Key Strategies, Challenges, and Needs

Eye on Education, Economic Development, Energy

Kumar Menon, Director of Fort Wayne City Utilities
Global Supply Shortage
Challenges

Houston set for $3B water project

Drought Planning: Water Shortages Expected in New Mexico

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

Pittsburgh Water Rates Set To Skyrocket

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

By Erich Hey, Pasch Staff | Jul 12, 2010 12:01 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.

'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
“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.”
A flood of water concerns

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

ED CHARBONNEAU

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 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 – 843,393

City of South Bend reviewing $600M sewer project

Population – 100,886

Evansville Announces $729 Million Sewer Project

Population – 120,310

Combining Sewer Overflow Project

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

Population – 47,989
Consent Decree - $132M

Population – 51,265
Consent Decree $155.6M

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

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

Population – 47,989
Consent Decree - $125M est.
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

- **large**
  - (42" - 126")
  - 5 x more pipe

- **medium**
  - (18" - 36")
  - 15 x more pipe

- **small**
  - (8" - 15")
  - 27 x more pipe

For every foot of pipe replaced at failure, we could have rehabbed "X" times the length of pipe.

- Excaved after Failure
- Rehab before failure
Emerging Challenges
New Lead & Copper Regulations
Impact of National Issues
Impact of National Issues

EPA warns of lead in water in East Chicago

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

Environmental Stewardship
Protecting Allen County Waterways
Affordability, Cost Management

- $500,000 Savings 1st year
- Reduction in staff time
- Earnings Credit
- 10 Year Savings $6 Million
Economic Development
Economic Development
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<th>Civil Engineers</th>
<th>Process Improvement Specialists</th>
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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
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