# NIRPC Environmental Management Policy Committee February 5, 2015

Thomas W. Easterly, P.E., BCEE Commissioner
IN Department of Environmental Management

# IDEM's Mission

## Protecting Hoosiers and Our Environment While Becoming the Most Customer-Friendly Environmental Agency

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 environmentally 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.
- Clean up contaminated sites to eliminate public exposure to toxics and return properties to productive use.

# Performance Metrics December 2014

| | Result | Targets | | Comments |
|---|---|---|---|---|
| **Quality of Hoosiers' Environment** | | | | |
| % of Hoosiers that live in counties that meet **air quality standards** | **91.00** | **100%** | **80%** | Muncie Lead; Ozone in LaPorte County; Sulfur Dioxide in parts of Daviess, Marion, Morgan, Pike and Vigo Counties |
| % of **CSO Communities** with approved programs to prevent the release of untreated sewage | **98.17%** | **100%** | **90%** | 98+9 (107) out of 99+10 (109). Not Gary or Edinburgh |
| % of Hoosiers that receive water from facilities in full compliance with **safe drinking water standards** | **98.99%** | **99%** | **95%** | Turbidity Violations at Jasper, Lowell and Stucker Fork |
| ***Permitting Efficiency*** Total calendar days accumulated in issuing environmental permits, as determined by state statute* | | | | |
| **Land** | **28,300** | **31,169** | **34,836** | **36,670 statutory** |
| **Air** | **41,671** | **45,237** | **50,559** | **53,220 statutory** |
| **Water** | **30,695** | **57,808** | **64,609** | **68,010 statutory** |

*** Places emphasis on back logged permits**

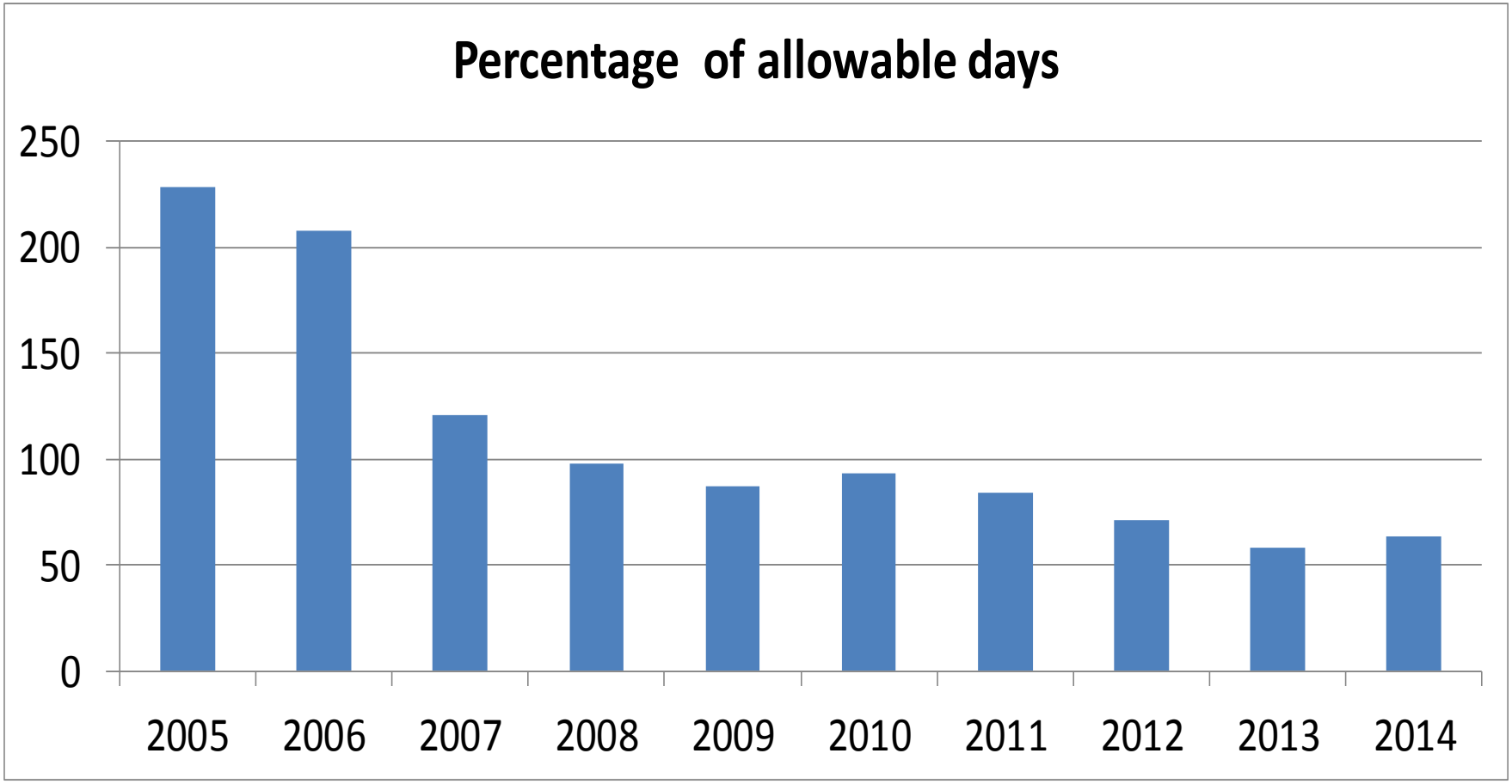
| | | | | |
|---|---|---|---|---|
| ***Compliance*** Total percentage of compliance observations from regulated customers within acceptable compliance standards* | | | | |
| **Inspections** | **96.02%** | **97%** | **75%** | |
| **Self reporting** | **96.52%** | **99%** | **95%** | |
| **Continuous monitoring (COM)** | **99.85%** | **99.9%** | **99.0%** | |

***** Tracks observations and not just inspections

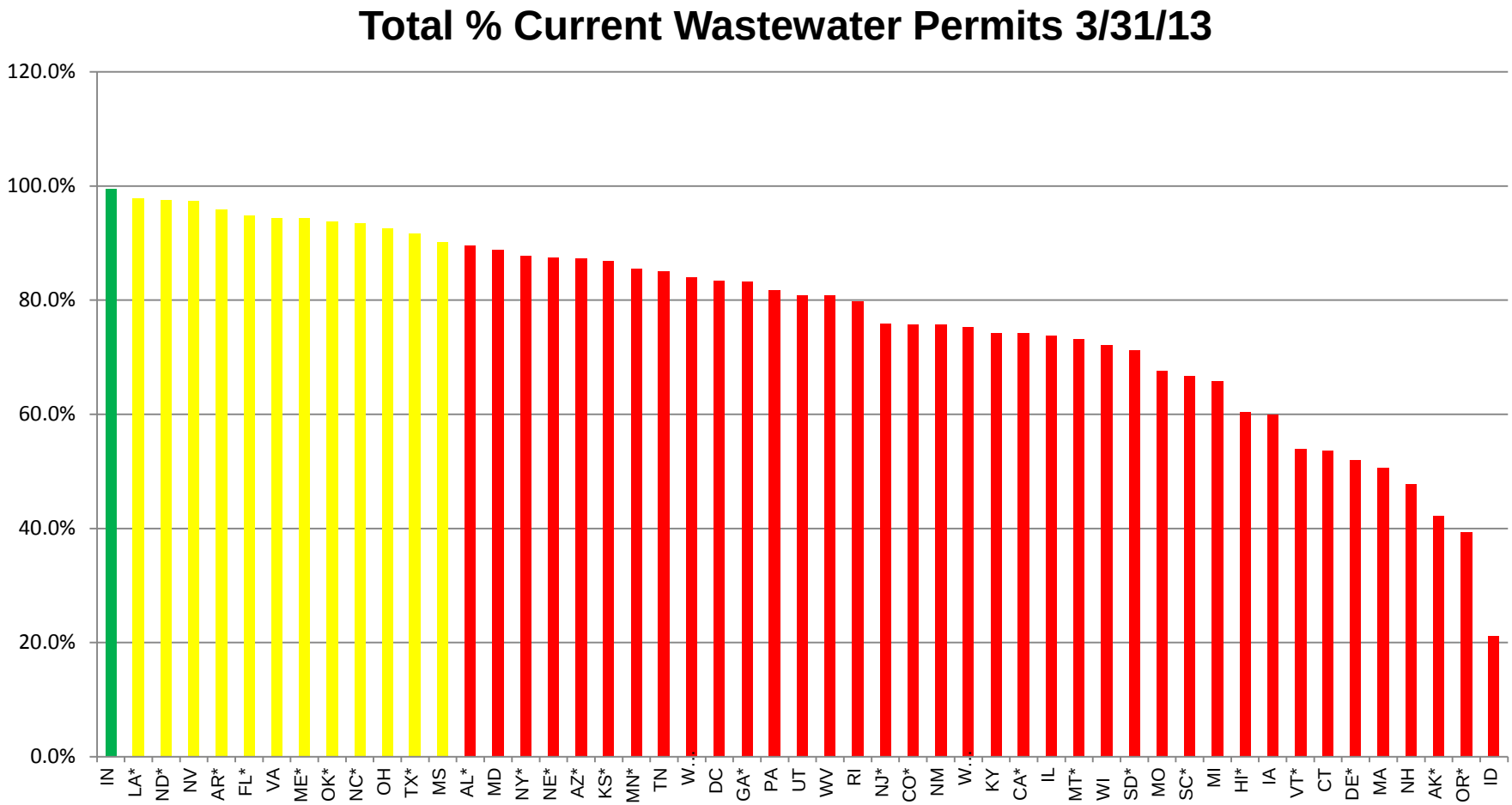
# Performance Metrics June 2005

| ***Quality of Hoosiers' Environment*** | **Result** | **Target** | | **Comments** |
|---|---|---|---|---|
| **% of Hoosiers in counties meeting air quality standards** | 61% | 100% | 80% | 12 counties & 2,408,571 of 6,195,643 above standard |
| **% of CSO Communities with approved programs to prevent the release of untreated sewage** | 4% | 100% | 20% | 75% by 2007 is goal |
| ***Permitting Efficiency*** Total calendar days accumulated in issuing environmental permits, as determined by state statute* | | | | |
| **Land** | 100,013 | 66,565 | 86,864 | |
| **Air** | 511,000 | 207,000 | 385,000 | |
| **Water** | 301,000 | 48,000 | 200,000 | |
| | * Places emphasis on back logged permits | | | |
| ***Compliance*** Total percentage of compliance observations from regulated customers within acceptable compliance standards* | | | | |
| **Inspections** | 95.46% | 97% | 75% | |
| **Self reporting** | 97.11% | 99% | 95% | |
| **Continuous monitoring (COM)** | 99.19% | 99.90% | 98.95% | |
| | * Tracks observations and not just inspections | | | |
| ***Organizational Transformation*** Budgetary agency dollars spent on **key** outside contracts for core agency functions. | | | | |
| Dollars spent on outside services per year | $6,179,367 | $0 | $3,447,017 | |

# Permits--Percent of Statutory Days

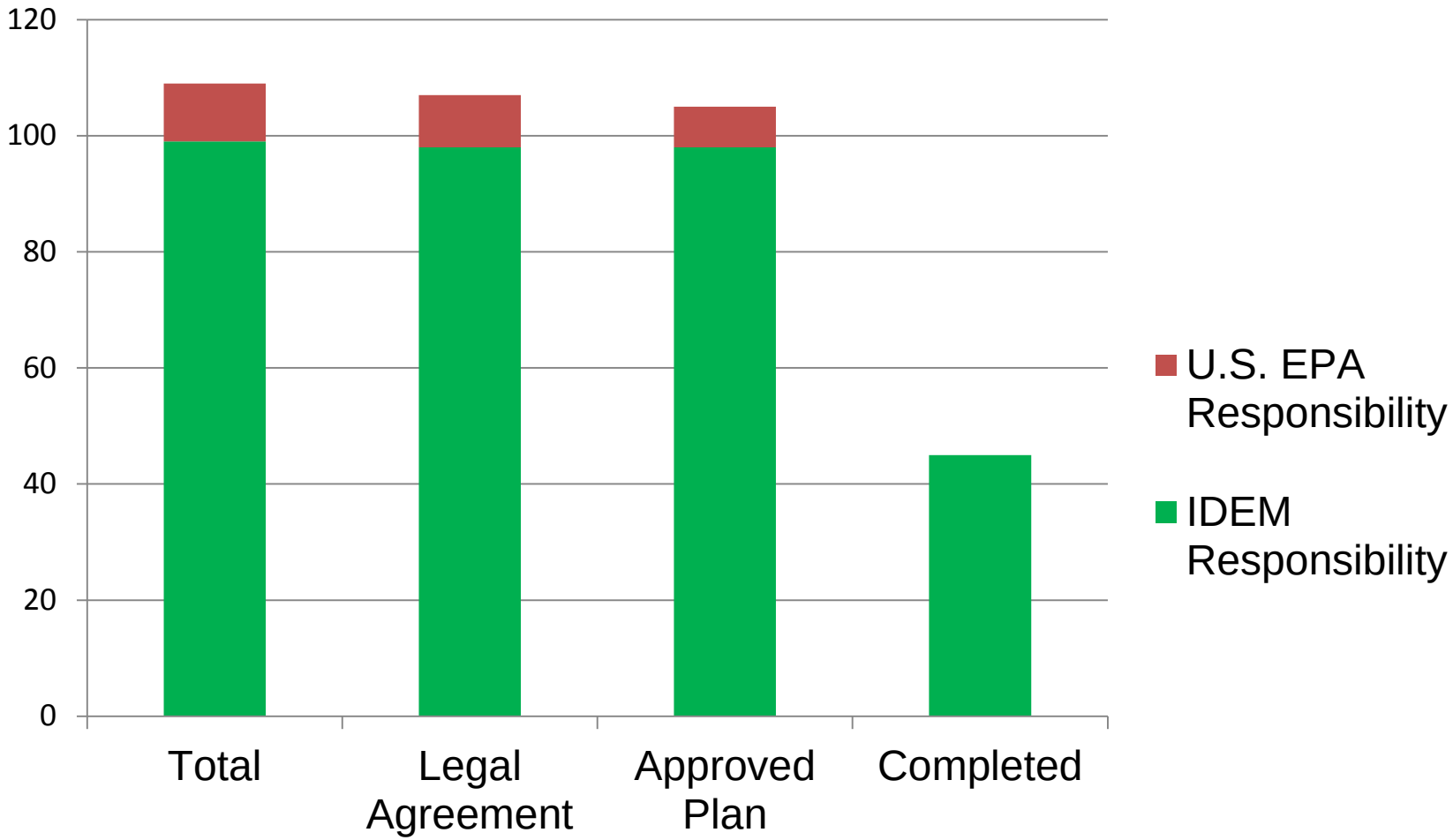


# Best in NPDES Permitting



# Water Quality

## Indiana Combined Sewer Overflow Status



# Air Quality

- Measured air quality in Lake and Porter Counties is better than federal air quality standards.
- Lake and Porter Counties are still designated nonattainment because of Chicago's air quality.
- Oral arguments in our lawsuit against U.S. EPA for this designation were heard last summer.

# Air Quality

- Measured air quality in LaPorte County is better than federal air quality standards for all pollutants except ozone.
- Measured ozone levels in LaPorte County were better than federal air quality standards in 2013 and 2014. Unless 2015 is a very bad ozone year (worse than any year but 2012), LaPorte County should meet the standard in 2015.

# *Grand Calumet River Area of Concern*

- In 1987, the Grand Calumet River/Indiana Harbor Ship Canal was identified as an “Area of Concern” (AOC).
- It is the only one of the 43 AOC’s in the Great Lakes Basin determined to be impaired for all 14 possible Beneficial Use Impairments (BUIs).
- U.S. EPA has agreed to remove two of the BUIs and work is ongoing on the other 12.

# Grand Calumet River Area of Concern

- Major recent improvements include:
  - Over 230 acres of habitat restoration work.
  - Planning for the restoration of 900 acres of Dune and Swale and Riverine Wetland Habitat.
  - Dredging and capping contaminated sediment in the west branch to Hohman Avenue.
  - Dredging and capping from Hohman Avenue to the state line is expected to begin this year.

# Grand Calumet River Area of Concern

- Completed 2 years of monitoring at 8 sites to address the status of the aesthetics impairment.
- The Jeorse Beach Task Force is working to resolve the bacterial water quality issues at the beach.
- Completing an Algal and Plankton baseline study.
- Working with U.S. EPA to develop criteria for safe beaches.

# Roxana Marsh Post Restoration

# Beaches Program

- Twenty-four Lake Michigan beaches are sampled for bacteriological contamination (E. coli) up to 7 days per week from Memorial Day to Labor Day.
- Results are posted at the beach, online at the BeachGuard website, and made available through the Indiana Beach*Alert* phone app.

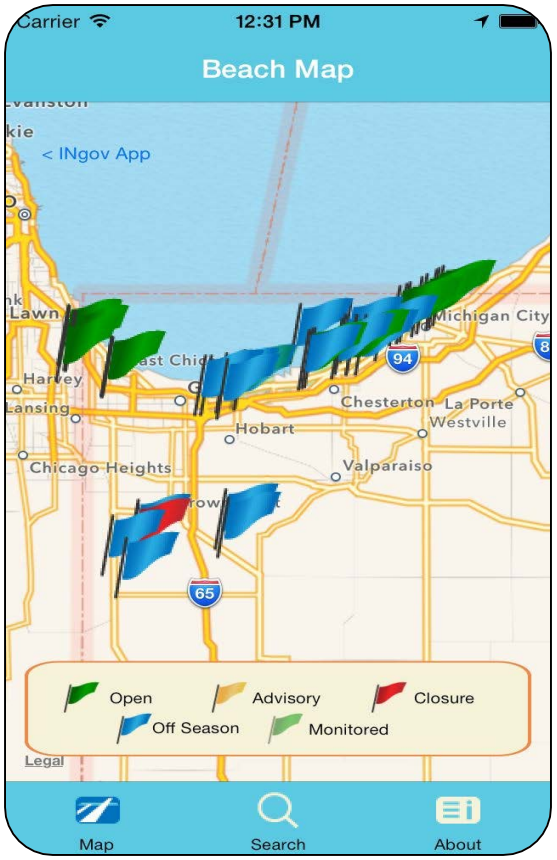
# Beaches Program

# Beaches Program

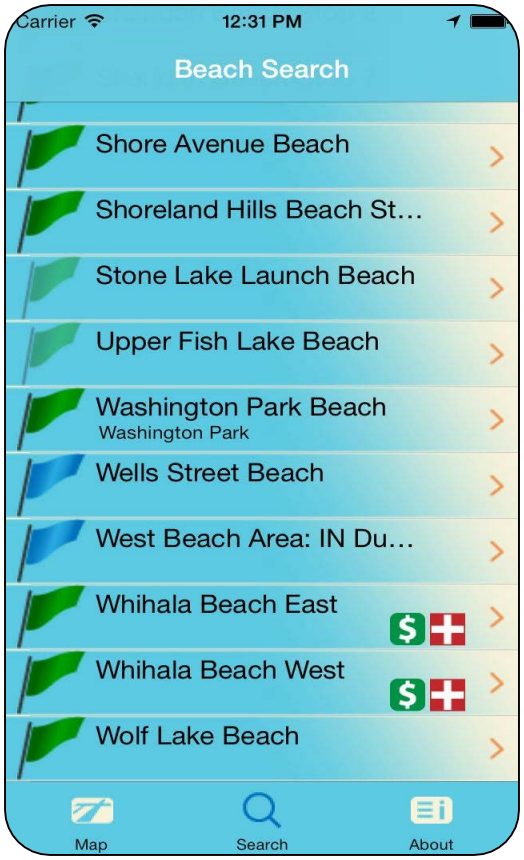
## Comparison of Total Exceedance Rates of past years

| | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 |
|---|---|---|---|---|---|---|
| Samples | 2,880 | 2,777 | 2,775 | 2,847 | 2,526 | 2,181 |
| Exceedances | 353 | 288 | 288 | 315 | 400 | 283 |
| % Rate | 12% | 11% | 10% | 11% | 16% | 13% |

# Beaches Program







# U.S. EPA's Clean Power Plan

- Regulates Carbon Dioxide ($CO_2$) emissions from power plants using fossil fuels
- New Source Standards under 111(b)
- **Existing Source Standards under 111(d)**

# Indiana Carbon Dioxide Emission Rates (pounds of $CO_2$ per Megawatt Hour)

| 2012 Baseline | U.S. EPA 2030 Goal | Indiana 2030 Estimate |
|---|---|---|
| 1,924 | 1,531 | 1,615 to 1,683 |

# Existing Source Proposal—111(d)

U.S. EPA estimates on a national level that:

- Coal production will decrease 25 to 27%, and the price of coal will decrease by 16 to 18% by 2020.
- Natural gas production will increase by 12 to 14% with a price increase of 9 to 12% by 2020.
- Renewable generation capacity will increase by 12 GW, NGCC capacity will increase by 20 to 22 GW.

# Existing Source Proposal—111(d)

- Coal generation capacity will decrease by 46-49 GW, and oil generation capacity by 16 GW.
- Annual incremental compliance costs of $5.5 to $7.5 billion in 2020 and $7.3 to $8.8 billion in 2030.
- Job increases of 25,900 to 28,000 in the electricity, coal and natural gas sectors by 2020.
- Job increases of 78,000 for demand-side energy efficiency by 2020.

# Impacts on Indiana

- This regulation will increase the costs of energy in the United States—both natural gas and electricity prices expected to rise by 10%--the impact on Hoosiers may be greater due to our current reliance on coal.
- The number of Hoosiers who lose utility services for non-payment is likely to increase.

# Impacts on Indiana

- This increased cost of energy will likely reduce the international competitiveness of Hoosier businesses resulting in a shift of emissions from Indiana to other countries.
- The worldwide greenhouse gas emissions may actually increase when manufacturing moves from Indiana (and the rest of the United States) to other countries.

# Climate Impacts—111(d) Proposal

This rule will have virtually no impact on modeled global climate change. It is projected to reduce:

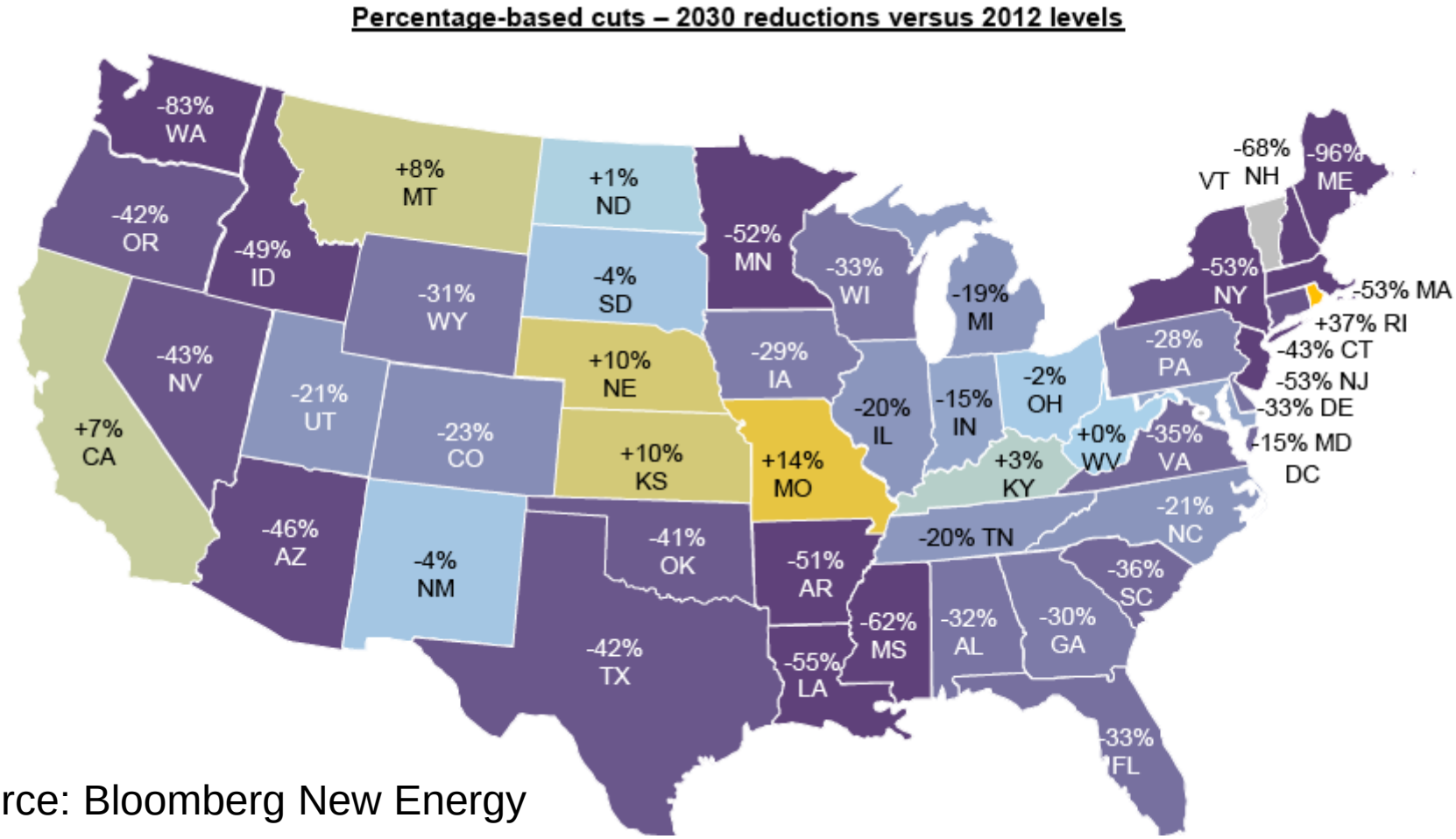
- Global $CO_2$ concentrations by 1.5 ppm by 2050. This represents 0.3% of the expected projected average global average $CO_2$ concentrations in 2050.
- Sea level increases by 0.01 inch.

# Climate Impacts—111(d) Proposal

The proposed rule is also projected to reduce:

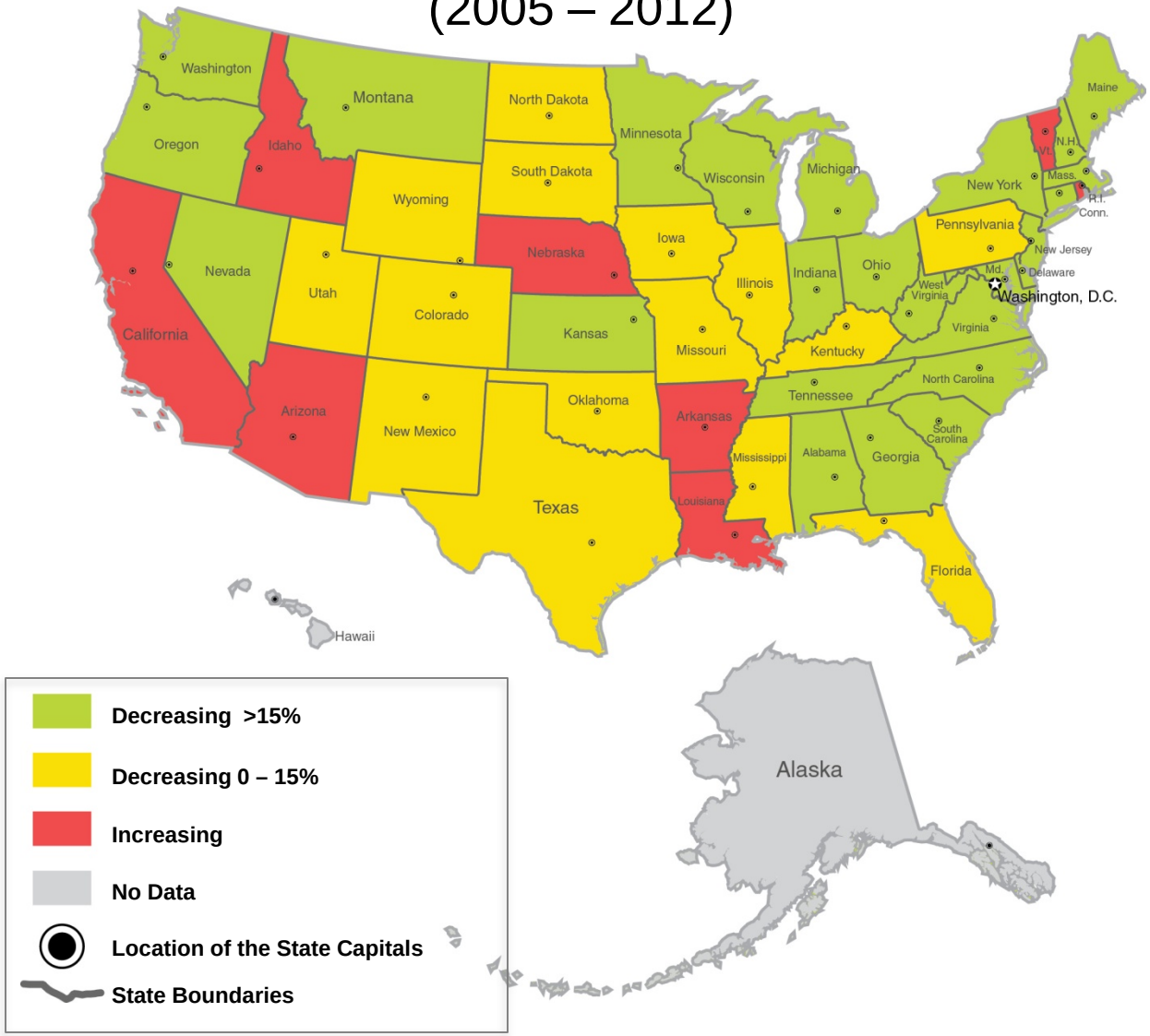
- Global average temperatures by 0.016$^{o}$ F (0.009$^{o}$ C) based upon U.S. EPA's climate models.
  - This projected temperature reduction is based upon the projected 1.5 ppm reduction in global $CO_2$ concentrations.
  - Since 1998, global average $CO_2$ concentrations have increased by 33 ppm or 9%, but global average temperatures have not increased.

# State Goals as % Reduction from 2012




Source: Bloomberg New Energy Finance

# Percentage Change in $CO_2$ Emissions from Utilities
(2005 – 2012)



# Indiana's Response to the 111(d) Proposal

- The proposed regulation is not consistent with our goal of affordable reliable energy.
- Governor Pence, Attorney General Zoeller and IDEM Commissioner Easterly have taken numerous actions to opposing U.S. EPA's proposal.

# Waters of the United States **(WOTUS)** Implications of the Proposed U. S. EPA / USACE Definition

# The Proposed Definition of WOTUS

***Key change: "affecting" waters test (former item 3) replaced with significant nexus test (new item 7)***

**(a)** The term *waters of the United States* means
**(1)** All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
**(2)** All interstate waters including interstate wetlands;
**(3 ~~6~~)** The territorial seas;
~~**(3)** All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:~~
~~**(i)** Which are or could be used by interstate or foreign travelers for recreational or other purposes; or~~
~~**(ii)** From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or~~
~~**(iii)** Which are used or could be used for industrial purpose by industries in interstate commerce;~~
**(4)** All impoundments of waters ~~otherwise defined as waters of the United States under the definition~~ identified in paragraphs (a) (1) through (3) and (5) of this section;
**(5)** All ~~T~~tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
**(6 ~~7~~)** All waters, including ~~W~~wetlands, adjacent to a waters ~~(other than waters that are themselves wetlands)~~ identified in paragraphs (a) (1) through (~~6~~5) of this section.
**(7)** On a case-specific basis, other waters, including wetlands, provided those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (a)(1) through (3) of this section.

# Key Deletion – other waters which could affect interstate or foreign commerce

~~**(3)** All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:~~

~~**(i)** Which are or could be used by interstate or foreign travelers for recreational or other purposes; or~~

~~**(ii)** From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or~~

~~**(iii)** Which are used or could be used for industrial purpose by industries in interstate commerce;~~

***These waters may be recaptured in the addition of the significant nexus language.***

# Key Addition – other waters that have a significant nexus to interstate waters

**(7)** On a case-specific basis, other waters, including wetlands, provided those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (a)(1) through (3) of this section.

***This language is an attempt to capture the understanding of what is currently required for determinations in light of key U. S. Supreme Court rulings (SWANCC 2001 and Rapanos 2006).***

***Note: The significant nexus test is applied today.***

# Waters that are NOT WOTUS

**(b)** The following are not "waters of the United States" **notwithstanding whether they meet the terms of paragraphs (a)(1) through (7) of this section** -

**(1)** Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA.

**(2 8)** Waters of the United States do not include p~~P~~rior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

**(3)** Ditches that are excavated wholly in uplands, drain only in uplands, and have less than perennial flow.

**(4)** Ditches that do not contribute flow, either directly or through another water identified in paragraphs (a)(1) through (4) of this section.

**(5)** The following features:

(i) Artificially irrigated areas that would revert to upland should application of irrigation water to that area cease;

(ii) artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basis, or rice growing;

(iii) artificial reflecting pools or swimming pools created by excavating and/or diking dry land;

(iv) small ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons;

(v) water-filled depressions created incidental to construction activity;

(vi) groundwater, including groundwaters drained through subsurface drainage systems; and

(vii) gullies and rills and non-wetland swales.

# Exceptions/Exemptions/Exclusions

**The Clean Water Act, Section 404 (f) exceptions still stand:**
**(1)** Except as provided in paragraph (2) of this subsection, the discharge of dredge or fill material
**(A)** from **normal farming**, silviculture, and ranching activities such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices;
**(B)** for the purpose of maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, and bridge abutments or approaches, and transportation structures;
**(C)** for the purpose of **construction or maintenance of farm or stock ponds** or irrigation ditches, or the maintenance of drainage ditches;
**(D)** for the purpose of construction of temporary sedimentation basins on a construction site which does not include placement of fill material into the navigable waters;
**(E)** for the purpose of **construction or maintenance or farm roads** or forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained, in accordance with best management practices, to assure that flow and circulation patterns and chemical and biological characteristics of the navigable waters are not impaired, that the reach of the navigable waters is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized;

***The added ditches and features are also exceptions/exemptions/exclusions and are not to be pulled in by the significant nexus test. We believe these additional exceptions/exemptions/exclusions provide some clarity on waters that are not subject to CWA 404 permitting and CWA 401 certification, reducing the number of questionable waters that now may be subject to the significant nexus test.***

# Definitions for “Adjacent”

**1 c)** Adjacent: The term *adjacent* means bordering, contiguous, or **neighboring**. ~~W~~waters, including wetlands, separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are “adjacent wetlands.”
**(2)** Neighboring: There term *neighboring*, for purposes of the term “adjacent” in this section, includes waters located within the **riparian area or floodplain** of a water identified in paragraphs (a)(1) through (5) of this section, or waters with a shallow subsurface hydrologic connections or confined surface hydrologic connection to such a jurisdictional water.
**(3)** Riparian Area: The term *riparian area* means as area bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area. Riparian areas are transitional areas between aquatic and terrestrial ecosystems that influence the exchange of energy and materials between those ecosystems.
**(4)** Floodplain: the term *floodplain* means an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows.

***The additional definitions of terms (note they build upon previous definitions) are added to provide more clarity for what is a WOTUS.***

# Definition of "Tributary"

**(5)** Tributary: The term *tributary* means a water physically characterized by the presence of **bed and banks and ordinary high water mark**, as defined at 33 CFR § 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section. In addition, wetland, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (3) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head along the run of a stream, debris, piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of that break. A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraphs (b)(3) or (4) of this section.

***Currently, by applying USACE guidance, flowing waters are determined by the presence of bed and banks and an ordinary high water mark. Wetlands are determined by the presence of wetland hydrology, hydric soils, and/or wetland plants.***

# Definition of "Significant Nexus"

Significant nexus: The term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section),6 significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3)of this section. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section.

***Currently, significant nexus is not defined. We believe the addition of a definition of significant nexus may provide some clarity on waters that are or are not subject to CWA 404 permitting and CWA 401 certification.***

***Note: The significant nexus test is applied today.***

# Indiana's Response to the WOTUS Proposal

- Indiana submitted joint comments from IDEM and the Department of Agriculture before the November 14, 2014, comment deadline, asking that the proposed rule be withdrawn and that U.S. EPA work with the regulated community to develop words that match U.S. EPA's stated intent of clarifying, not expanding, the definition of Waters of the United States.

# IDEM 2015 Legislative Agenda

- Surface Water Protection Plan and Aboveground Storage Tank Registration
- Cost recovery for IDEM oversight activities related to cleanup of a property contaminated with petroleum
- Responsible Party Reimbursement Bill
  - Impacts Administrative Orders for response actions for contaminant releases

# IDEM 2015 Legislative Agenda

- Agency Cleanup Bill
  - Operator Certification examination fees by third parties (Ivy Tech)
  - Electronic Submission of Information
  - In-Lieu Fees for mitigation of wetlands
  - Variances may be for five years (one now)
  - Align Waste Fee due dates with reporting dates
  - Eliminate duplicate display device sales reporting

# Questions?

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