
- Pressure monitors with continuous data reporting



Innovative Enforcement

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Marathon Petroleum Corporation Clean Air Settlement

- Required to use infrared gas-imaging camera at fuel storage tanks to identify potential defects that may cause excessive emissions
- If defects found, Marathon will conduct up-close inspections and perform repairs where necessary



Marathon Petroleum Company (Detroit, Michigan)

Innovative Enforcement

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Clean Air Act settlement with BP Whiting (Indiana)

- Fence line monitors located in consultation with EPA and community
- Data reported weekly on public web site
- Facility must review data with community at their request



BP Whiting's Public Website of Fenceline Monitoring Results

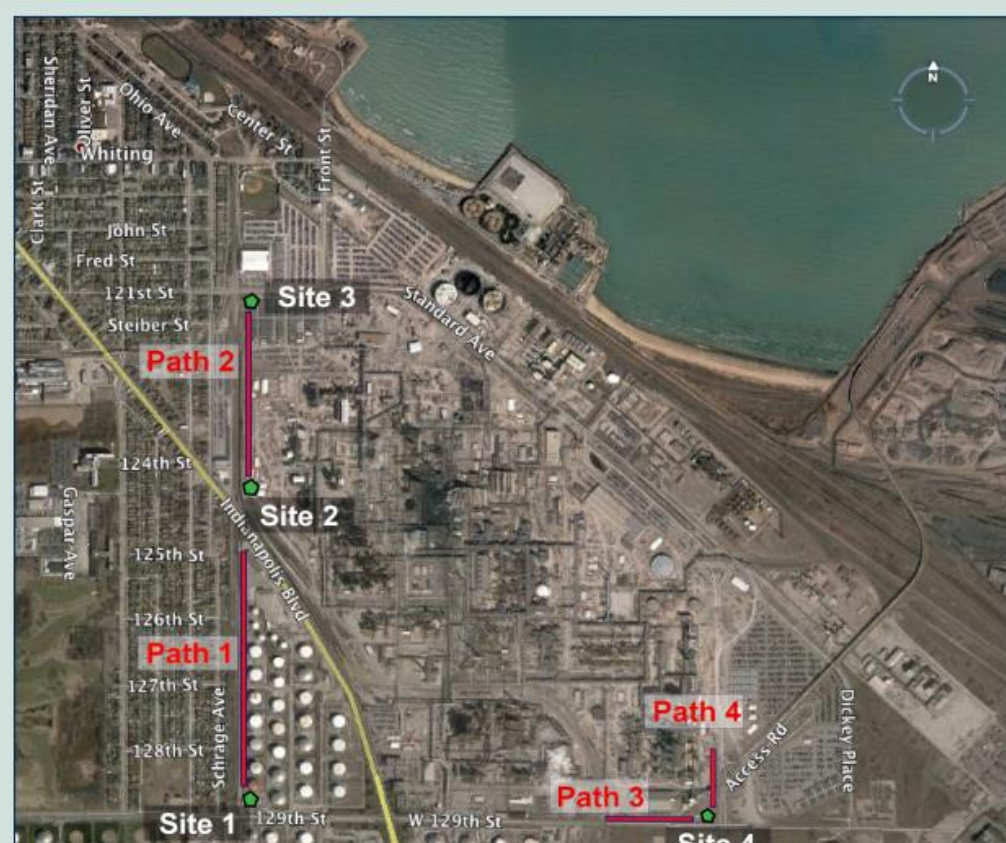
AECOM

BP Refinery Whiting, Indiana

AIR QUALITY MONITORING PROGRAM

The air monitoring network is shown in the map below. There are four air quality and meteorological monitoring stations shown in white lettering. These stations (which are referred to as "fixed stations") monitor the air for sulfur dioxide, hydrogen sulfide, total reduced sulfur (TRS) compounds, benzene, toluene, pentane, and hexane along with local weather conditions. In addition, adjacent to the fixed stations are four "open path" monitors. Open path monitors send ultra-violet light beams along a path. Chemical compounds are measured over the distance the path covers. The open path monitors are shown in red on the map. The open path monitors measure benzene, toluene, xylenes, carbon disulfide, carbonyl sulfide, and ozone.

[Click here for larger image.](#)



Home

Using the Web Site

Measurement Data

Fixed Station Measurement

Data

Open Path Measurement Data

Wind Rose

Information

[Site Locations](#)

Monitoring Equipment

Chemical Information

Glossary

Other

Documents

Contacts

New Rule for Petroleum Refineries

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- Refineries must conduct fenceline monitoring to ensure neighboring communities are protected
 - Action level/trigger
- Most recent annual average recalculated every two weeks so companies can keep emissions well below the annual standard



Coal Ash Rule

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- Transparency
- Third Party Certifications



Proposed CAA Risk Management Program Rule

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- New independent third-party audits:
 - Focuses on facilities with past accidents where required self-audits failed to prevent accidents.
 - Facilities with prior accidents required to do **independent** third party auditing to more effectively comply with accident prevention requirements.

New Rule for Oil and Gas

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- Companies required to install emissions reduction equipment at oil and gas wells
- Streamlined reporting option allows companies to submit list of completed gas wells with digital date and GPS stamped photos showing equipment installation



Which monitor should EPA, states, or citizens use for PM_{2.5}?

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Clean Water Rule Litigation

Three phases:

1. Stay: 6th Circuit has stayed the rule.
 - “Petitioners have demonstrated a substantial possibility of success on the merits”
2. Jurisdiction: 6th Circuit has ruled it has jurisdiction.
3. Merits: ??

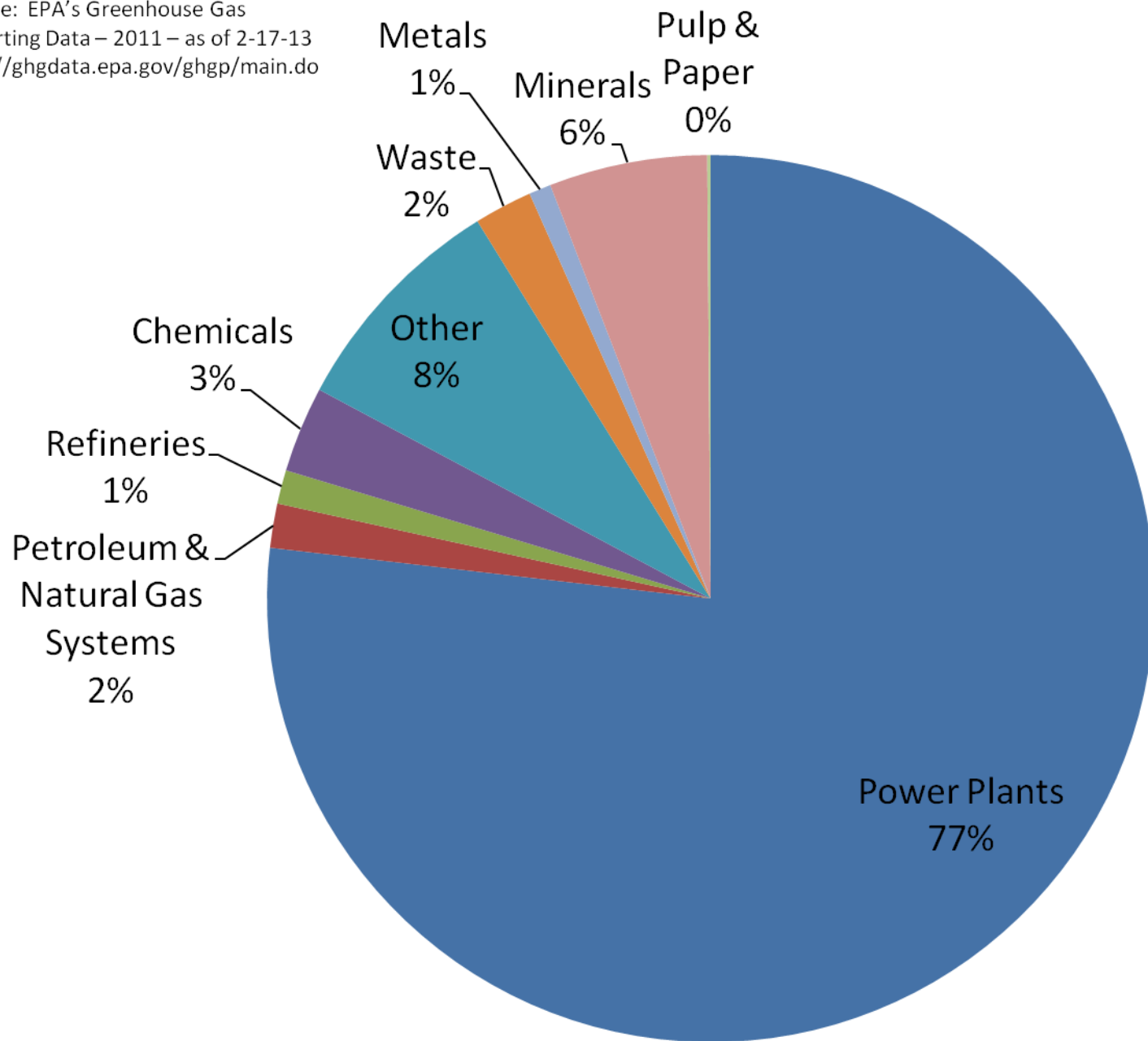
A horizontal banner for the Clean Power Plan. The top half features a silhouette of a cityscape with various buildings, a power line tower, and wind turbines. The bottom half is a dark blue bar with the text "THE CLEAN POWER PLAN" in large, white, bold letters. To the left of the text is the URL "epa.gov/cleanpowerplan" and to the right are the hashtags "#ActOnClimate" and "#CleanPowerPlan". A small EPA logo is positioned on the right side of the banner.

THE CLEAN POWER PLAN

epa.gov/cleanpowerplan #ActOnClimate #CleanPowerPlan

2016

Source: EPA's Greenhouse Gas Reporting Data – 2011 – as of 2-17-13
<http://ghgdata.epa.gov/ghgp/main.do>



Region 7 Greenhouse Gas (GHG) Emissions in CO₂e

Existing Power Plants: CAA 111(d)

State targets/state flexibility

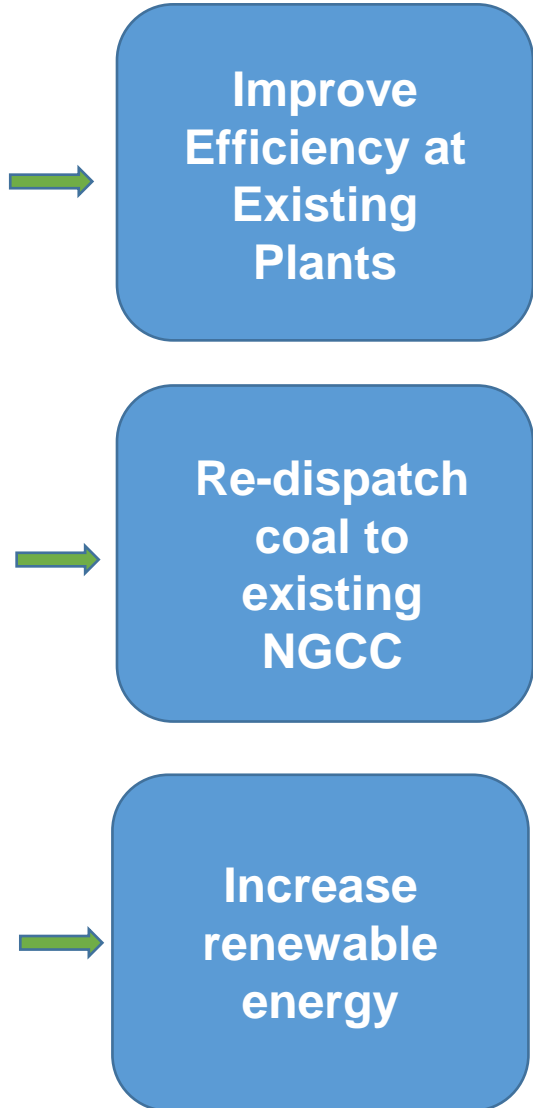
Approx 30% reduction in emissions

“Best system of emission reductions” that “that the
"Administrator demonstrates is adequately demonstrated."



Available Compliance Options

CPP's Three Building Blocks



Additional options:

- ❖ Demand-side EE
- ❖ New nuclear/upgrades to existing nuclear
- ❖ Combined Heat & Power
- ❖ Biomass
- ❖ Natural gas co-firing/convert to natural gas
- ❖ Transmission & distribution improvements
- ❖ Energy storage improvements
- ❖ Retire older/inefficient power plants
- ❖ Trading



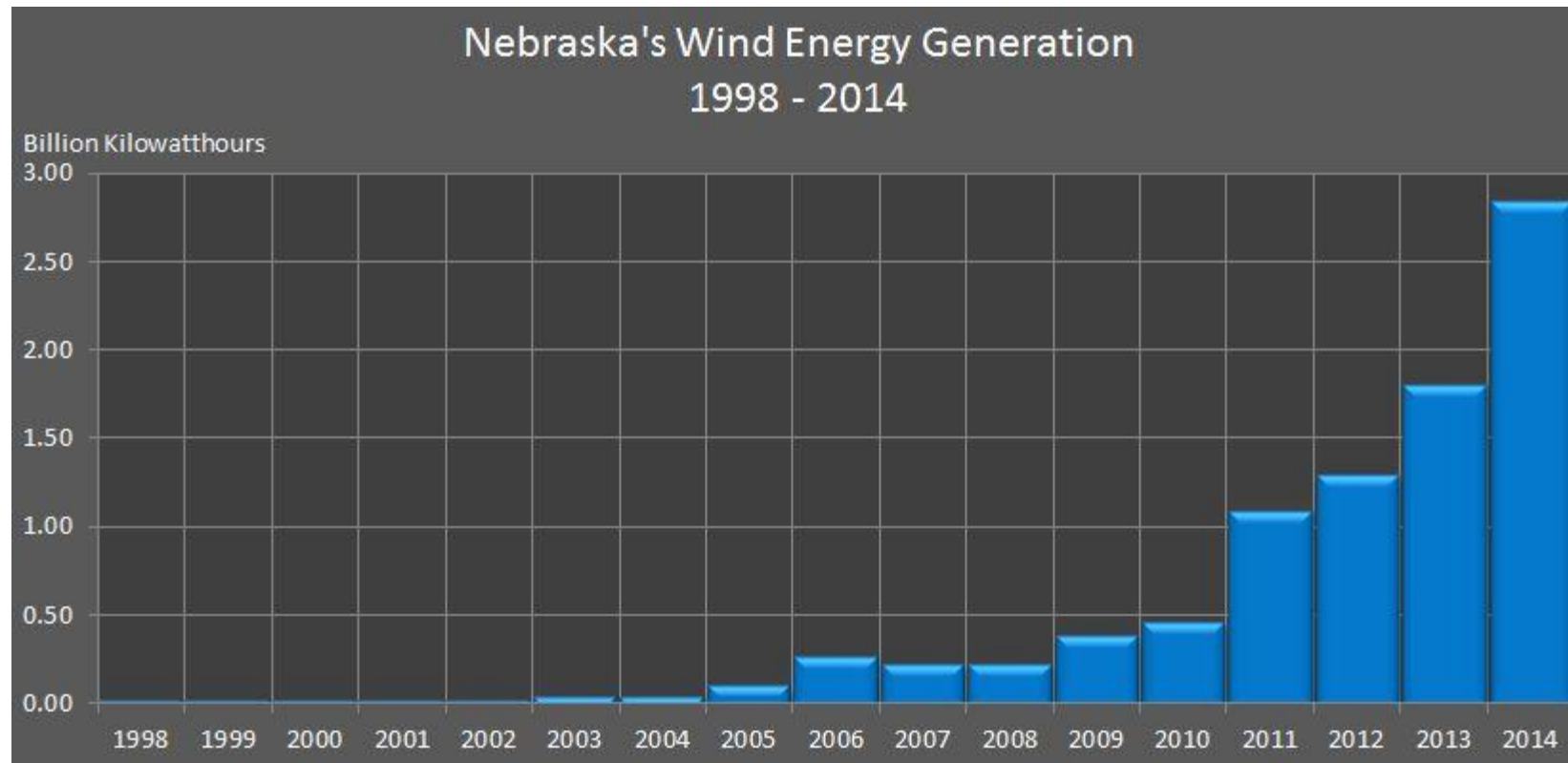
Supreme Court Stays the Clean Power Plan

- On February 9, 2016, the Supreme Court stayed implementation and enforcement of the Clean Power Plan pending judicial review.
- EPA firmly believes the Clean Power Plan will be upheld when the merits are considered because the rule rests on strong scientific and legal foundations.
- For the states that choose to continue to work to cut carbon pollution from power plants and seek the agency's guidance and assistance, EPA will continue to provide tools and support.

Key Points

- Implementation and enforcement are on hold.
- Initial submittals not required on September 6, 2016.
- EPA will continue to work with states that want to work with us on a voluntary basis.

Wind in Nebraska



Unofficial Ozone Design Values 2012-14 in EPA Region 7

