

Key Strategies, Challenges, and Needs



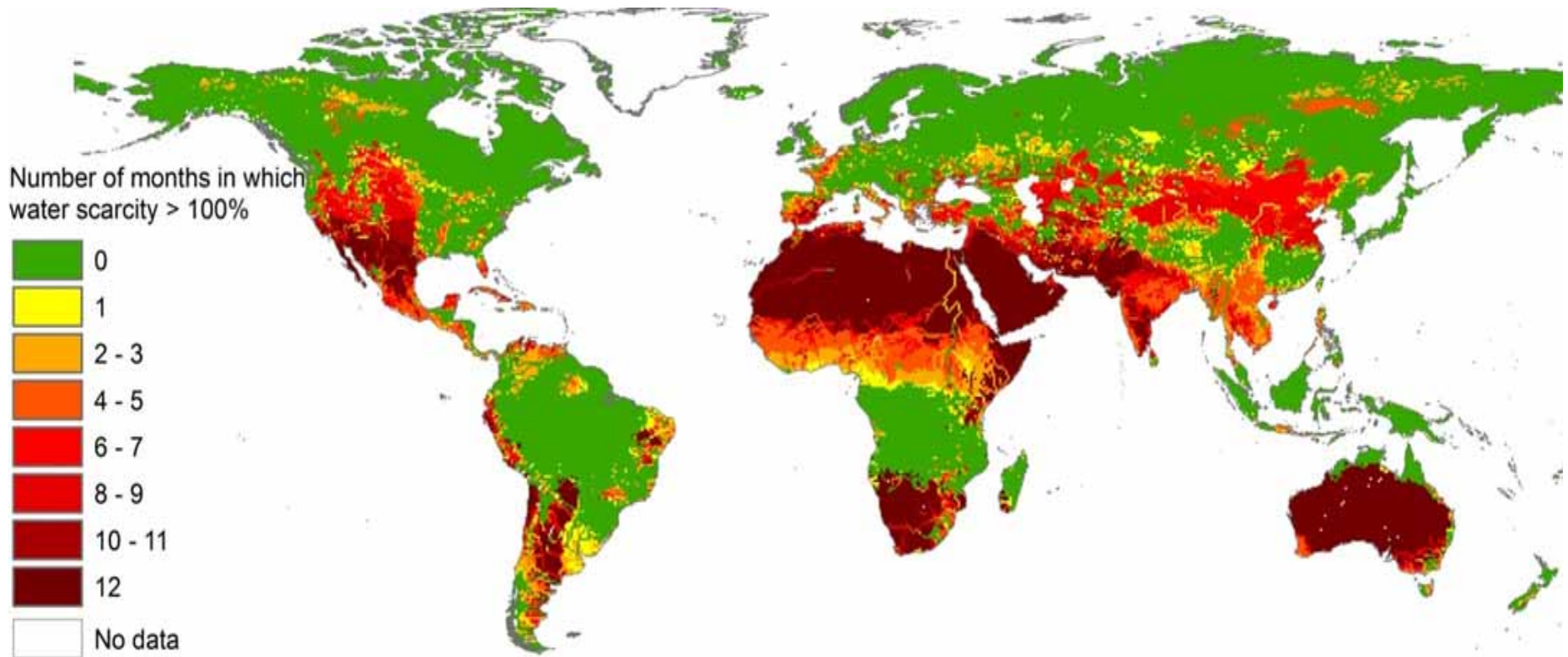
Eye on Education, Economic Development, Energy

Kumar Menon, Director of Fort Wayne City Utilities

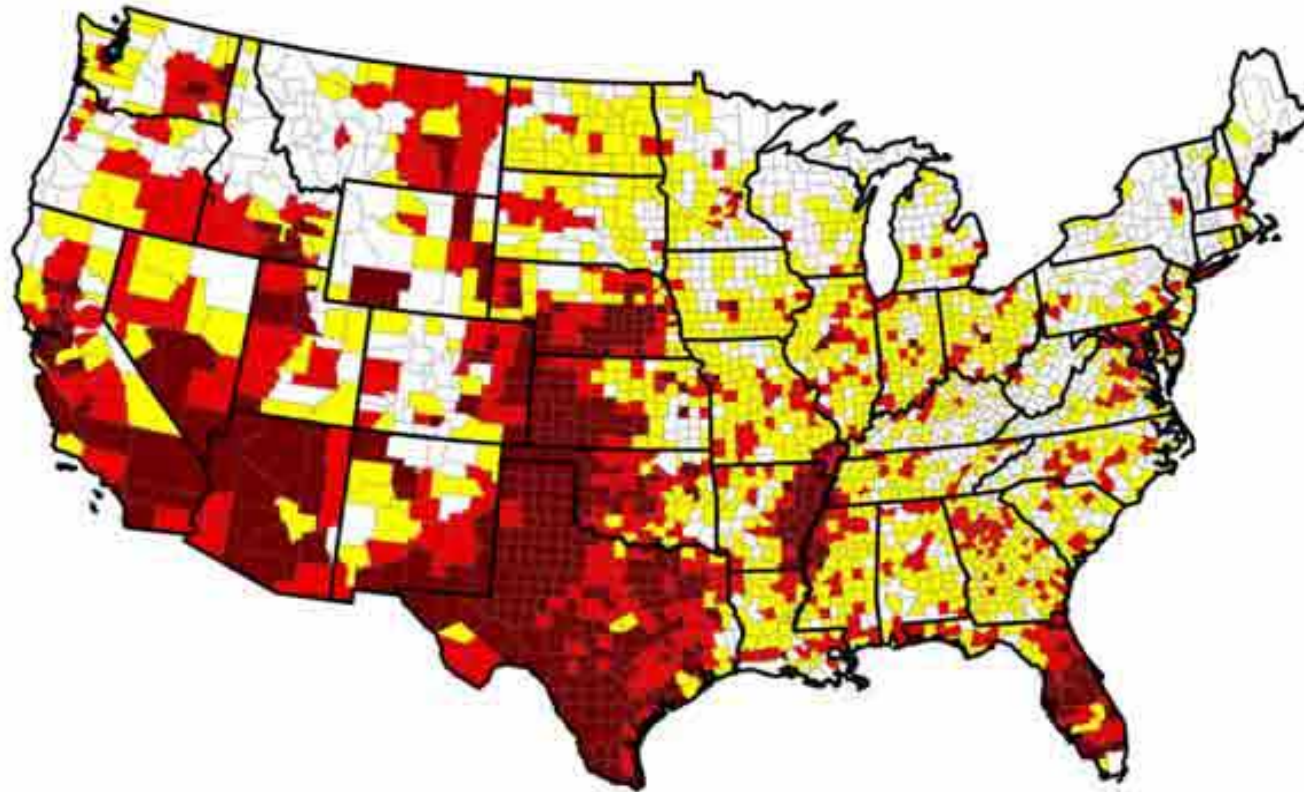
Global Perspective



Global Supply Shortage



U.S. Shortage



Water Supply Sustainability Index (2050)

- Extreme (412)
- High (608)
- Moderate (1192)
- Low (897)



Challenges



Drought Planning: Water Shortages Expected in New Mexico

Water managers in nearly every corner of New Mexico are projecting shortages in drinking and irrigation supplies given expected demand over the next few decades.

March 25, 2017, at 4:45 pm



High one of the many irrigation canals in Albuquerque, N.M., on Friday, March 21, 2013. Around New Mexico have developed irrigation plans addressing potential future...



FORT WORTH

March 25, 2017, at 4:45 pm

Cash-strapped Oklahoma again floats idea of selling water to Texas

Challenges



Politics & Government

Pittsburgh Water Rates Set To Skyrocket

Water and Sewer Authority hiked rates 28 percent in January. Now it wants another massive increase.

By Eric Heyl, Patch Staff | Jul 23, 2018 12:21 pm ET



PITTSBURGH, PA - Prepare yourself for sticker shock. The Pittsburgh Water and Sewer Authority, which raised residential rates by 28 percent in January, plans to raise them again by 16.7 percent.

The authority is notifying customers of its intentions in a notice enclosed with July bills.

GOVERNING

THE STATES AND LOCALITIES

INFRASTRUCTURE & ENVIRONMENT

'People Are Literally Being Poisoned': How Sewage Problems in Alabama Got So Bad -- and Why Other States Should Worry

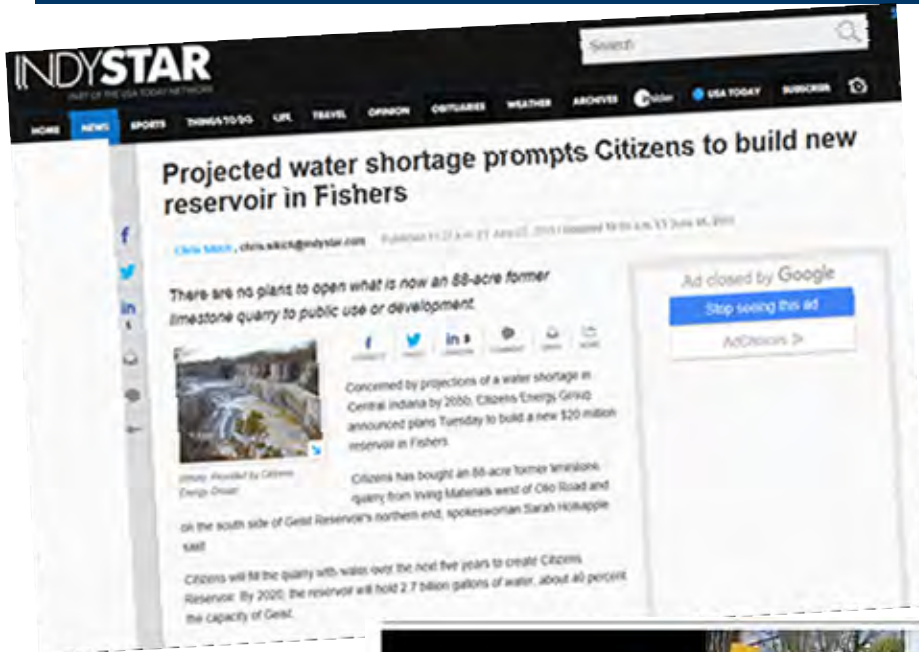
The state and county have failed to fix the unsanitary conditions for years, and at times threatened to arrest citizens over them. An outbreak of a once-eradicated disease has prompted the United Nations to get involved.

BY DANIEL C. VOCK | JULY 17, 2018



Lowndes County, Ala., residents gathered in a church in 2002 to voice their concerns about their sewage system to state and local officials. (AP/Dave Martin)

Challenges



Old infrastructure leading to sinkholes

ROGER SCHNEIDER | Associated Press

SHANER, Miss. — Dixie Lynch's husband was driving in his Arden on a dark evening in early December when she suddenly collapsed from sight. Later, her car, with her body inside, was found at the bottom of a 12-foot-deep opening. A sinkhole that had eroded the road ahead of her.

The 35-year-old, a school bus driver in Brooklyn, New York, ran into a huge opening in the road. Luckily, no children were on board and the driver survived with minor injuries.

Around the State



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Member Spotlight

Water and Economic Development in Indiana

A six-month study on water resources in Indiana was released on August 8, 2014. While Indiana currently has abundant supplies compared to many areas of the country, the state ranks first in the United States in the percentage of its economy that depends on water. Proper management and a long-term plan are needed to ensure adequate fresh water for citizens and businesses in the future.

- Full Study (high-res version here: 16 MB)
- Executive Summary
- Press Release
- Video (1 minute, 20 seconds)
- Statewide Map of Generalized Groundwater Availability

Water Usage and Resource Maps by County

| | | | | |
|-------------|----------|-----------|--------|-------------|
| Adams | Elkhart | Jefferson | Ohio | Sullivan |
| Allen | Fayette | Jennings | Orange | Switzerland |
| Bartholomew | Floyd | Johnson | Owen | Tippecanoe |
| Benton | Fountain | Knox | Pike | Tipton |
| Blackford | Franklin | Kosciusko | Perry | Union |

Upcoming Events

Remaining Union Free Seminar
Tue Apr 21 @ 8:00AM - 04:30PM

“In Indiana, we want to continue to grow and thrive. Water is one of the necessary elements to support that growth.”

“While current high capacity users are accessing the resource, local shortages have and will continue to occur.”

New Strategies



The Journal Gazette

FORT WAYNE, INDIANA • LOCALLY OWNED SINCE 1885

www.journalgazette.net

OPINION

Tuesday, May 23, 2017 | The Journal Gazette 7A

A flood of water concerns

Planning will help Hoosiers continue to make the most efficient use of abundant resource

ED CHARBONNEAU



Ed Charbonneau, a Republican from Valparaiso, represents Indiana Senate District 5.

Since the drought in 2012, Indiana has been working to clarify water policy in a way that ensures clean, safe drinking water for all Hoosiers while protecting our manufacturing and agricultural economy. Over the past four years, Indiana has taken careful steps to guarantee that any change in policy on water supplies and infrastructure is backed by valid data and information. In 2012, the General Assembly passed legislation that directed the state to collect data on how utilities planned for changes in water supply.

In 2015, there was a survey of water utilities in the largest 15 communities,

along with five smaller systems, that found near-unanimous interest in planning for the future and knowing more about the growing withdrawals of neighboring water users.

After the catastrophe in Flint, Michigan, the state conducted another survey that included almost every community water system in the state. The purpose was to understand how each one invested in replacement of aging infrastructure and how

well each system understood water losses attributable to leaking, aging infrastructure. The results were staggering.

The 2016 survey found that the need for infrastructure vastly outpaces investments. Collectively, we need more than \$2.3 billion to begin replacing the aging pipes, treatment plants and fire hydrants that treat and deliver water in our communities. After that initial replacement, using basic assumptions about how quickly pipelines and plants depreciate, utilities across the state need more than \$800 million a year in new funding. This same survey showed that small systems are both more expensive to operate and less resilient to

the changes that are affecting health and safety.

This year, while no funding was dedicated to water infrastructure, the legislature was active in addressing water policy. In anticipation of a federal infrastructure bill, legislation was passed to set up an infrastructure assistance fund for utilities. The Indiana Finance Authority is directed to investigate the future needs of utilities and determine their ability to provide water for growing populations.

Another bill directs the state to set up a transboundary groundwater authority to avoid interstate conflict that has become a problem among neighboring states.

Finally, legislation was passed to allow utilities to

look further ahead when developing new supplies and, if needed, make it affordable to replace lead service lines so homeowners can be confident the water they drink is as pure as what comes from the water treatment plant.

All of these bills move the state in the right direction, but eventually we need to manage Indiana's water resources. That task is complicated by the fact that Indiana has more than 500 water utilities, but fewer than 100 of them are under the jurisdiction of the Indiana Utility Regulatory Commission.

As a riparian state, users can withdraw the water they need. On the other hand, it makes sense that the state provide information about growth rates in use and even

how that use affects the various watersheds existing in Indiana. This will allow the many water users to adapt their behavior to the circumstances.

Protecting the economy means making sure that utilities manage our water resources together. Protecting agricultural production in the state means helping farmers see how often they can pump and how closely they can install new irrigation wells. We need experience tracking water use in watersheds to ensure Indiana can thrive.

The future of Indiana is bright. We have plenty of water, but we need to become better stewards as we seek to maximize the benefits of our regionally abundant water supplies.

New Strategies Indiana Finance Authority Findings

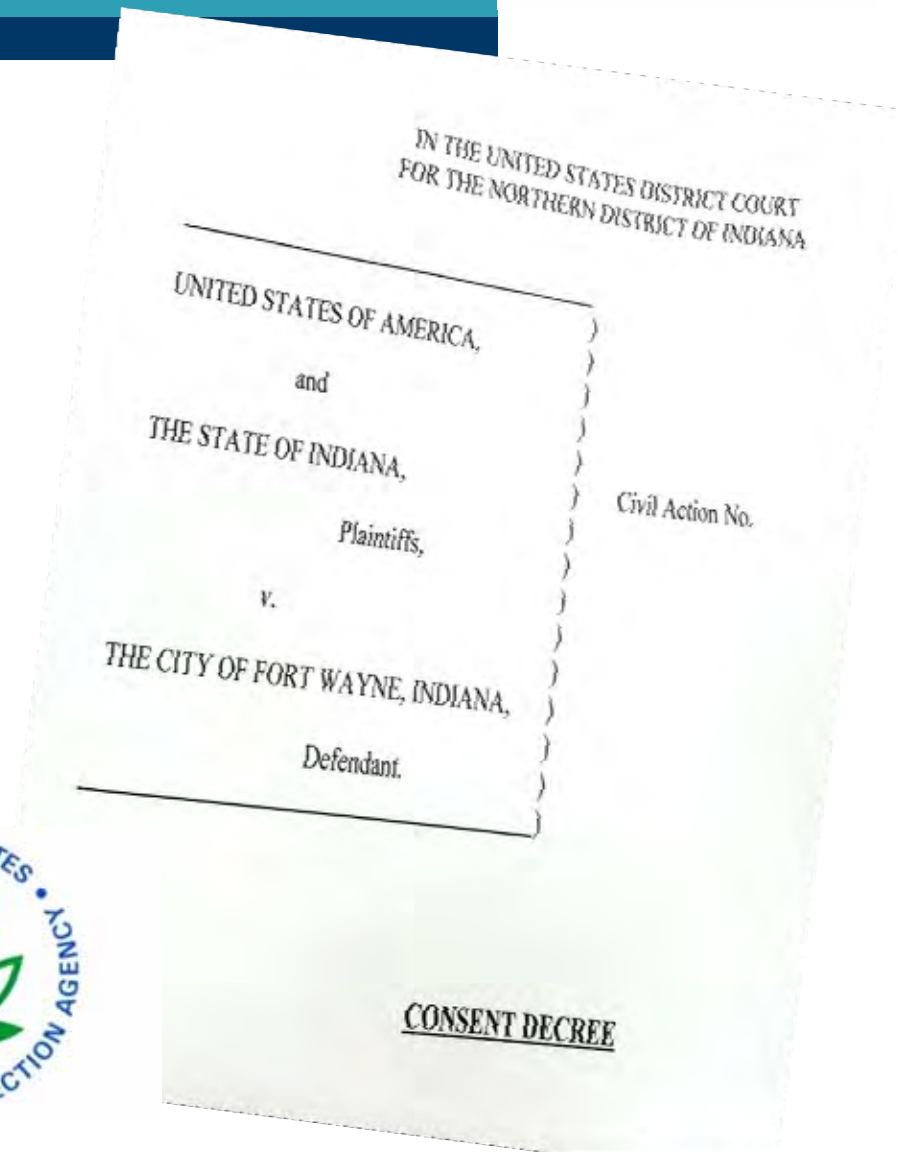


- “We need more than \$2.3 billion to begin replacing the aging pipes, treatment plants and fire hydrants that treat and deliver water in our communities.”
- “...small systems are both more expensive to operate and less resilient to the changes that are affecting health and safety.”
- “...Indiana has more than 500 water utilities, but fewer than 100 of them are under the jurisdiction of the Indiana Utility Regulatory Commission.”
- “Protecting the economy means making sure that utilities manage our water resources together.”

Old and New Challenges



- Consent Decree to eliminate Combined Sewer Overflows
- New Water Treatment Methods
- Stormwater Quality Improvements



Indianapolis, South Bend, Evansville, Fort Wayne



Population – 100,886

Indianapolis Agrees to \$1.8 Billion Sewer Plan

October 8, 2006



Population – 843,393



The city of Indianapolis signed a consent decree with the U.S. Justice Dept. U.S. Environmental Protection Agency to make more than \$1.85 billion in in to curb overflows from its sewer system.

The settlement will be the third highest-cost Clean Water Act settlement and combined sewer overflows, and will ultimately reduce the volume of Indiana untreated discharges by 7.2 billion gallons in an average year. The combined overflows combine both sewage and stormwater runoff.



City of South Bend reviewing \$600M sewer project



Evansville Announces \$729 Million Sewer Project

Published 02/25 2016 06:24PM Updated 02/25 2016 06:24PM

Population – 120,310



Population – 256,496

City Of Fort Wayne, Indiana Agrees To Make \$250 Million In Improvements To Sewer System

Washington, D.C. — The City of Fort Wayne, Ind., has agreed to make an estimated \$250 million worth of improvements to resolve longstanding problems with overflows from its sewer system, the Justice Department and Environmental Protection Agency (EPA) have announced.

The city's sewer system, which serves approximately 220,000 people, transports the city's sewage for treatment at a wastewater treatment plant prior to discharging it into area rivers and streams. Overflows from the city's collection system discharge raw sewage directly into rivers and streams and can be a major source of water pollution. Fort Wayne's overflows currently number approximately 60 per year.

Jeffersonville, Mishawaka, Elkhart

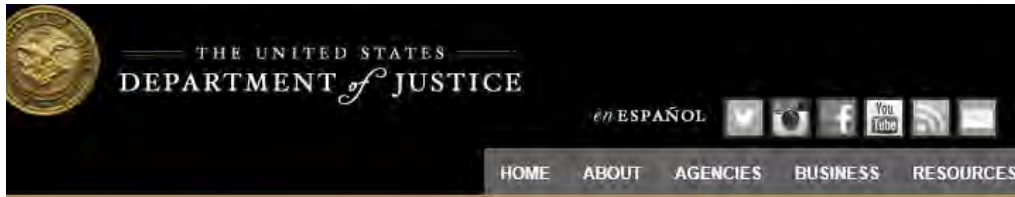


Mishawaka, feds sign sewer work consent decree

JOSEPH DITS South Bend Tribune jdits@sbtinfo.com Feb 11

Population – 47,989

Consent Decree - \$132M



FOR IMMEDIATE RELEASE

Thursday, September 17, 2009

City of Jeffersonville, Indiana, Agrees to Upgrade Sewer Systems to Comply with Clean Water Act

WASHINGTON—The city of Jeffersonville, Ind., has agreed to make extensive improvements to its sewer systems that will significantly reduce combined sewer overflow (CSO) discharges into the Ohio River. The agreement, which is a consent decree, is the first of its kind in the state of Indiana.

According to a consent decree filed today in federal court, the city is required to develop and implement a comprehensive plan to reduce, and where feasible, eliminate overflows into the Ohio River from its combined sewers by calendar year 2020 or 2025, depending on Jeffersonville's financial health; implement a plan with specific actions to improve the capacity, management, operation, and maintenance of its sanitary sewer system to eliminate overflows of untreated sewage; and eliminate all discharge points within its sanitary sewer system.

Population – 47,989

Consent Decree - \$125M est.

Two federal agencies have finally signed a consent decree, covering the city's promise to upgrade its sewer system in the coming 20 years.



Environmental Topics

Laws & Regulations

About EPA

City of Elkhart, Indiana, Combined Sewer Overflow Clean Water Act Settlement

On October 24, 2011, a Consent Decree was entered by the District Court. The Decree requires the City to develop and implement an enforceable schedule to eliminate combined sewer overflows from its sewer systems into the Elkhart Rivers, and Christiana Creek. Under the 2011 settlement, the City is also required to pay civil penalties totaling \$87,000 to be divided equally between the United States and the State.

Population 51,265

Consent Decree \$155.6M

Emergency vs. Preventive Care The Replacement Generation(s)



Emergency vs. Preventive Care The Replacement Generation(s)

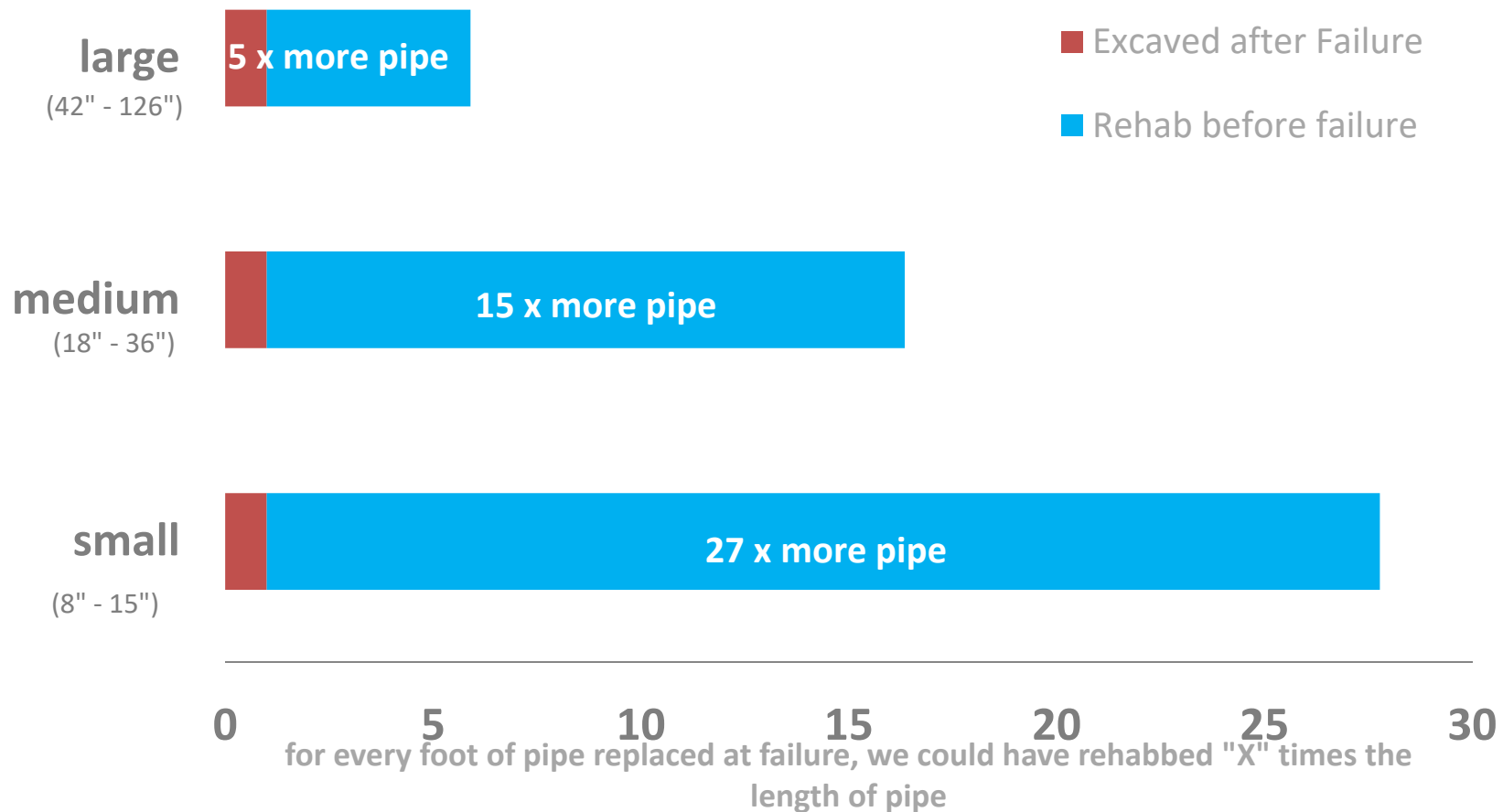


Pipe Analytics

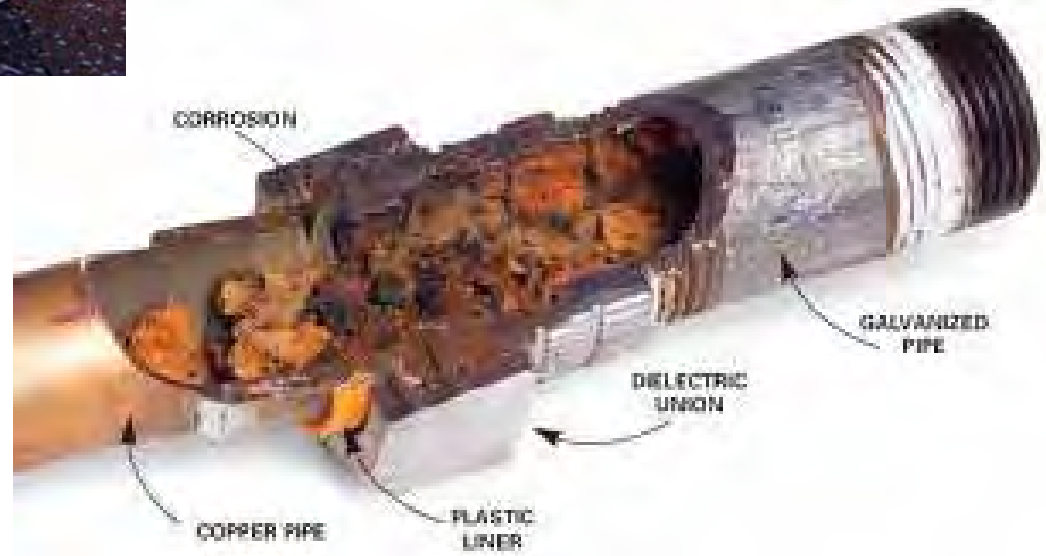
Minimum Life Cycle Costs



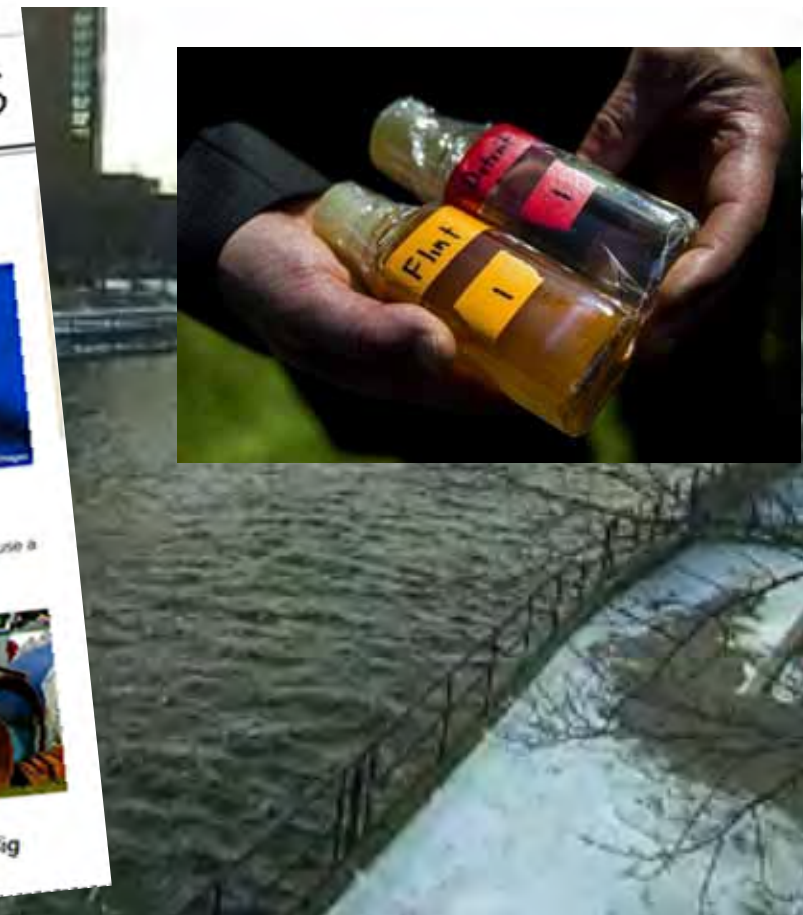
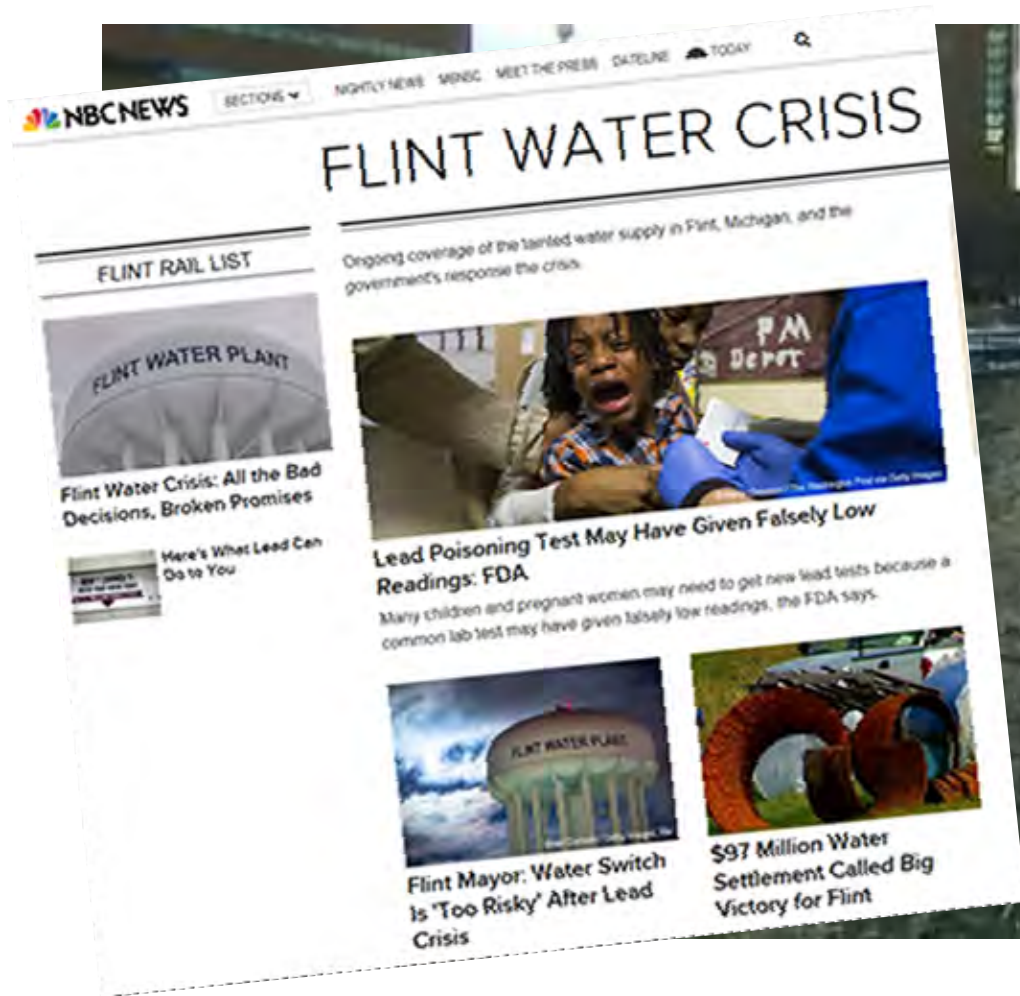
Number of feet that would be rehabbed for the same cost of replacement at failure



Emerging Challenges New Lead & Copper Regulations



Impact of National Issues



Impact of National Issues




Chicago Tribune

SEARCH

SPORTS BREAKING EAT DRINK & BE MERRY TRENDING OPINION SUBURBS ENTERTAINMENT ADVERTISING

News | Blotting Poverty's Po

EPA warns of lead in water in East Chicago



A water tower with the slogan "For Our Children, East Chicago" stands near the East Chicago Housing Complex in East Chicago. The water tower is white with a large dome and the slogan is written in black letters on the side. The building behind it is a two-story brick structure with a dark roof.

By Michael Hawthorne - Contact Reporter
Chicago Tribune

When federal officials revived a long-delayed cleanup of toxic soil in East Chicago last year, they discovered that decades of factory emissions weren't the only source of brain-damaging lead endangering the Indiana community.

FOX 59 NEWS MORNING COMMUNITY CONTENTS TRAFFIC ON AIR SPORTS WEATHER 62° SHOP NOW!

EPA officials: Up to 90% of homes in East Chicago, IN have lead water lines

FORREST GIFFIN FEBRUARY 6, 2014 AT 4:00PM EST | PHILIP LUCIA FEBRUARY 7, 2014 FEBRUARY 6, 2014



DO NOT
PLAY IN THE DIRT OR
AROUND THE MULCH

EPA

Innovation Offsets Costs



- Methane power generation
- Reducing electric bill and increasing revenue by \$1.1 Million



Utilizing Existing Resources



- Maximizing return on existing assets
- \$2.3 Million

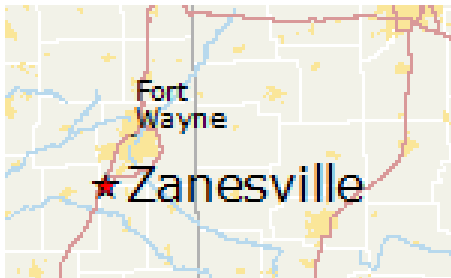


“Resource”-ful Partnerships



Allen County Regional Water & Sewer District

Established 1979
200 East Berry Street, Suite B-015 Fort Wayne, IN
T: (260) 427-2696 E: info@acrwsd.com



Affordability, Cost Management



- \$500,000 Savings 1st year
- Reduction in staff time
- Earnings Credit
- 10 Year Savings \$6 Million



Economic Development



Economic Development



Current/Future Talent Needs



- Civil Engineers
- Biologists
- Chemists
- Accountants
- Public Managers
- Project Managers
- CAD Technicians
- Mechanics
- I/T Specialists
- Human Resources Generalists
- Electricians
- Customer Service Representatives
- Business Development
- Public Relations Officers
- Compliance Officers
- Asset Management Specialists
- Real Estate Professionals
- Attorneys
- Process Improvement Specialists
- Performance Managers
- Trainers
- Construction Managers
- Skilled Trades
- Plant Operators
- GIS Specialists
- Public Finance Experts
- Planners
- Maintenance Technicians
- Electrical Engineers
- Mechanical Engineers
- Process Engineers
- Environmental Engineers
- Structural Engineers
- Architects
- Sustainability Experts

Human Capital Development



The Journal Gazette

FORT WAYNE, INDIANA • LOCALLY OWNED SINCE 1882

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Concrete projects lay foundation for students

Benjamin Lanka | The Journal Gazette

A group of [Anthis](#) Career Center students spent the summer laying concrete for the city.

Human Capital Development



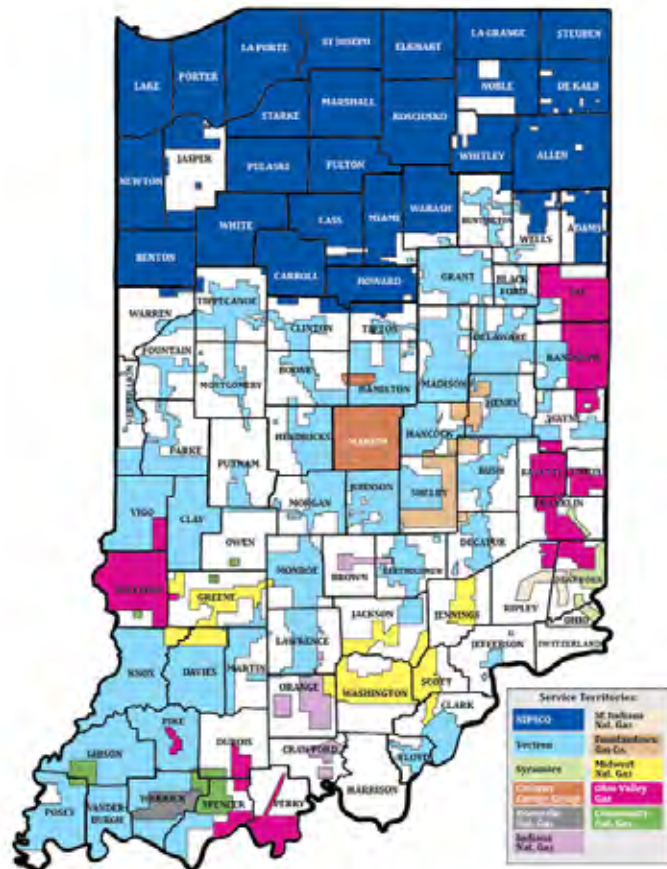
Human Capital Development



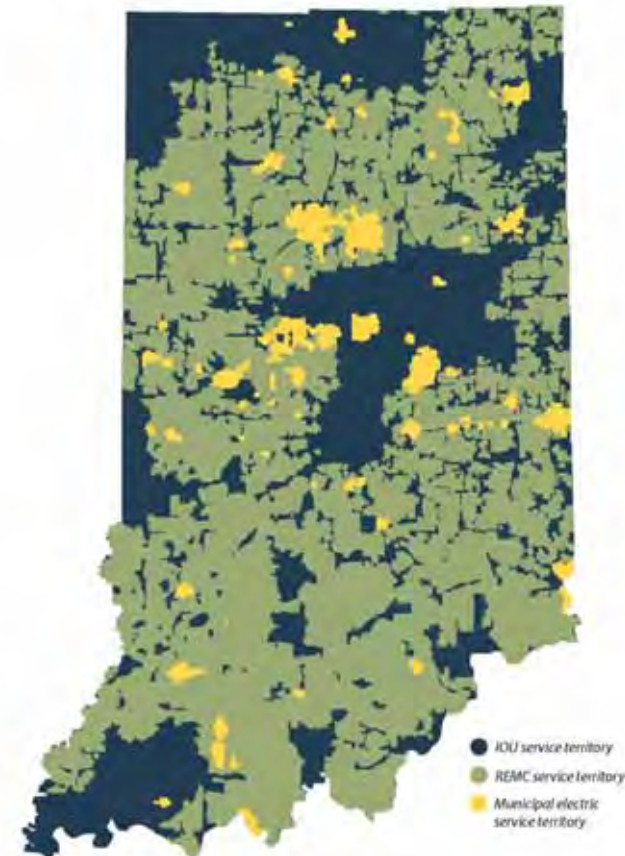
Regional Service Territories



Gas Service Territories



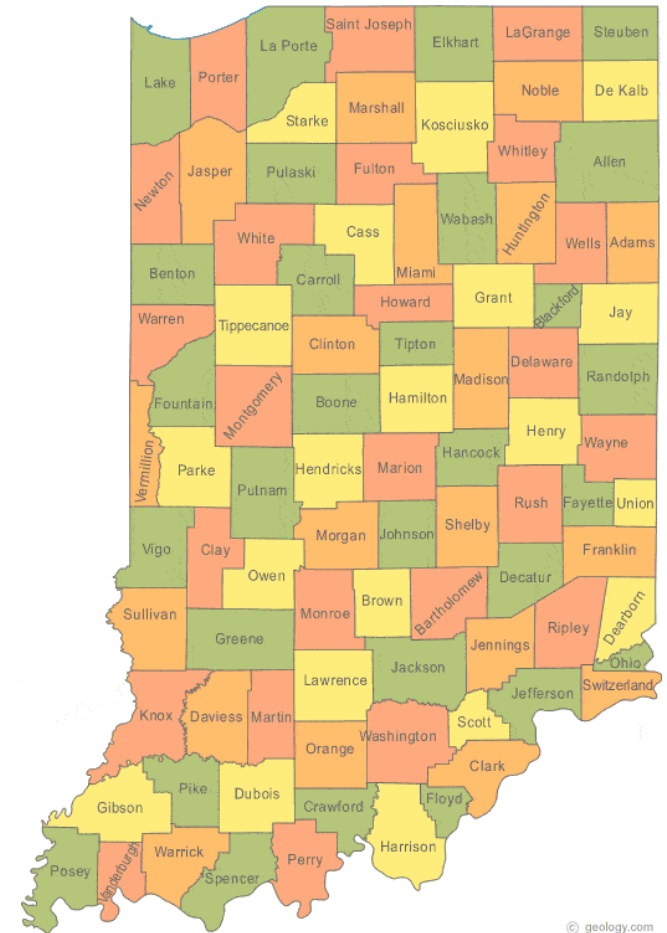
Electric Service Territories



Why Regionalization



- Economies of Scale
- Downward Effect on Customer Rates
- Improved Opportunities to attract and retain high demand positions
- Environmental Stewardship
- Effective Resource Management
- Enhanced Educational and Training
- Cyber Security and Technology Investments



Enhanced Utility Management Shared Services



CITY UTILITIES
 Citizens Square
 Customer Relations Center
 200 E. Berry Street, Suite 131
 East Waukegan, IL 60070-2733

280-421-1234
 Email: customerservice@cityutilities.com

800-447-2264
 Monday to Friday 7:30AM to 5:00PM

Pay Online at www.cityutilities.com

Phone Payments
 280-477-1234

Curbside Drop Box
 200 E. Berry Street

Customer # 00000000
 Account # 00000000

For Payments Use This Number
 0000000000

Bill Number: 10764302
 Bill Date: 09/30/2016
 Amount Due: 211.62
 Due Date: 10/03/2016
 After Due Date Pay: 232.78

| Service | Meter Number | Previous Meter Read Date | Reading | Current Meter Read Date | Reading | Meters Read Days | Meter Size | Consumption for Billing Cycle |
|---------|--------------|--------------------------|---------|-------------------------|---------|------------------|------------|-------------------------------|
| Water | 00000000 | 07/26/2016 | 2695 | 08/24/2016 | 2524 A | 29 | " | 171 Units |
| Sewer | 98002645 | 07/26/2016 | 2074 | 08/24/2016 | 2100 A | 29 | " | 104 Units |

Previous Balance: 213.70
 Balance Forward: 213.70
 Total Water Charges: 30.54
 Total Sewer Charges: 8.99
 Total Rate Charges: 39.53
 Total Current Charges: 31.25
 Total Due: 211.62

Water Usage by Month

Enhanced Utility Management Checklist of Excellence



- Proper Staffing
- Maintenance Plan
- Strategies for Sustainability
- Partnerships



Enhanced Utility Management Establishing Centers of Excellence



- Commitment to leadership and training
- Maintenance Management
- Technology Growth
- Environmental Stewardship
- Educational Partnerships
- Regulatory Support
- Local, Regional, National Advocacy
- Reliable, resilient, responsible, affordable services for all customers

