WATER INFRASTRUCTURE TASK FORCE

Indiana Legislative Services Agency
200 W. Washington Street, Suite 301
Indianapolis, Indiana 46204

Friday November 09, 2018

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WATER INFRASTRUCTURE TASK FORCE

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FINAL REPORT

Water Infrastructure Task Force

I. STATUTORY DIRECTIVE

The Water Infrastructure Task Force (Task Force) was established by IC 2-5-44. The Task Force is required by IC 2-5-44 to do the following:

(1) Examine recommended standards and best practices for the maintenance and life cycle management of:

(A) drinking water systems;
(B) wastewater management systems; and
(C) storm water management systems.

(2) Analyze whether individual:

(A) drinking water systems;
(B) wastewater management systems; and
(C) storm water management systems;

in Indiana are achieving the recommended standards referred to in subdivision (1).

(3) Assess the adequacy of present sources of funding for the maintenance and life cycle management of:

(A) drinking water systems;
(B) wastewater management systems; and
(C) storm water management systems;

and, if necessary, identify additional sources of funding.

(4) Evaluate whether, considering:

(A) the availability of resources;
(B) the ownership of resources;
(C) changing population demographics;
(D) appropriate system capacity;
(E) operational expertise;
(F) public health and safety; and
(G) economic development;

the regionalization of water infrastructure could improve system performance and ratepayer value.

(5) Assess the value that an improved system of water infrastructure would add to economic development in Indiana.

(6) Create an empirical decision making tool that will allow policymakers to prioritize the funding of water infrastructure projects in a manner that will:

(A) account for public health, safety, and economic development, as well as ensure ratepayer value;
(B) evaluate the capacity of present funding streams and, if necessary, new funding streams; and
(C) test the outcomes of various scenarios over multiple timelines.

(8) Develop a long term plan for addressing drinking water, wastewater, and storm water management needs in Indiana that includes recommendations to the general assembly and the governor concerning:

(A) Outcomes that must be achieved in order to overcome challenges facing Indiana's local water infrastructure, and the benchmarks and timelines that must be met in order to achieve these outcomes.

(B) Metrics to be used in assessing the current status of:

(i) drinking water systems;

(ii) wastewater management systems; and

(iii) storm water management systems;

and in tracking the progress made toward accomplishing all goals, benchmarks, and recommended standards.

(C) Funding and financing mechanisms that should be used to achieve necessary improvements in:

(i) drinking water systems;

(ii) wastewater management systems; and

(iii) storm water management systems.

(D) A determination of who should bear the financial burden of improving:

(i) drinking water systems;

(ii) wastewater management systems; and

(iii) storm water management systems;

and how the financial burden should be apportioned among those bearing the financial burden, taking into consideration the impact on affordability of water and wastewater rates.

(E) Appropriate legislation for the 2019 legislative session based on the recommendations of the long term plan set forth in clauses (A) through (D).

II. INTRODUCTION AND REASONS FOR STUDY

Legislative Council Resolution 18-02 assigned the Task Force to study the following:

(A) Standards and funding for drinking water, wastewater management, and storm water management systems and potential for regionalizing systems (Source: HEA 1267-2018.)

(B) Research and outreach efforts to reduce non-point source impacts on water quality, as conducted through government supported programs and by universities, including programs related to the following:

(1) nutrient management and soil health; and

(2) drainage water management.

(Source: HEA 1233-2018; HEA 1267-2018.)

(C) Potential funding mechanisms to assist local units of government to address the

following:

(1) sewer and water projects, including storm water management projects;

(2) improving storm water drainage systems; and

(3) helping to upgrade deteriorating wastewater and storm water infrastructure.

(Source: EHB 1374-2018, as reprinted March 6, 2018.)

III. SUMMARY OF WORK PROGRAM

The Task Force met four times during the 2018 interim on these dates:

September 12, 2018
September 26, 2018
October 10, 2018
October 30, 2018

All of the meetings took place in Room 404 of the State House, Indianapolis, Indiana.

IV. SUMMARY OF TESTIMONY

At the meeting of September 12, 2018, witnesses: (1) summarized reports concerning water infrastructure that had been issued in recent years by the Indiana Finance Authority, the Indiana Chamber of Commerce, the Indiana Utility Regulatory Commission, and the Indiana Advisory Commission on Intergovernmental Relations; and (2) discussed standards and best management practices for water utilities (including asset management, water loss, board training, operator recruitment, lead service line replacement, regional collaboration, challenges for rural communities, water affordability, and cybersecurity).

The minutes of the meeting can be accessed at: https://iga.in.gov/documents/098357f7

At the meeting of September 26, 2018: (1) witnesses discussed state-wide long-term water supply and demand planning (including prioritizing infrastructure needs, engineering perspectives, the Central Indiana Collaborative of Water Utilities, and the prioritization of water infrastructure improvements in other Midwest states); (2) the chief officers of the state environmental agencies of Ohio, Kentucky, and Indiana spoke about water infrastructure improvements and health-related water issues; and (3) a former Missouri state officer discussed his experiences in implementing Missouri's water resources plan.

The minutes of the meeting can be accessed at: https://iga.in.gov/documents/82c1eca1

At the meeting of October 10, 2018, the Task Force heard presentations concerning: (1) the economic development value of improved water infrastructure; (2) the aquifer underlying Charlestown State Park; (3) public-private partnerships as a means of addressing water infrastructure needs; (4) efforts underway to reduce the runoff of agricultural nutrients; (5) design advancements in agricultural ditches; (6) the soil and water research projects of the Purdue

University Department of Agronomy; (7) water, wastewater, and stormwater organizational structures in Indiana; (8) the Indiana Office of Community and Rural Affairs; (9) the USDA's Indiana State Rural Development office; (10) the Indiana Finance Authority's State Revolving Fund Loan Programs; (11) concerns about utility rate affordability; (12) public health aspects of water infrastructure; and (13) the Indiana Rural Community Assistance Program.

The minutes of the meeting can be accessed at: https://iga.in.gov/documents/84db5b9c

At the meeting of October 30, 2018, the Task Force heard presentations about municipal water infrastructure and municipal water supply matters and about the role of county drainage boards in rural drainage matters. The Task Force members also heard testimony from a representative of soil and water conservation districts and an advocate of a proposed reservoir project. Finally, the Task Force members discussed, revised a draft of, and voted on the Task Force final report.

The minutes of the meeting can be accessed at: https://iga.in.gov/documents/17af4d5c

V. TASK FORCE FINDINGS AND RECOMMENDATIONS

EXECUTIVE SUMMARY

The Water Infrastructure Task Force ("Task Force") was created by IC 2-5-44 and given the mandate set forth in PART I ("Statutory Directives") of this report.

The Task Force heard almost 20 hours of testimony over four days on a broad array of water related topics that provided the appropriate foundational knowledge for members to evaluate, discuss, and make the recommendations set forth in this report.

A substantial amount of testimony stressed the importance of evaluating the needs of water systems by utilizing a health based risk approach. With that in mind, many recommendations in this report focus on prioritizing public health. In addition, recommendations about asset management, water loss recognition and prevention, drought preparedness, and economic development considerations are included.

The Task Force also evaluated the roles of certain state agencies -- including the Department of Environmental Management, the Department of Natural Resources, the Department of Health, the Utility Regulatory Commission, the Office of Community and Rural Affairs, and the Indiana Finance Authority -- with respect to regulating and providing funding for water systems. The Task Force provides recommendations within this report encouraging the Executive Branch to direct the regulatory agencies to develop regulatory standards and benchmarks based upon the health risks identified in testimony, as well as directing the Office of Community and Rural Affairs and the Indiana Finance Authority ("IFA") to prioritize funding to address appropriate health based needs. As part of this recommendation, the Executive Branch is encouraged to

create a position or entity to coordinate the communication and direction of all water related activities of state regulatory and finance agencies.

The Task Force recognizes the importance of moving forward expeditiously to address the many needs of the state's water systems and the need to set health based priorities, so all recommendations in this report include a goal of implementation within twenty-four months.

Finally, the Task Force has included a section in this report concerning the reestablishment of the Water Infrastructure Task Force. It became apparent early on that the statutory charge was too broad to cover in one report. Therefore, this report includes a recommendation that the Task Force be reestablished for another year to study various matters, the primary one being storm water runoff, with additional members possessing appropriate knowledge being appointed to the Task Force.

EXECUTIVE SUMMARY OF RECOMMENDATIONS

"Review of standards and best practices"

The Executive Branch should evaluate the following:

Requiring all water and wastewater systems to create asset management plans.

Requiring all drinking water utilities to annually self-audit for and biennially evaluate water loss, with biennial independent validation by a third party, using the standardized AWWA M-36 methodology.

The establishment of appropriate utility benchmarks.

The creation of a central repository for all reported utility data.

"Empirical decision making tool"

The Executive Branch should prioritize infrastructure needs based on public health and safety, consequence of failure, probability of occurrence, affordability, and economic development. The Executive Branch may utilize:

- the joint Indiana American Council of Engineering Companies ("ACEC") and American Water Works Association ("AWWA") Risk Consequence Model, a full version of which is attached as Appendix "A" and a condensed version of which appears in the discussion of Specific Recommendation (1) of Recommendation [1];
- the State Revolving Fund ("SRF") Loan Program rank and scoring system of the IFA; and
- other data sources;

for guidance in the development of a prioritization methodology.

Any funding, if made available, should be deployed according to the prioritization methodology utilized by the Executive Branch.

"Develop a long term plan for addressing drinking water, wastewater, and stormwater needs"

The Executive Branch should appoint a person or persons to oversee all water related activities, including regulation, financing, water supply and demand, and infrastructure needs.

The Executive Branch should establish State Water Infrastructure Study Areas. The purpose of these areas will be to study supply and demand, drought preparedness, and infrastructure needs, as well as opportunities for utility collaboration within a region. Participation by utilities, municipalities, and other entities in the activities of the State Water Infrastructure Study Areas should be required.

Studies of the regional areas of the state should be continued so that the identification of regional infrastructure needs, solutions, and inter-local synergies can continue.

The Office of Community and Rural Affairs and the IFA SRF grant and loan programs should utilize the prioritization methodology determined by the Executive Branch to prioritize the funding the state's water systems and should also require all funding recipients to prepare and maintain asset management programs.

If any state funding resources are identified, the prioritization methodology determined by the Executive Branch should be utilized to deploy state funding.

The Water Infrastructure Task Force should be reestablished for another year to expand its study of storm water management within the agricultural sector and also to study the quality and quantity of our water resources and the need for state-wide water supply and demand planning.

RECOMMENDATIONS

A. Concerning Funding

[1] Priority System For Funding Infrastructure Projects

Finding

Lead service lines, combined sewer overflows, failing septic systems, and drinking water main failures are the most urgent infrastructure needs facing Indiana residents, as demonstrated by the joint Indiana ACEC/AWWA Risk Consequence Model, a full version of which is attached as Appendix "A" and a condensed version of which appears below in the discussion of Specific

Recommendation (1).

The joint Indiana ACEC/AWWA Risk Consequence Model was created by water and wastewater professionals working on behalf of the ACEC and the AWWA. It is based on the infrastructure needs identified by the IFA and the IU Public Policy Institute in their published reports. The information in the Risk Consequence Model was evaluated by the ACEC and the AWWA according to public health and safety, consequence of failure, probability of occurrence, affordability, and economic development, using the judgement and experience of Indiana water and wastewater professionals.

Risk

IDEM Commissioner Bruno Pigott testified that serious health risks, including improper neurological development of infants and young children and negative effects on reproductive health and fertility, can be attributed to the continued use of lead service lines.

Other health risks, including gastrointestinal illnesses, can be associated with failing septic systems and combined sewer overflows.

Health risks that have been associated with water main failures from aging infrastructure include the interruption of the delivery of clean, potable water and the introduction of contaminants into the water supply.

Dr. Indra Frank of the Hoosier Environmental Council echoed the commissioner's concerns.

Specific Recommendations

(1) The Executive Branch should prioritize infrastructure needs based on public health and safety, consequence of failure, probability of occurrence, affordability, and economic development. In the development of a prioritization methodology, the Executive Branch may utilize the joint Indiana ACEC/AWWA Risk Consequence Model, a full version of which is attached as Appendix "A" and a condensed version of which follows:

Risk/Needs	Risk Score	Duration to Fix (years)	Investment Priority	New Funding Allocation (Years 1-5)	New Funding Allocation (Years 6-15)	New Funding Allocation (Years 16-30)
Drinking water main failure	114	30	3.8	6%	10%	16%
Lead contamination/pipes	110	5	22	38%	-	-
Failing treatment systems	108	30	3.6	6%	10%	15%
CSO's (fishable/swimmable) & SSO's	105	15	7	12%	19%	-

Security (cyber and facility)	96	30	3.2	5%	9%	13%
Urban stormwater drainage	84	30	2.8	5%	8%	12%
Failing septics	80	15	5.3	9%	15%	-
Water contamination/facility	75	30	2.5	4%	7%	10%
Wastewater main failure	66	30	2.2	4%	6%	9%
Stormwater main failure	60	30	2	3%	5%	8%
Flooding/natural disaster	51	-	-	-	-	-
Insufficient operating budget	42	30	1.4	2%	4%	6%
Workforce development	33	30	1.1	2%	3%	5%
Water contamination/source	31	30	1	2%	3%	4%
New regulations	10	30	0.3	1%	1%	1%
Impeding economic development	6	30	0.2	0.30%	1%	1%

The Executive Branch may also utilize the IFA's SRF Loan Program rank and scoring system as well as other data sources for guidance in the development of a prioritization methodology.

(2) Any empirical decision making tool should include input from stakeholders, should be reviewed for its effectiveness, and should be updated on a regular basis.

(3) The appropriate state regulatory agencies should continue to set standards related to the protection of public health, and the appropriate state agencies should continue to identify infrastructure needs.

(4) Any funding, if made available, should be deployed according to the priorities identified by the prioritization methodology of the Executive Branch.

Timeline: These specific recommendations should be implemented at the same time as funding is made available.

B. <u>Concerning Recommendations to the Executive Branch</u>

[2] Appointment of a Cabinet Level Executive to Oversee Water Related Activities

Finding

The Indiana Chamber of Commerce's 2014 report *Modernizing the State Approach to a Critical*

Resource found that Indiana is highest among all the states in the degree to which its state economy is dependent on abundant water resources. Yet, the Indiana Finance Authority's 2015 study *Evaluation of Water Utility Planning in Indiana* found that there is no single state authority that coordinates the water activities in the state, including coordination among state and federal water agencies and the management of water data and water quality and quantity. See Figure 1, which documents the transfer of water-related data among state and federal agencies.

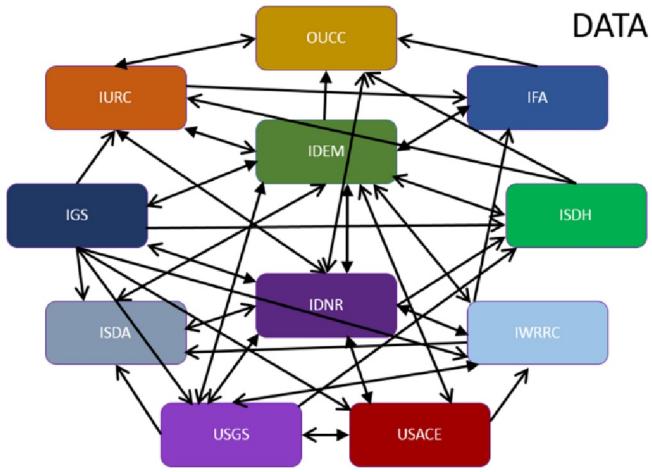


Figure 1: Water-related data transfer among state and federal agencies. Source: *Evaluation of Water Utility Planning in Indiana,* IFA, 2015.

Risk

Without a better coordinated approach, Indiana jeopardizes the future of its water resources.

Specific Recommendations

(1) The Executive Branch should by executive order appoint a governor's cabinet level executive to oversee water related matters, including water supply and demand and infrastructure needs.

(2) The primary purpose of the person appointed would be to coordinate all water related activities of the state regulatory and finance agencies.

Timeline: The implementation of these specific recommendations should be completed before January 1, 2020.

[3] Formation of State Water Infrastructure Study Areas

Finding

Water supply and demand and infrastructure needs vary by region around the state. During his

testimony before the Task Force on September 26, 2018, Dr. Jack Wittman of INTERA introduced boundaries dividing the state into water planning areas based on a number of factors, including watershed and population. The administration, in creating water infrastructure study areas, should not be bound by political boundaries.

Risk

Water suppliers and significant water users cannot effectively plan for population changes, water shortages, affordability challenges, compliance with future regulations, and economic development without an understanding of their water supply, water demand, and infrastructure needs. The Indiana Finance Authority's 2017 *Southeastern Indiana Water Supply* study found that the most effective long-term solutions will likely involve regional planning.

Specific Recommendations

(1) The Executive Branch should establish State Water Infrastructure Study Areas that generally follow the boundaries presented by Dr. Jack Wittman in his testimony on September 26, 2018. Attached as Appendix "B" is an alternative map of "Possible Centers of Collaboration" prepared by Task Force member Michael Simpson.

(2) Participation by utilities, municipalities, and other entities in the activities in one or more of the State Water Infrastructure Study Areas or subgroups thereof should be required. However, if participation is voluntary, utilities, municipalities, and other entities should be highly encouraged to participate, and it should be stated that a utility's ability to access state resources in the future would be based upon participation.

Timeline: The implementation of these specific recommendations should be completed before January 1, 2020.

[4] Centralizing Data Management

Finding

The Indiana Finance Authority's 2015 study *Evaluation of Water Utility Planning in Indiana* found that the state lacks a central hub to manage all water related data.

Risk

Without a central hub to manage all water related data, the data collected by the state will continue to be siloed by the various agencies that collect it. Because agencies use different data formats, which are often incompatible, data sharing can be very cumbersome. Furthermore, in the process of translating data into a usable format, agencies make duplicative requests to utilities for the same data, only in a different format.

Specific Recommendations

(1) Consideration should be given to the evaluation of what data utilities provide to the state in terms of utility assets, usage, capacity, quality, water pumped and sold, and 20-year infrastructure needs.

(2) Consideration should be given to consolidating the collection of all appropriate water related data into a single hub to make data reporting easier for utilities and to make the data more accessible by a greater number of users while maintaining appropriate data confidentiality and security.

(3) An evaluation is needed of what entity should be responsible for managing the data collected and allowing appropriate data to be viewed by the public for transparency and for comparison between utilities.

(4) The types of data that could be collected include:
- (a) Asset management data.
- (b) Water pumped and sold data; current and future.
- (c) Water supply and demand.
- (d) 20-year infrastructure needs.
- (e) Lead service line inventory and current status.
- (f) Distribution system maps.
- (g) Water Loss assessment.

Timeline: The implementation of these specific recommendations should be completed before January 1, 2020.

[5] Utility Benchmarking

Finding

The Task Force received testimony that utility benchmarking enables utilities to compare themselves to their peers and also allows utility customers to better understand the value they are receiving in their utility rates.

Risk

Without benchmarks by which to gauge their performance, underperforming utilities often do not recognize and/or attend to deficiencies in a timely manner, thereby putting public health at risk.

Specific Recommendations

(1) In addition to the collection of utility data as prescribed above, an evaluation of which

agency or agencies should establish utility benchmarks should be conducted, so that the data collected can be appropriately evaluated.

(2) The appropriate agency should either adopt a pre-existing, widely accepted utility benchmark system, such as those used by the AWWA, or should create its own benchmark system. The benchmark system adopted or created should include simple, standardized metrics for system condition and utility finances. Utilities would report their figures for the benchmarks and the appropriate agency would publish the information in order to show how individual utilities are performing.

(3) Collaboration with neighboring utilities should be included as a best management practice.

(4) Consideration should be given to a requirement that a report of the data collected be prepared and presented to the General Assembly biennially.

Timeline: The implementation of these specific recommendations should be completed by July 1, 2020.

[6] Water Loss Control

Finding

The Indiana Finance Authority's 2016 study *Evaluation of Indiana's Water Utilities* found that over 50 million gallons of water are lost from Indiana water suppliers each year at a cost of over $54 million.

Risk

If water loss control is not addressed, utilities will continue to allow valuable water resources and associated revenues to be lost, at an increasing cost to rate payers. A delay in addressing water loss could result in increased infrastructure repair and replacement costs, as leaks often indicate the need for infrastructure updates.

Specific Recommendations

(1) Consideration should be given to the establishment of annual water loss self-audits, with independent biennial validation, using the standardized AWWA methodology; to the reporting of the results of those audits to the appropriate agency; and to making the audit results a part of the annual report to the appropriate agency recommended above.

(2) Investment in water loss mitigation should be targeted by system, and incremental gains must be weighed against cost. Financial assistance should be tied to achieving a proper

cost/benefit balance.

(3) Consideration should be given to prioritizing funding for utilities that incorporate conservation measures into their rate structures.

Timeline: The implementation of these specific recommendations should be completed before January 1, 2020.

[7] Continuation of Regional Studies

Finding

Regional and trans-border water issues are a concern across the state. For instance, water suppliers in northeastern Indiana are concerned about groundwater withdrawals in northwestern Ohio. In some regions, studies of the region's own water needs, such as the studies of the Central Indiana Collaborative, have begun. Regional studies, such as the Indiana Finance Authority's 2017 *Southeastern Indiana Water Supply* study, are a useful way to identify regional infrastructure needs and solutions. For example, the IFA's 2017 study found that a number of utilities are currently playing an important role in supplementing supplies for their neighbors through utility-to-utility wholesale water purchase agreements. The findings of the proposed regional studies could further develop a foundation for a more informed discussion of regional collaboration.

Risk

Water suppliers and significant water users cannot effectively plan for population changes, affordability challenges, compliance with future regulations, and economic development without an understanding of their infrastructure needs and the efficiencies that may be gained through the sharing and/or consolidation of resources.

Specific Recommendations

(1) The Executive Branch should continue to study regional areas of the state to identify regional infrastructure needs and solutions as well as efficiencies to be gained through the sharing and/or consolidation of resources. This information will be useful when evaluating the state's regional boundaries, just as the IFA's *Southeastern Indiana Water Supply Study* was useful to the work of this Task Force.

(2) The regional studies could also be used in determining appropriate regional boundaries for State Water Infrastructure Study Areas.

Timeline: The implementation of these specific recommendations should be completed on or before December 1, 2020.

C. Concerning Funding Through the Existing IFA-SRF Loan Program

[8] Asset Management

Finding

The Indiana Finance Authority's 2015 study *Evaluation of Water Utility Planning in Indiana* found that the majority of utilities in Indiana are not proactively making plans to manage aging infrastructure.

Risk

Asset management planning is urgently needed to prevent deterioration of service levels, increased water loss, and higher-than-otherwise-necessary long term costs and rates.

The cost of renewal and replacement of infrastructure is expected to be much higher for small utilities than for large ones.

Specific Recommendations

(1) Any funding, if made available, should utilize the existing IFA-SRF Loan Program, which currently requires all funding recipients to follow the existing SRF Asset Management Program requirements.

(2) Failure to comply with the SRF Asset Management Program requirement in future years may result in an increased interest rate.

Timeline: These specific recommendations should be implemented at the same time as funding is made available.

[9] Local Match

Finding

Local investment in a project is often an indicator of local support. In addition, the more local support there is for a project, the more likely the project is to be successful.

Risk

The lack of local support and investment is often an indicator that a project will not achieve its desired outcomes.

Specific Recommendation

Any funding, if made available, should utilize the IFA-SRF Loan Program's Project Scoring System, which awards bonus points to applicants that provide local match funding.

Timeline: This specific recommendation should be implemented at the same time as funding is made available.

[10] Interconnection/Regional Collaboration

Finding

According to the Indiana Finance Authority's 2015 study *Evaluation of Water Utility Planning in Indiana*, the benefits of regional cooperation include: lower overall operation and maintenance cost; greater technical, managerial, and financial capacity; enhanced ability to attract and retain qualified staff; better emergency response; more reliable service; and an enhanced ability to plan on a watershed-wide basis.

Risk

The opportunities and potential efficiencies of regional cooperation might be lost if regional cooperation is not considered.

Specific Recommendation

Any funding, if made available, should utilize the existing IFA-SRF Loan Program's Project Scoring System, which awards bonus points to projects that will interconnect, consolidate, or regionalize, or will remain interconnected, consolidated, or regionalized.

Timeline: This specific recommendation should be implemented at the same time as funding is made available.

[11] Affordability Assistance to Small Utilities

Finding

The Indiana Finance Authority's 2016 study *Evaluation of Indiana's Water Utilities* found that:

- average annual utility operating costs per capita decrease as utility size increases; economies of scale are evident as utility size increases; and
- utilities that serve fewer than 3,300 persons account for 73% of utilities in Indiana, yet they serve only 10% of Indiana's population that is served by water suppliers.

The AWWA's 2012 report *Buried No Longer: Confronting America's Buried Infrastructure Challenge* found that, for Midwest utilities from 2010 to 2050, water main replacement cost per capita for utilities that serve fewer than 3,300 persons is over five times greater than the cost for

utilities that serve 50,000 or more persons.

Risk

Despite the use of best practices, excellent fiscal management, and experienced certified operators, smaller utilities are often more vulnerable to challenges and may have less resiliency than their larger counterparts.

Specific Recommendations

(1) State policy should promote the reduction in the number of vulnerable, less resilient systems.

(2) Small utilities seeking state financial assistance should be required to demonstrate that they have explored collaborative options with other utilities and have historically planned and set rates sufficient to support prudent investment in systems.

(3) If any funding is made available to the IFA-SRF Loan Program, a portion of it will be made available in the form of grants to eligible small utilities with high user rates.

(4) The allocation of grant funding may be determined by the following:
(a) The impact of the dollars allocated to the number of utilities that serve fewer than 3,300 persons.
(b) Utility plans to decrease vulnerability and increase resiliency through collaboration efforts or other initiatives to gain economies of scale.
(c) Another method for allocation.

(4) The eligibility for grant funding may be determined by the following:
(a) Median Household Income (source: US Census).
(b) Number of service connections or persons served (source: US Census).
(c) Post-project monthly user rates.
(d) Income distribution.
(e) Population trend.
(f) Local Area Unemployment Rate (source: US DOL, Bureau of Labor Statistics; https://data.bls.gov/PDQWeb/la).

Timing These specific recommendations should be implemented at the same time as funding is made available.

[12] Cybersecurity

Finding

According to Mr. John Lucas, Chair of the Water and Wastewater Committee of the Indiana Executive Council on Cybersecurity, the water sector is under steady and increasing cyber-attacks.

Risk

Cyber-attacks on the water and wastewater sectors could result in serious threats to public health and safety, disruption of services, and significant financial costs, and could also create the potential for regulatory and civil liability.

Specific Recommendation

Any funding, if made available, should utilize the existing IFA-SRF Loan Program, which will require all funding recipients to follow the existing SRF Asset Management Program requirements, which include requirements for addressing cybersecurity.

Timing: This specific recommendation should be implemented at the same time as funding is made available.

D. Concerning the Reestablishment of the Water Infrastructure Task Force

[13] The Task Force Should Be Reestablished for the 2019 Interim Period

Finding

Even with four meetings, the Water Infrastructure Task Force was not able to cover the entire range of topics relevant to water infrastructure management and investment planning in Indiana. A number of topics, including but not limited to agricultural storm water run-off, require more deliberation.

Risk

All charges to the Task Force are equally important and deserving of complete evaluation, and the topics not adequately covered by the Task Force in 2018 need further, appropriate consideration in order for all water related matters in the state to be completely addressed.

Specific Recommendations

(1) The Water Infrastructure Task Force should be continued for another year to study:
  (A) storm water management within the agricultural sector;
  (B) the quality and quantity of Indiana's water resources; and
  (C) state-wide water supply and demand planning.

(2) The Water Infrastructure Task Force should be reestablished to both maintain the current areas of expertise and to include two members with expertise in storm water management within the agricultural sector.

(3) As reestablished, the Water Infrastructure Task Force should study the feasibility of a state-wide water plan as recommended by the Department of Natural Resources during testimony, with a focus on the following:

(a) Inventory and assessment of water resources.
(b) Inclusion of non-municipal water users (agriculture, industry, power, recreation).
(c) Long-range water supply needs based on population changes, industry demands, and hydrologic conditions.
(d) Water quality.
(e) Water and wastewater infrastructure needs, funding, and financing options.
(f) Specific steps for how the state of Indiana will meet its water supply needs.
(g) Performance indicators.
(h) Input at the local level.

Timing: The Water Infrastructure Task Force should be reestablished in 2019 and should produce a report on or before December 1, 2019.

In the alternative, the Task Force recommends that the issue of storm water management within the agricultural sector could be studied during the 2019 interim period by an appropriate study committee established by IC 2-5-1.3.

VI. ADOPTION

With all members present, the Task Force adopted the draft version of this final report by a unanimous voice vote on October 30, 2018.

WITNESS LIST

Justin Brugger, the Chief Financial Officer of Fort Wayne City Utilities

Craig W. Butler, Director of the Ohio Environmental Protection Agency

John Davis, Deputy Director of the Indiana Department of Natural Resources

Scott Dompke, the Director of City Utilities of Columbus, Indiana

Greg Ellis, Vice President of Energy, Environment, Infrastructure, and Federal Affairs of the Indiana Chamber of Commerce

Doug Farquhar, Director of the Environmental Health Program of the National Conference of State Legislatures

Dr. Indra Frank, the Environmental Health Director of the Hoosier Environmental Council

Former State Senator Beverly Gard, Member of the Board of NineStar Connect of Greenfield, IN

Curt Gassert, Director of the Water and Wastewater Division of the Indiana Utility Regulatory Commission

Jodi Golden, the Executive Director of the Indiana Office of Community and Rural Affairs

Brian Gould, Government Affairs Director of Aim (Accelerate Indiana Municipalities)

Bill Graham, Mayor of Scottsburg, Indiana

Scott Ham, the Manager of the Silver Creek Water Corporation of Sellersburg, Indiana

Anthony R. Hatton, Commissioner of the Kentucky Department for Environmental Protection

Ryan Heater, Executive Director of External Affairs of the Indiana Utility Regulatory Commission

Don Henderson, a resident of Madison County speaking on behalf of the Mounds Lake reservoir project

Nolan Hendon, the Conservation and Energy Resource Manager of the City of Bloomington Utilities

Jill Hoffmann, Executive Director of the White River Alliance

Stacy Hoffman, the Director of Engineering of Indiana American Water Company

Amy Jo Klei, Chief of the Ohio EPA's Division of Drinking & Ground Waters

John Lucas, Vice President of Information Technology of Citizens Energy Group and Chair of the Water and Wastewater Committee of the Indiana Executive Council on Cybersecurity

Jim McGoff, the Director of Environmental Programs of the Indiana Finance Authority

Danielle McGrath, Senior Vice President for Corporate Strategy, Policy, and Foundation of the Indiana Economic Development Corporation

Glen Miller, the General Manager of the Morgan County Rural Water Corporation

Ryan Mueller, Director of the Division of Water of the Indiana Department of Natural Resources

Eric Ogle, the Director of the Community Development Block Grant Program of the Indiana

Office of Community and Rural Affairs

Kerwin Olson, the Executive Director of the Citizens Action Coalition

Rochelle Owen, the Community Programs Director of the Indiana State Office of the U.S. Department of Agriculture's Rural Development mission area

Vicki L. Perry, the State Director of the Indiana Rural Community Assistance Program

Hans Peterson, PE, the Civil/Environmental Team Leader for Indiana of Clark Dietz, Inc.

Bruno Pigott, Commissioner of the Indiana Department of Environmental Management

Raj Rao, President and Chief Executive Officer of the Indiana Municipal Power Agency

Joseph Rompala, Director, Lewis Kappes, PC, speaking on behalf of Indiana Industrial Energy Consumers, inc.

Jerry Rouch, Assistant Chief of the Ohio EPA's Division of Environmental and Financial Assistance

Todd V. Royer, Associate Professor at Indiana University School of Public and Environmental Affairs

Elizabeth A. (Liz) Solberg, a member of the League of Women Voters of Indiana

Ms. Jamie Palmer, Senior Policy Analyst at the IU Public Policy Institute and Director of the Indiana Advisory Commission on Intergovernmental Relations

Joe Schmees, Executive Director, the Indiana Association of Soil and Water Conservation Districts

Skip Stitt of Faegre Baker & Daniels Consulting

Fred (Ted) Stubbs, the General Manager of the Brookville Lake Regional Waste District and a Member of the Board of the Indiana Regional Sewer District Association

Dr. Ronald F. Turco, Professor and Department Head of the Purdue University Department of Agronomy

Richard Vermillion, County Surveyor of Knox County and President of the County Surveyors Association of Indiana

W. William Weeks, Director of the Conservation Law Center and Clinical Professor, Indiana University Maurer School of Law

Ben Wicker, Executive Director of the Indiana Agriculture Nutrient Alliance

Jeff Willman, Vice President of Water Operations for Citizens Energy Group

Matthew Wirtz, Deputy Director of Fort Wayne City Utilities

Jack Wittman, Ph.D., Vice President and Principal Geoscientist of INTERA, Inc.

APPENDIX "A" ~ Joint Indiana ACEC/AWWA Risk Consequence Model

Affects

Risks/Needs	Public Health and Safety				Economic Development		
Drinking water main failure							
Lead contamination/pipes							
Failing treatment systems							
CSO's (fishable/swimmable) & SSO's							
Security (cyber and facility)							
Urban stormwater drainage							
Failing septics							
Water contamination/facility							
Wastewater main failure							
Stormwater main failure							
Flooding/natural disaster							
Insufficient operating budget							
Workforce development							
Water contamination/source							
New regulations							
Impeding economic development							

No water	Fire risk	Healthcare disruption
5	5	4
5		
5	5	4
5	5	4
5	5	4
5	5	4
5	5	4

Consequences (types of harm):

- Multiple (5)
- Personal harm (4)
- Property harm (3)
- Environmental harm (2)
- Economic harm (2)
- Administrative burden (1)

(Multiple me

Consequences

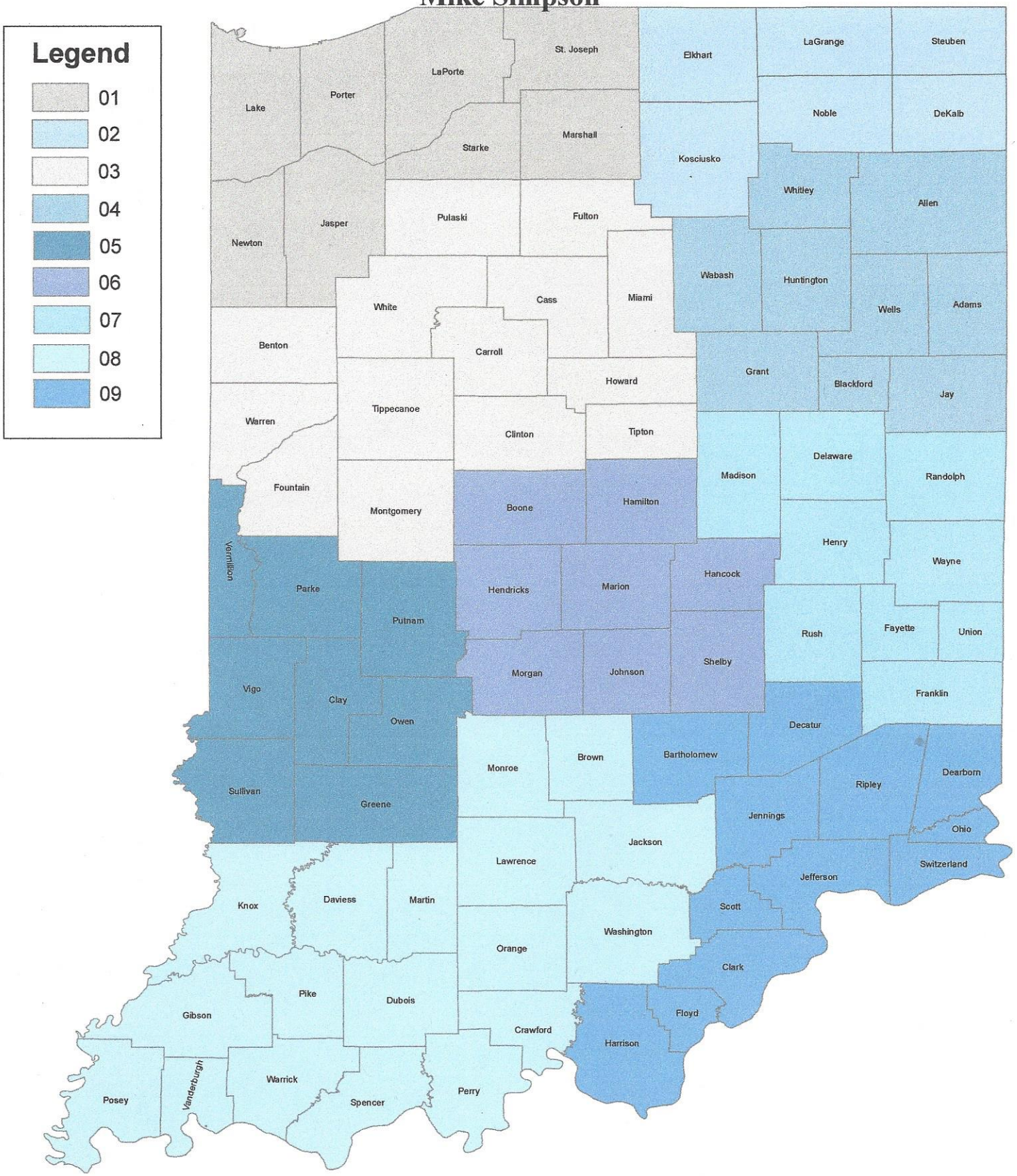
Emergency response disruption	Health risk	Death	Sewer backups	Property damage	Road damage	Physical facility damage	Recreational area damage	Water Loss	Stream/water contamination	Business interest disappears	Business shutdown	Transportation disruption	Community stigma	Property value impact
4	4			3	3			2	2		2	2		
	4									2			2	2
	4		3	3		3			2	2			2	2
	4		3	3			3		2	2			2	2
	4		3	3		3					2			
	4		3	3	3		3		2			2	2	2
	4			3			3		2				2	2
	4					3					2			
4	4		3	3	3				2			2		
4	4			3	3		3					2		
4	4	4	3	3	3	3	3		2		2	2		
			3	3		3		2	2					
	4		3			3								
	4					3				2	2		2	2
										2			2	2

ans the risk/need results in at least two of the types of harm below)

Insurance rates increase	Displacement	Changing priorities	Training requirements	Lost revenue	Total impact	Probability factor	Risk Score	Risks/Needs	Duration to Fix
		1		1	38	3	114	Drinking water main failure	30
2	2	1	1	1	22	5	110	Lead contamination/pipes	5
				1	36	3	108	Failing treatment systems	30
					21	5	105	CSO's (fishable/swimmable) & SSO's	15
		1	1	1	32	3	96	Security (cyber and facility)	30
2	2				28	3	84	Urban stormwater drainage	30
					16	5	80	Failing septics	15
		1		1	25	3	75	Water contamination/facility	30
		1			22	3	66	Wastewater main failure	30
		1			20	3	60	Stormwater main failure	30
	2	1		1	51	1	51	Flooding/natural disaster	-
		1			14	3	42	Insufficient operating budget	30
			1		11	3	33	Workforce development	30
		1		1	31	1	31	Water contamination/source	30
		1	1		2	5	10	New regulations	30
					6	1	6	Impeding economic development	30

Probability factors:
5= likely
3=possible
1=unlikely

Investment Priority	New Funding Allocation (Years 1-5)	New Funding Allocation (Years 6-15)	New Funding Allocation (Years 16-30)
3.8	6%	10%	16%
22.0	38%	-	-
3.6	6%	10%	15%
7.0	12%	19%	-
3.2	5%	9%	13%
2.8	5%	8%	12%
5.3	9%	15%	-
2.5	4%	7%	10%
2.2	4%	6%	9%
2.0	3%	5%	8%
-	-	-	-
1.4	2%	4%	6%
1.1	2%	3%	5%
1.0	2%	3%	4%
0.3	1%	1%	1%
0.2	0.3%	1%	1%
58.5			

Possible Centers of Collaboration

APPENDIX "B" ~ Map Submitted by Task Force Member Mike Simpson