



NIRPC Environmental Management Policy Committee February 7, 2013

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IN Department of Environmental Management



IDEM's Mission

We Protect Hoosiers and Our Environment

IDEM's mission is to implement federal and state regulations to protect human health and the environment while allowing the environmentally sound operations of industrial, agricultural, commercial and government activities vital to a prosperous economy.



How Does IDEM Protect Hoosiers and Our Environment?

- Develop regulations and issue permits to restrict discharges to the environment to safe levels.
- Inspect and monitor permitted facilities to ensure compliance with the permits.



How Does IDEM Protect Hoosiers and Our Environment?

- Use compliance assistance and/or enforcement when people exceed their permit levels or violate regulations.
- Educate people on their environmental responsibilities.



One Region 2012 Quality of Life Indicators Report Environment Chapter



2012 Environment Chapter

- This chapter contains information in at least four sections:
 - The Numbers Now
 - Where We Stand
 - What We Need to Know
 - Call to Action
- That is inconsistent with what we actually know.



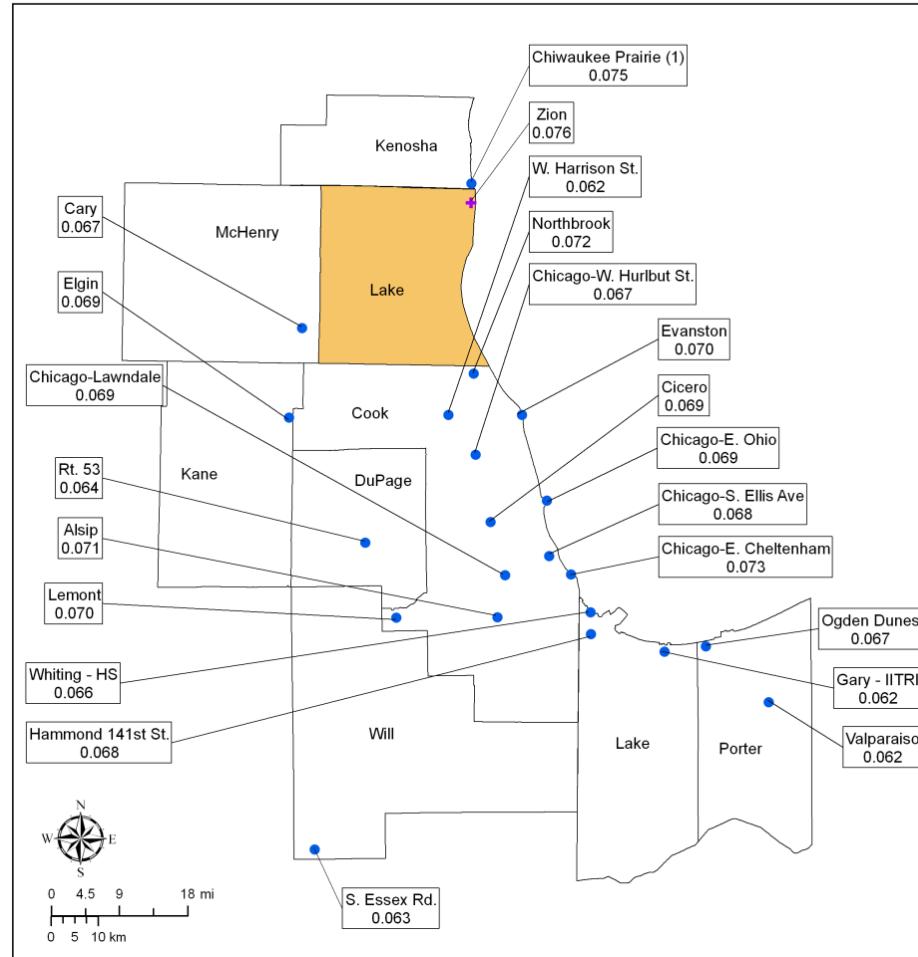
Air Quality

- *“How can we better understand the reasons for Northwest Indiana’s poor air quality”*
- Measured air quality in Northwest Indiana IS NOT POOR, it has attained all air quality standards for all six pollutants with air quality standards since 2008—U.S. EPA has designated the area as attainment for all of these pollutants.



Air Quality

- *“though the region is not in federal compliance for ozone”*
- While U.S. EPA did designate the area as nonattainment for the “new” ozone standard in June of 2012, this designation is based upon air quality in Illinois at the Wisconsin border—not Indiana air quality.



Mapped By: S. Raymond, OAQ
Date: 3/20/2012
Source: Data obtained from OAQ
Map Projection: UTM Zone 16 N
Map Datum: NAD83

Legend

- + Ozone Monitor with Design Value Greater Than or Equal To 0.076 ppm
- Ozone Monitor with Design Value Less Than 0.076 ppm
- County With Ozone Design Value(s) Greater Than or Equal To 0.076 ppm
- County With Ozone Design Value(s) Less Than 0.076 ppm

Notes:
 - Based on 2009 - 2011 data.
 - Values posted are in units of ppm.
 (1) Most current certified data is based on 2008 - 2010 data.

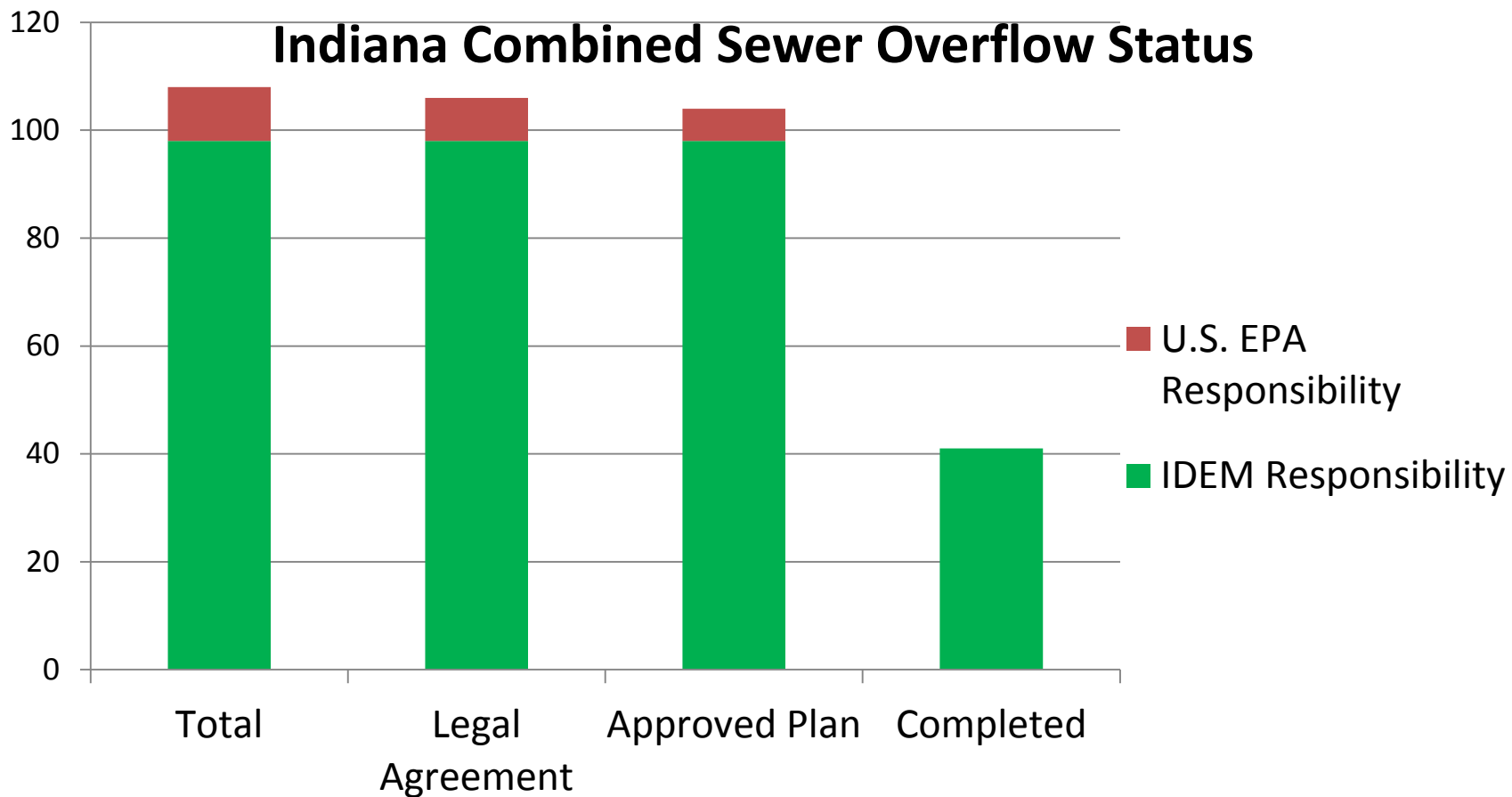


Water Quality

- *A combined sewer overflow taskforce should be considered to evaluate the barriers to separation of water and sewer systems and to develop a cohesive regional strategy for remedying CSOs.*
- LaPorte, Michigan City and Valparaiso have completed required CSO remedies.
- All other communities are making progress.



Water Quality





Is Beach Water OK for Swimming?

“In 2010, on average, they had beach action days 28% of the time”

YEAR	AVERAGE	BEST	WORST
2010	83%	99%	26%
2011	85%	99%	51%
2012	87%	100%	48%



Recommendations

- One Region should work with entities such as the NIPRC EMPC, the NWI Forum Environmental Committee, and IDEM to obtain the most current data on the environment.
- Any future report should accurately present the facts about the measured quality of Northwest Indiana's environment.



Why is the Economy Important to the Environment?

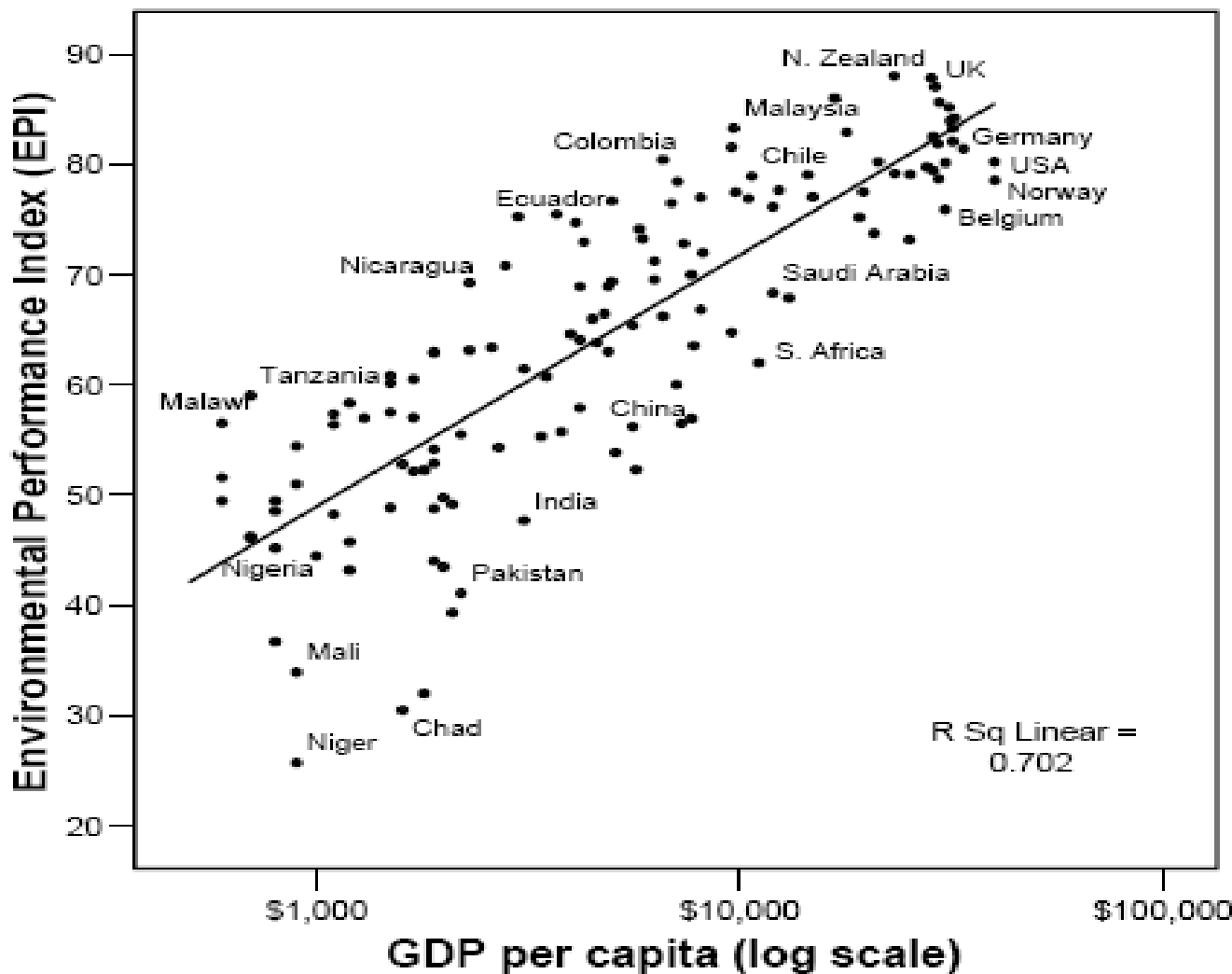


Pilot 2006 Environmental Performance Index

Yale Center for Environmental Law & Policy
Yale University

Center for International Earth Science Information Network (CIESIN)
Columbia University

<http://www.yale.edu/epi/>





Policy Implications of the 2012 EPI

- Wealth matters.
- The Environmental Health scores, in particular, reveal a significant relationship with GDP per capita.
- EPI scores more generally also correlate with wealth, although there is a diversity of performance within every level of economic development.



Ozone and Particulate Air Quality 2009-2011





New Air Quality Standards

- Since the end of 2009, new air quality standards have resulted in U.S. EPA designating the following new nonattainment areas:
 - Lake and Porter Counties Ozone (2008 standard)
 - Lawrenceburg Township (Dearborn County) Ozone
 - City of Muncie Lead



New Air Quality Standards

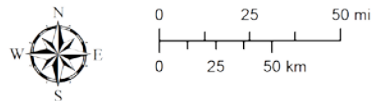
- All monitors in Indiana currently meet the 100 ppb short term NO_x standard established in 2010.
- A number of townships in six counties will likely be designated as nonattainment for the 1-hour, 75 ppb SO_2 standard established in 2010.



2010 Sulfur Dioxide Standard Nonattainment Designation Recommendations

Legend

- SO₂ Monitor with Design Value Less Than 76 ppb.
- + SO₂ Monitor With Design Value Greater Than Or Equal To 76 ppb.
- Proposed Nonattainment Area
- Attainment Area



Notes:
 - Values posted are in units of ppb.
 - SO₂ Design Value Based on 2009 - 2011 Data.
 (1) Based on incomplete data.
 (2) Based on two years of data.

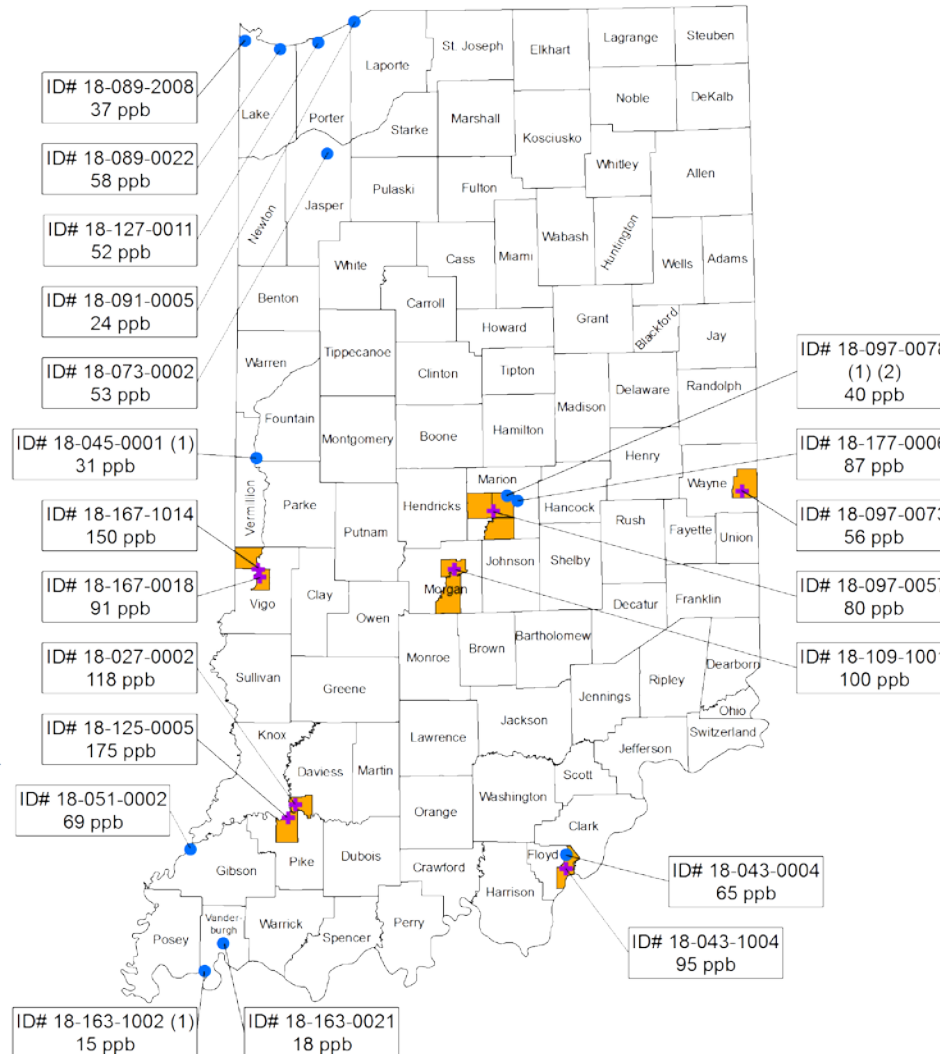
Sources: Data obtained from the State of Indiana Geographical Information Office Library and OAQ.

Date: 8/14/2012

Mapped By: B. Callahan, OAQ

Map Projection: UTM Zone 16 N

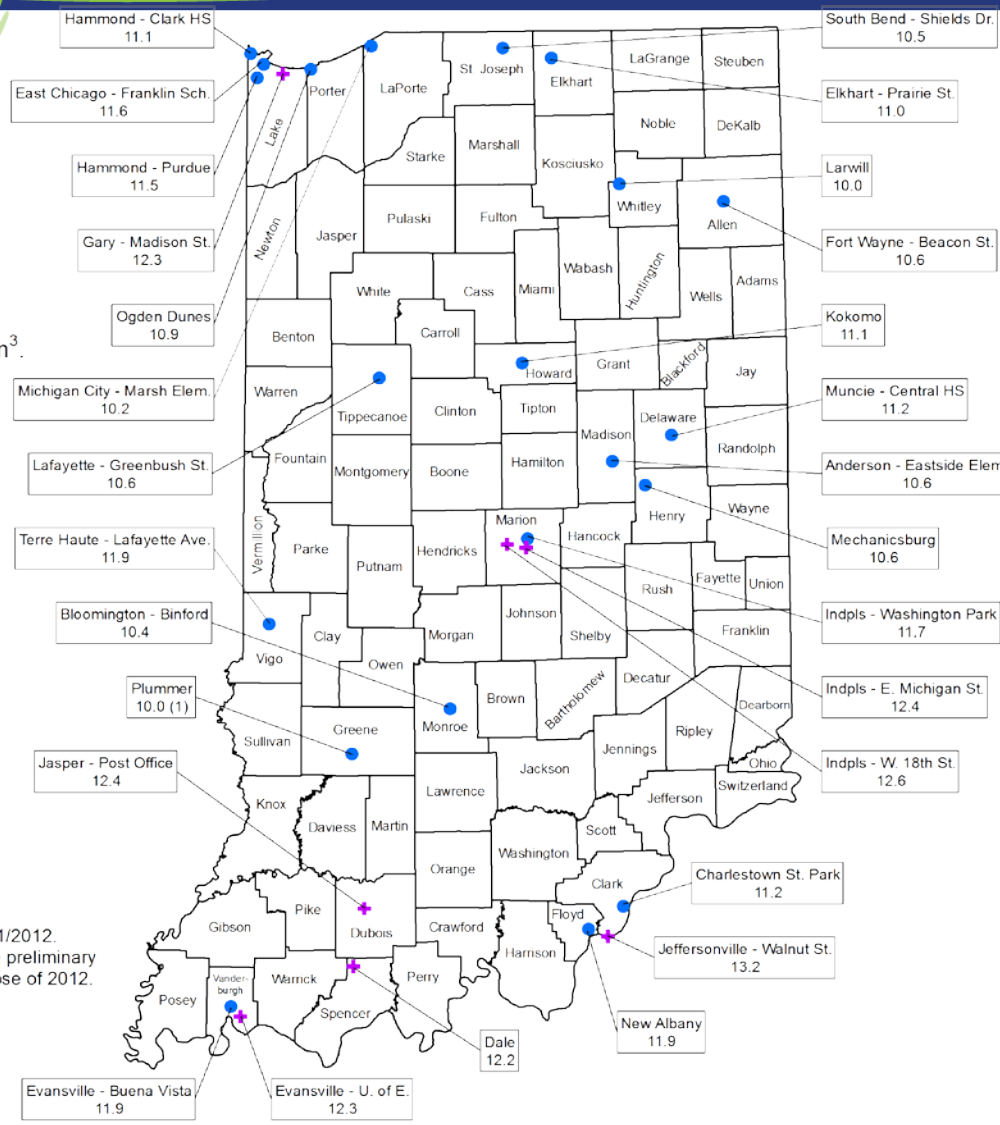
Map Datum: NAD83





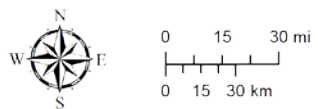
New PM_{2.5} Standard

- The new annual standard is 12 micrograms per cubic meter which is a 20% reduction from the previous 15 micrograms per cubic meter standard.
- Standard was published January 15, 2013, and becomes effective March 18, 2013.
- New nonattainment designations likely in early 2015.



Legend

- PM_{2.5} Monitor With Design Value Less Than 12.1 $\mu\text{g}/\text{m}^3$.
- + PM_{2.5} Monitor With Design Value Greater Than Or Equal To 12.1 $\mu\text{g}/\text{m}^3$.



Notes:
 - (1) 2012 Data only.
 - Posted Data Represent Annual Average Design Values, 2010 - 2012, through 8/31/2012.
 - Posted data are in units of $\mu\text{g}/\text{m}^3$ and are preliminary until the data has been certified at the close of 2012.

Date: 11/27/2012
Mapped By: B. Callahan, OAQ
Sources: Office of Air Quality.
Map Projection: UTM Zone 16 N
Map Datum: NAD83

PM_{2.5} Annual Design Values Based on 2010 through August 31, 2012 Monitoring Data

Standard proposed at 12 $\mu\text{g}/\text{m}^3$

*June 22, 2012:
 U.S. EPA proposed a new annual PM_{2.5} Standard within a range of 12-13 $\mu\text{g}/\text{m}^3$*



NWI 75 ppb OZONE DESIGNATION

- September 22, 2011, U.S. EPA announces it is proceeding with ozone nonattainment designations.
- December 9, 2011, U.S. EPA notifies Governor Daniels that all of Indiana will be designated attainment except Lawrenceburg in Dearborn County.



NWI 75 ppb OZONE DESIGNATION

- January 31, 2012, U.S. EPA notifies Governor Daniels that due to data provided by Illinois on December 7, 2011; Lake, Porter and Jasper Counties will be designated as nonattainment for ozone.
- April 13, 2012, Indiana sends package explaining why Lake, Porter and Jasper Counties should be designated as attainment.



NWI 75 ppb OZONE DESIGNATION

- Reasons for Indiana ozone attainment recommendation:
 - A single monitor out of 22 apparently exceeded the standard by 0.4 ppb (0.0004 ppm)
 - Illinois caused the violation by discontinuing full implementation of its automotive inspection program in 2008 without making a 110 (I) demonstration, thereby violating its SIP and the Clean Air Act.



NWI 75 ppb OZONE DESIGNATION

- Milwaukee, which is designated as attainment, has a higher contribution to the violating monitor than Lake County or Porter County.
- On May 31, 2012, Administrator Jackson signed the nonattainment designation for the Chicago Area including Lake and Porter Counties in Indiana—Milwaukee remains designated as an attainment area.



NWI 75 ppb OZONE DESIGNATION

- Remedies being implemented:
 - Petition Court for Reconsideration of nonattainment designations—July 19, 2012.
 - Petition Court for a Stay of the designations—August 8, 2012—Denied November 5, 2012.
 - Petition U.S. EPA to reconsider the May 31, 2012, designations—August 10, 2012—Denied December 14, 2012
 - Filed State Implementation Plan and request for designation as attainment—December 5, 2012

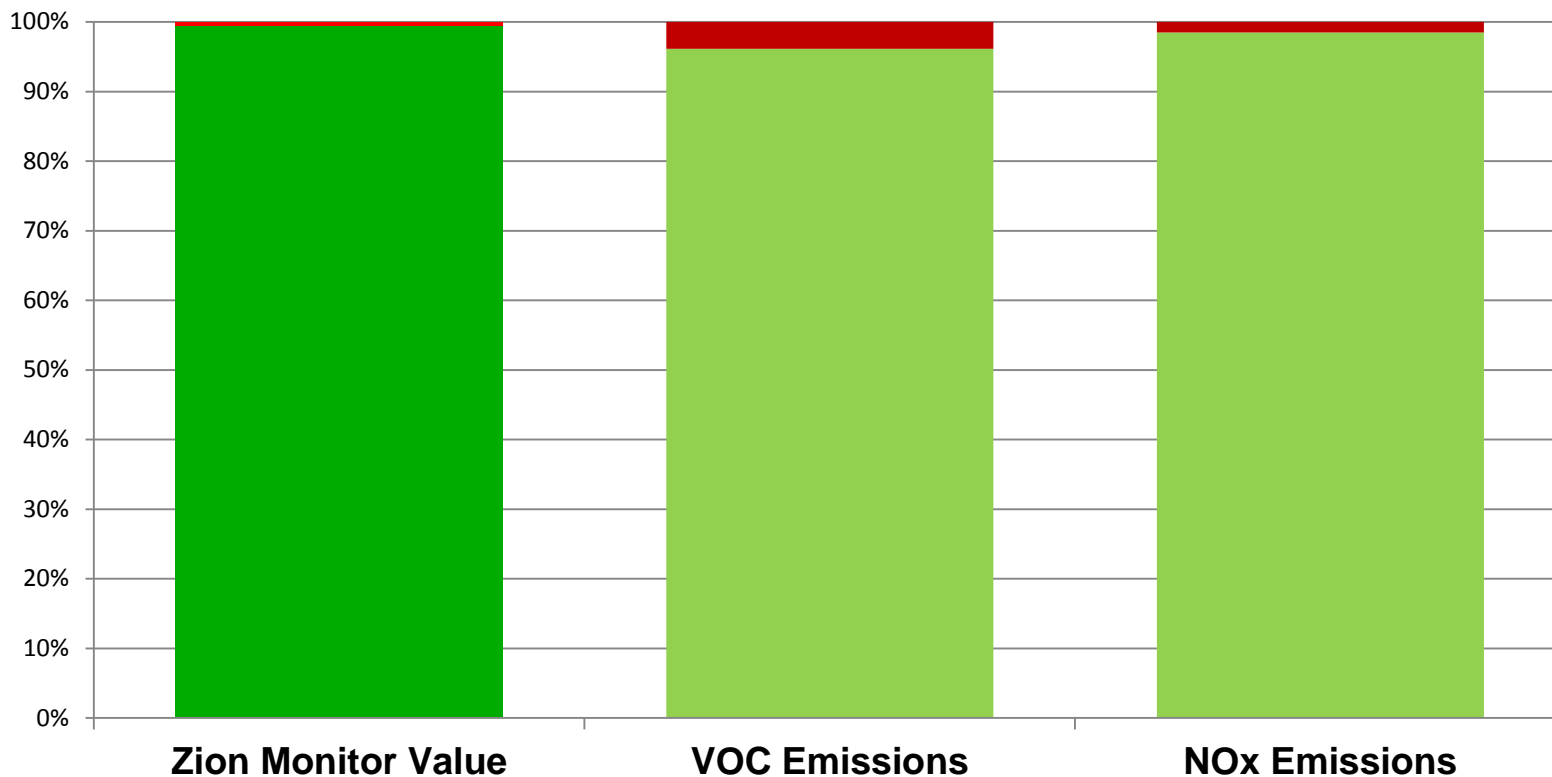


Why is Illinois I & M Key?

- Beginning in 2007, Illinois went to the OBD inspection system which exempts the 1968 through 1995 vehicles from inspection.
- Data from Indiana's system shows that inspection of 1968 through 1995 vehicles accounted for 67% of the HC, 85% of the NOx, and 79% of the CO reductions in 2008.
- A recent study in California indicates that 2% of the cars contribute 50% of the emissions.



Chicago-NE IL Air Quality Profile



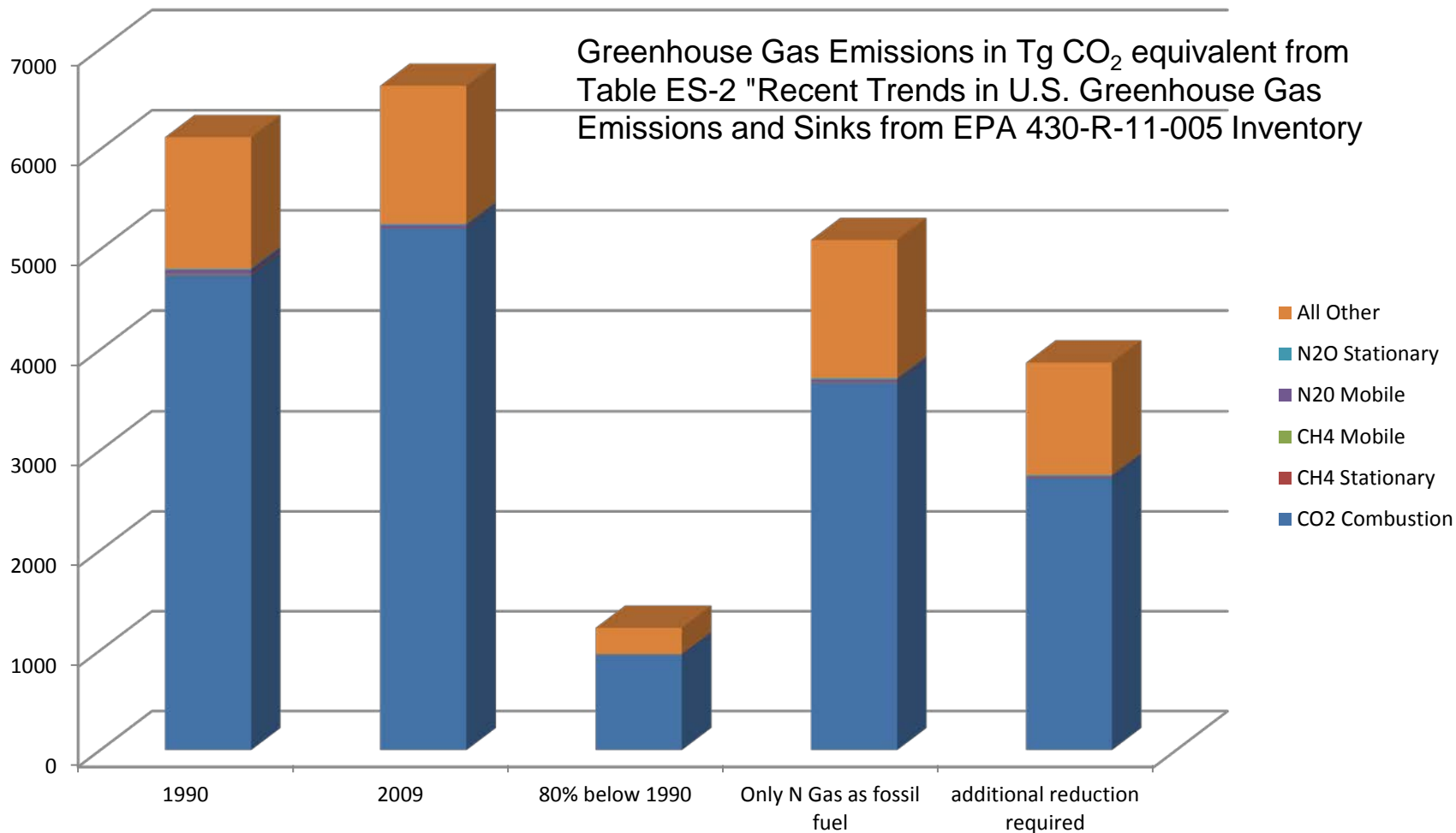
- Unauthorized Northeast Illinois Vehicle Emissions
- Total SIP-Authorized Northeast Illinois Emissions
- Exceedance
- Standard



CO₂ (Greenhouse Gasses)

- Is U.S. EPA's proposed NSPS GHG rule, which effectively prohibits the construction of new electrical generating facilities that use coal in the United States, going to make a significant difference in emissions?

The National Academy of Sciences report, "*America's Climate Choices*" recommends that actions be taken now to start reducing U.S. greenhouse gas emissions to levels between 50% and 80% below 1990 levels.





CO₂ (Greenhouse Gasses)

- In the spring of 2012, the Environmental Council of the States (ECOS) passed resolution 12-1 “Challenges of Achieving Significant Greenhouse Gas (GHG) Emissions Reductions.” A copy of this resolution is available at:

http://www.ecos.org/files/4711_file_Resolution_12_1_Challenges_of_GHG_reductions.doc



CO₂ (Greenhouse Gasses)

- The resolution requests that the U.S. EPA develop one or more scenarios that will produce an 80 percent reduction in GHG emissions nationally, from a 2005 baseline, in 2050 or beyond; and to conduct an analysis of the costs and the benefits associated with each such scenario along with an estimate of the costs and benefits of not obtaining these GHG reductions.



CO₂ (Greenhouse Gasses)

- U.S. EPA has decided not to spend the resources required to develop the requested scenario, but rather to develop rules to reduce GHG emissions, even if these rules do not materially reduce U.S. emissions.
- The NSPS for EGUs effectively bans new coal fired facilities in the U.S. without any public plan to actually reduce U.S. (or world) GHG emissions to the levels advocated by the National Academy of Sciences.



Fish Tissue Mercury

- At the end of 2010, U.S. EPA issued new guidance on the proper interpretation of the fish tissue data.
- U.S. EPA's guidance indicates that a properly calculated average mercury value is the appropriate interpretation of the limit.
- IDEM has reevaluated its mercury data using the U.S. EPA guidance.



Fish Tissue Mercury

(Note: Lake Data Does Not Include Lake Michigan)

Year	Mercury Impaired Stream Reaches	Mercury Impaired Stream Miles	Mercury Impaired Lakes	Mercury Impaired Lake Acres
2010	272	1,689	37	44,540
2012	42	417	15	14,582
Change	-84%	-75%	-60%	-67%



IDEM 2013 GOALS AND CHALLENGES



2013 Goals and Challenges

- Governor Pence has asked that IDEM find a way to be the clear leader in helping and cooperatively partnering with regulated entities to improve environmental quality.
- Develop Good to Great Plan to improve IDEM performance consistent with Governor Pence's Roadmap.



2013 Goals and Challenges

- Continue to work to ensure that all Hoosiers have air to breathe that meets all health based standards and that U.S. EPA designates all of the State as attainment for all pollutants.



2013 Goals and Challenges

- Continue to work to ensure that all Indiana waters meet all water quality standards and that U.S. EPA delists impairments as water quality improvements are documented.



2013 Goals and Challenges

- Continue to work to ensure that current activities do not pollute Indiana lands and that previously contaminated lands are safe for future intended uses.



2013 Goals and Challenges

- Continue to pursue water program consolidation.
- Issue water general permits.
- Phosphorous in lakes rule.
- Develop plans and associated rules to meet new air quality standards.



2013 Goals and Challenges

- Continue process of tailoring the solid waste processing rules for activities with limited potential environmental impact.
- Transform rulemaking process to the new Environmental Rules Board.
- Update and improve the Virtual File Cabinet.



Questions?

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Commissioner

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