



Indiana Finance Authority Environmental Programs

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Indianapolis, Indiana 46204
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Director of Environmental Programs
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April 7, 2017

Director, WIFIA Program
US EPA William Jefferson Clinton West Building, Rm. 6210A
1301 Constitution Avenue, NW
Washington, DC 20004

RE: Indiana Finance Authority
Letter of Interest to the
US EPA WIFIA Program

Dear Director:

The Indiana Finance Authority is pleased to submit to the US EPA a Letter of Interest for the WIFIA Program. I believe Indiana can be a beneficial partner with EPA in this new financing tool, providing both meaningful financing alternatives for environmental projects and an extremely stable credit for your loan portfolio. Enclosed is the Letter of Interest and its attachments.

Please let me know if additional information is needed. I will be in Washington DC for the CIFA meeting April 18-20, if a meeting to discuss Indiana's submittal would be helpful.

Sincerely,

James McGoff
Director of Environmental Programs

Enclosure



SECTION A: PROSPECTIVE BORROW INFORMATION

1. **Legal Name of prospective borrow:** RESPONSE: Indiana Finance Authority (“**IFA**”)
2. **Other names under which the prospective borrower does business:** RESPONSE: NA
3. **Department and division name:** RESPONSE: NA
4. **Business street address, city, state, zip:**
RESPONSE: One North Capitol, Suite 900, Indianapolis, IN 46204
5. **Mailing street address:** RESPONSE: same
6. **Website:** RESPONSE: www.in.gov/ifa
7. **Employer identification number:** RESPONSE: 35-1602316
8. **Dun and Bradstreet Data Universal Number System (DUNS) number:**
RESPONSE: 782762541
9. **Type of entity (check all that apply):**
RESPONSE:
 - a. Yes- Federal, State or Local Governmental Entity, Agency or Instrumentality
 - b. Yes- State Infrastructure Finance Authority
10. **Describe the organization structure of the project and attach an organization chart illustrating this structure. Explain the relationship between the prospective borrower, the project, and other relevant parties. Include individual member or titles of the project team(s) and their past experiences with projects of similar size and scope. If multiple parties are involved in the project’s construction, maintenance, and operation, describe the project’s risk allocation framework.**
RESPONSE:
 - a. IFA operates the State Revolving Fund (“**SRF**”) Loan Programs for the State of Indiana.
 - b. Through its SRF Program operations, the IFA has developed robust infrastructure funding programs supported by an experienced staff and significant program assets, and is the largest and most experienced funding source for eligible Drinking Water and Clean Water infrastructure in the state of Indiana.
 - c. This experience includes having funded 734 loans, totaling \$4,262,773,633, as of March 31, 2017. The IFA began administering the SRF Loan Programs in 2005, at which point it inherited the resources and staffing of its predecessor State agencies that had operated the SRF Programs since inception.
 - d. Through an MOU with the Indiana Department of Environmental Management (“**IDEM**”), the IFA employs IDEM staff to complete technical and environmental reviews of SRF projects. IFA staff complete the financial review prior to loan closure and monitors post-closing project and loan compliance. See attached organizational chart.
 - e. All SRF loans are currently in compliance with their loan payment terms. This compliance exists without the necessity of the SRF Loan Programs having to resort to declaring legal defaults and undertake legal proceeding to enforce loan repayment of any SRF loan since the programs’ inception. Other reasons for this positive experience include effective pre-loan closure due diligence, use of consistent lending criteria and legal documentation, and strong management oversight.
 - f. The IFA is the principal public entity responsible for management of state public finance debt in the State of Indiana. Its mission is to oversee State-related debt issuance and provide efficient and effective financing solutions to facilitate state, local government and business investment in Indiana. See <http://www.in.gov/ifa/>.

- g. Although the SRF Loan Programs accept applications on a year round basis, its State Fiscal Year (“**SFY**”) runs from July 1 to June 30; SFY 2018 commences July 1, 2017. On July 1, 2017, the SRF Loan Programs will rank all projects with submitted Preliminary Engineering Reports and it will subsequently create its SFY 2018 Project Priority Lists. Projects ranked (i.e., prioritized) at the top of the Project Priority Lists have priority access to (i.e., have a greater likelihood for receiving) SRF financial assistance. The Project Priority Lists are updated quarterly and as otherwise determined by IFA to be necessary.
 - h. This letter of interest is seeking WIFIA funding to increase SRF’s funding capacity and thereby more completely satisfy needs demonstrated by its Project Priority Lists for SFY 2017. Accordingly, the “project” for WIFIA purposes (consistent with the meaning of 40 CFR § 35.10005 and as described in this letter of intent, including particularly Section D below) should be understood to be a reference to those activities as set forth on the Project Priority Lists of the IFA’s SRF Loan Programs for SFY 2017, as such are regularly supplemented by the IFA consistent with applicable law, which are activities eligible for assistance under section 603(c) of the Federal Water Pollution Control Act or are activities described in section 1452(a)(2) of the Safe Drinking Water Act.
 - i. IFA’s expectation is that the processes and programs represented by its continued operation of the SRF Loan Program will develop and evolve with sub-recipients’ project needs being funded by IFA from WIFIA project disbursements made to IFA (“**WIFIA Funded Improvements**”). By use of its dynamic programmatic processes (rather than being tied to one given specific infrastructure project or a limited group of such projects), any WIFIA funding (if made available) will be integrated in a way that is consistent with and supportive of what IFA currently does (and has historically developed) along with SRF funding to help meet the needs demonstrated by its Project Priority Lists for SFY 2017. Because WIFIA will be funding IFA’s SRF Project Priority Lists, this funding can be allocated and applied by IFA, based on real-time facts and circumstances, to those WIFIA Funded Improvements that result in the most timely and expeditious outcomes. This is further described in this letter of interest.
 - j. Because the “project” is those activities as set forth on the Project Priority Lists of the IFA’s SRF Loan Programs, many responses throughout in this letter of intent include usage of the terms such as “varies,” “statewide,” and other like responses (including where appropriate “not applicable” or “NA”). If further information is desired in respect to any such response, additional antidotal information can be provided by IFA.
11. **If the prospective borrower is not a public entity or in the case of the prospective borrower being a state infrastructure finance authority, the sub-recipient(s) is not a public entity, is the project(s) publicly sponsored? Please explain.**

RESPONSE:

- a. Indiana WIFIA sub-recipients will be required to be SRF-eligible recipients. Cities, towns, counties, regional sewer/water districts, conservancy districts and water authorities are eligible for SRF assistance. Private and not-for-profit facilities are eligible only for drinking water SRF loans.
- b. Indiana WIFIA sub-recipients will be obligated to hold a public hearing to discuss the project and publish a public hearing notice in the local paper, as required by the SRF Loan Program.
- c. All activities as set forth on the Project Priority Lists of the IFA’s SRF Loan Programs are submitted to cross-discipline review as part of the prioritization and programmatic processes of the SRF Loan Programs. Accordingly, they can be viewed as publicly vetted (and if determined to be fundable by the SRF Loan Programs, publicly sponsored).

12. **Indicate (yes or no) whether the prospective borrower is prepared to submit an application within 365 days after receiving an invitation to apply. (Assume invitations to apply will be issued approximately 90 days from the close of the letter interest submission period).**

RESPONSE:

- a. IFA will be the “obligor” of the “secured loan” within the meaning of 40 CFR § 35.10005.
- b. Yes, IFA is prepared to immediately submit an application and can quickly move to complete WIFIA loan closure and funding. To this end, IFA would look to complete WIFIA loan closure and commence funding in the fall of 2017.

SECTION B: PROJECT PLAN

1. **Project Name (for the purposes of identification assign a short name to the project):**

RESPONSE: Indiana Finance Authority 2017 WIFIA Application

2. **Project Website:**

RESPONSE: See <http://www.in.gov/ifa/srf/2373.htm>

- a. This existing website contains the Project Priority Lists for the IFA’s SRF Loan Programs, which as set forth and described above is the WIFIA “project” and as such includes activities eligible for assistance under section 603(c) of the Federal Water Pollution Control Act or are activities described in section 1452(a)(2) of the Safe Drinking Water Act.
- b. The IFA will soon add a link on the IFA web page to the WIFIA Program’s website.

3. **Provide a brief description of the project(s):**

RESPONSE:

- a. See attached 2017 3rd Quarter Project Priority Lists for the Drinking Water and Clean Water SRF Loan Programs for projects applying for financial assistance in SFY 2017, which include project descriptions. As stated above, the Project Priority Lists are updated quarterly, projects are removed once financed and added when applications are received. These Project Priority Lists will be (as updated and supplemented consistent with programmatic processes) the activities ultimately funded by WIFIA assistance. IFA’s current expectation is that the Drinking Water and Clean Water Project Priority Lists will reflect aggregate demand of approximately \$890 million.
- b. WIFIA Funded Improvements will be required to be SRF-eligible projects as described under section 603(c) of the Federal Water Pollution Control Act (33 U.S.C. 1383(c)) and section 1452(a)(2) of the Safe Drinking Water Act (42 U.S.C. 300j-12(a)(2)). The Drinking Water and Clean Water SRF Loan Program Guidelines are attached.
- c. IFA would request WIFIA funding in an amount equal to 49% of its SFY 2017 needs (as such is demonstrated by the Drinking Water and Clean Water Project Priority Lists), presently estimated to result in WIFIA funding of approximately \$436 million.

4. **Describe the project’s purpose (including quantitative or qualitative details on public benefits the project will achieve).**

RESPONSE: WIFIA program requirements appear to mirror SRF Loan Program requirements. Therefore, WIFIA Funded Improvements will be obligated to provide the same benefits required of SRF projects; drinking water projects must provide public health benefits and clean water projects must provide environmental water quality benefits.

5. **Describe the location of the project(s).** RESPONSE: Statewide

6. **Counties projects will serve:** RESPONSE: Statewide

7. **Population served by the projects:**
RESPONSE: population of Indiana is 6,483,802 (2010 US Census)
8. **Total population served by system:** RESPONSE: NA
9. **Indicate the type of project delivery method (i.e. design-build, construction manager at-risk, design-bid-build) that is planned for this project:**
RESPONSE: Varies, but may include design-bid-build or design-build.
10. **Present the project schedule, including the proposed project start and end dates of the planning, design, permitting, and construction or implementation phases.**
RESPONSE: Varies, WIFIA sub-recipients will be required to follow the SRF requirement that borrowers achieve Substantial Completion within 24 months of closing a loan absent unusual and communicated circumstances. The SRF Loan Program estimates having the need to close \$500 million of loans before January 2018.
11. **Provide any analysis (i.e. PER, feasibility studies, preliminary design, siting studies, project plans) completed in support of the project(s). Provide any referenced documents as attachments.**
RESPONSE: WIFIA sub-recipients will be required to follow all SRF requirements related to Preliminary Engineering and permitting.
12. **Present the findings of any alternatives analysis or business cases conducted, if available. Describe the project alternatives considered and the rationale (i.e. lowest capital cost, greater ease of operation, most reliable, fewest environmental impacts, etc.) for the selected alternative, this description should include the technical, managerial, financial, environmental, operations and local decision making rationale for the selected approach, Provide any reference documents as attachments.**
RESPONSE: WIFIA sub-recipients will be required to follow all SRF requirements that include the consideration of alternatives, including the “No Action” alternative. The Preliminary Engineering Reports will be required to also include the rationale for the selection of the chosen alternate.
13. **If available, provide a copy of the system master plan or like document.** RESPONSE: NA
14. **Briefly discuss any other issues that may affect the development and financing of the project.**
RESPONSE:
 - a. None are identified at this time as negatively affecting the IFA, the SRF Programs or any SRF or WIFIA sub-recipient.
 - b. However, IFA does foresee many other positives should the requested WIFIA assistance be granted, which could be expected to include:
 - i. Utilizing IFA’s existing SRF’s staff, systems and procedures from cradle to grave to manage, oversee, evaluate, prioritize, structure financial assistance, monitor project design and construction, assure loan repayments, etc. This will eliminate and relieve EPA (and its WIFIA staff) of the burden for managing such matters, much the same way that IFA now partners and collaborates with Region 5 on the SRF Programs. Similar to those in use for the SRF Loan Programs and its projects, IFA would expect such matters to be set out in an operating agreement or MOU between IFA and WIFIA. This would be expected to include periodic reporting to EPA and the public as to the improvements funded by WIFIA.

- ii. Because IFA/SRF has existing relationships across the state of Indiana with Indiana communities, public officials, professional groups, engineering firms, financial and legal professionals, environmental groups, etc., IFA/SRF is best positioned to effectively manage all aspects of the WIFIA sub-recipients' projects. Additionally, there will not be any significant added administrative burden or expense on IFA/SRF because it will already be the SRF funding source for 51% of the total project and, in many instances, IFA/SRF already has an ongoing, existing (past) lending relationship with many potential sub-recipients across the state.
 - iii. Because of similarities as to what is required for SRF Loan Program projects and WIFIA Funded Improvements, there is expected to be a seamless and timely addressing of WIFIA requirements (such as those related to the use of American Iron and Steel, Davis-Bacon wages, National Environment Policy Act, floodplain management, National Historic Preservation Act, Endangered Species Act, Civil Rights Acts, etc.). By working a project through two programs having common origins and requirements (as well as a developed and known compliance structure), time and expenses can be expected to be saved (both on the IFA/SRF/WIFIA side as well as by sub-recipients); quality compliance will be better assured; and common goals will be more effectively and timely achieved.
15. **Describe the authorizing action (e.g. local vote, board vote, ordinance) that would need to occur in order to enter into a loan agreement with the WIFIA program.**
RESPONSE: The IFA Board will be obligated to approve the loan closings of all potential WIFIA sub-recipients, as it does for all SRF participants. The IFA Board will also authorize the plan of finance and related actions.
16. **Present the environmental review process and status of such for the project(s).**
RESPONSE: As with SRF Loan Program projects, WIFIA Funded Improvements will be required to undergo the State Environmental Review Process, which is an EPA-approved NEPA-like process. The State Environmental Review Process includes review of flood risk and floodplain management.
17. **Describe the status of any additional permits and approvals that the project(s) may require. If applicable, describe community outreach efforts conducted to date and planned for the project(s).**
RESPONSE: Varies but WIFIA sub-recipients will be required to follow the SRF requirement that applicants publish a public hearing notice in the local paper and hold a public hearing to discuss the project.
18. **Indicate if the project is for new construction, substantial improvement or to address substantial damage to structure and facilities as described in Executive Order 13690 and Draft Guidelines for Implementing E.O. 11988, Floodplain Management, and E.O. 13690 (“Guidelines”). See WIFIA program handbook, section 2.7.4, for more information.**
RESPONSE: Varies
19. **Indicate if the project is located in close to, or could impact the 100-year floodplain.**
RESPONSE: Varies
20. **In known, indicate if the project is in the expanded horizontal floodplain as described in E.O. 13690 and the Guidelines. If necessary, will the project be made resilient to the higher vertical elevation as described in E.O. 13690 and the Guidelines?**
RESPONSE: Varies but as with SRF Loan Program projects, WIFIA Funded Improvements will be required to undergo the State Environmental Review Process, which is an EPA-approved NEPA-like process.

SECTION C: PROJECT OPERATIONS AND MAINTENANCE PLAN

1. **Provide the estimated useful life of the project(s) and describe the underlying assumptions. In determining the useful life of the project(s), please consider the useful economic life of the assets(s) to be financed.**

RESPONSE: Varies but WIFIA sub-recipients will be obligated to follow the SRF Loan Program policy that the useful life of the financed assets must be equal to or exceed the term of the bonds.

2. **Provide the project(s)'s operation and maintenance plan, including sources of revenue to finance those activities, any performance guarantees, and major maintenance reserves. A preliminary or draft plan is acceptable.**

RESPONSE: Varies but WIFIA sub-recipients will be required to follow the SRF Loan Program Financial Due Diligence requirements. See attached Financial Due Diligence checklist.

3. **Describe any contractual arrangements that may impact the operation of the project(s).**

RESPONSE: Varies

SECTION D: FINANCING PLAN

RESPONSE: Reference is made to <http://emma.msrb.org/ES829742-ES650842-ES1045920.pdf> (“**SRF Official Statement**”) for summary and detailed descriptions of the IFA’s Bonds (including security, sources of payment and credit matters), SRF Indentures, Bond Indenture and SRF Programs. The SRF Official Statement includes use of capitalized defined words (and four additional defined terms are set out immediately below) that serve to provide greater specificity and understanding to this Section D.

“**IFA’s Type A (Leveraged and/or State Match) Bonds**” – refers to revenue bonds of the IFA, the proceeds of which are deposited in the State’s Drinking Water Fund or Wastewater Fund for use in connection with the related SRF Loan Programs (including to fund Eligible Projects of Participants and other permitted purposes under the Clean Water Act and Safe Drinking Water Act) and as defined in the SRF Official Statement as “Bonds.” The IFA currently has 19 separate Series of these Bonds outstanding. For WIFIA’s purposes, these Bonds serve as “project obligations” within the meaning of 40 CFR § 35.10005.

“**IFA’s Type B (WIFIA) Bonds**” – these will also be revenue bonds of the IFA, the proceeds of which are deposited in the State’s Drinking Water Fund or Wastewater Fund for use in connection with the related SRF Programs (and particularly will be used to fund Eligible Projects of Participants under the Clean Water Act, the Safe Drinking Water Act, and/or the Water Infrastructure Finance and Innovation Act of 2014) and as defined in the SRF Official Statement as “Subordinate Bonds.” The IFA currently has no Subordinate Bonds outstanding under its indentures, nor are there any Subordinate Bonds outstanding under any indenture of an Alternative Bond Issuer. For WIFIA’s purposes, these Bonds will serve as the “secured loan” within the meaning of 40 CFR § 35.10005.

“**Participant Loan(s)**” – funding as made available to a Participant by the IFA through the SRF Loan Programs to undertake and construct Eligible Projects, which assistance is repaid by a Participant and are secured in a manner acceptable to the IFA consistent with the requirements of its SRF Loan Programs. See the caption “SRF PROGRAMS—Participant Loans” in the SRF Official Statement for additional information.

“WIFIA Project” consistent with the meaning of 40 CFR § 35.10005 and as used in this Section D, is a reference to those activities as set forth on the Project Priority Lists of the IFA’s SRF Programs, as such are regularly supplemented by the IFA consistent with applicable law, which are activities eligible for assistance under section 603(c) of the Federal Water Pollution Control Act or are activities described in section 1452(a)(2) of the Safe Drinking Water Act. See the caption “SRF PROGRAMS—Eligibility and Project Evaluation” in the SRF Official Statement for additional information.

Indiana’s Expectations for Integrating WIFIA Funding into the IFA’s SRF Loan Programs. The IFA’s main objective is to add a major additional project funding source for the SRF Programs (and particularly the WIFIA Project). This will ultimately create additional lending capacity and preserve all existing benefits of the SRF Loan Programs, such that use of WIFIA funding should allow IFA to meet prioritized project needs that would otherwise go underserved or unmet. To that end, the entire Project Priority Lists of the IFA’s SRF Loan Programs is to be understood as the “project” for WIFIA purposes within the meaning of 40 CFR §35.10005 and the following are key elements supporting IFA’s Plan of Finance:

- A. Following integration of WIFIA funding, the IFA expects to be able to continue to serve Participant needs through its SRF Loan Programs, which is principally accomplished by making Participant Loans available for prioritized Eligible Projects (as set forth on the Project Priority Lists of the IFA’s SRF Loan Programs) from the proceeds of the IFA’s Type A (Leveraged and/or State Match) Bonds and/or its Equity Accounts held under its SRF Indentures. No aspect of WIFIA funding would be expected to be undertaken in a way that undermines or lessens existing SRF Loan Program funding (rather it will be done to increase the SRF Loan Programs’ funding opportunities).
- B. By depositing proceeds of the IFA’s Type B (WIFIA) Bonds in the State’s Drinking Water Fund or Wastewater Fund, such proceeds will be applied to several Eligible Projects named as part of the WIFIA Project and, consistent with federal SRF law, such Bonds may be repaid from the SRF Program’s cash flows (including repayment on existing and new Participant Loans). Because of common requirements between the SRF Loan Programs and WIFIA, any Eligible Project that IFA identifies will meet applicable requirements of WIFIA including being a State priority. Eligible Projects identified as of any closing of IFA’s Type B (WIFIA) Bonds (i.e., the making of the “secured loan” within the meaning of 40 CFR § 35.10005), will remain open to SRF Loan Program priorities, and thereby allow for updating by IFA to meet aggregate funding needs across all priorities, to assure funding meets readiness expectations, and to assure all other important SRF and WIFIA objectives are advanced and observed in a timely and expeditious manner.
- C. Without WIFIA funding, the aggregate amounts available for Eligible Projects (as set forth on the Project Priority Lists of the IFA’s SRF Loan Programs) would be constrained by reason of (a) annual limits for any one Participant (even when it scores at the highest priority) pursuant to SRF Loan Program constraints on subsidized assistance and (b) aggregate annual assistance limits for all Eligible Projects (due to inherent limits in the SRF leveraging structure).

- D. WIFIA funding would open the ability of the IFA to provide Participant Loans that spread debt costs related to infrastructure over longer periods (particularly with assets with long useful lives). The IFA would expect to allow up to 35 year Participant Loans by means of IFA's Type B (WIFIA) Bonds' principal repayment being structured in the later years (e.g., in early 20 something years out into the 35th year), and with earlier funding weighted toward repay IFA's Type A (Leveraged and/or State Match) Bonds and/or SRF Equity Accounts. This will best assure the lowest total cost of funds across all maturities, with the added benefit of WIFIA terms having preserved more flexible refinancing opportunities should bond market metrics shift over time opening any savings opportunities.
- E. Because the WIFIA Project is the aggregate Project Priority Lists of the IFA for its SRF Loan Programs, WIFIA funding is not a focus on any one Eligible Project (or limited group of them), but rather the aggregate funding of the SRF Programs' prioritized lists. By the time an Eligible Project is included on the SRF Loan Programs' prioritized lists, each has been vetted through the IFA's preliminary engineering process and ranked, resulting in IFA having confidence funding sourced in part to WIFIA will be timely committed and applied to constructing infrastructure. This is further assured because under standard practices the SRF Loan Programs prior to committing to (i.e., closing) a Participant Loan, all or substantial portion of the Eligible Project must have been bid so that construction is ready to proceed.
- F. IFA's Type A (Leveraged and/or State Match) Bonds and/or SRF Equity Accounts will be available to fund the remainder of the WIFIA Project funding needs, which in aggregate will be at least 51% of the total identified funding in comparison to the maximum 49% amount of the total funding being sourced to the IFA's Type B (WIFIA) Bonds. The available funding capacity of Indiana's SRF Loan Programs exceed what will be necessary to meet the 51% SRF and 49% WIFIA funding ratio, relative to IFA's request for a WIFIA funding amount of \$436 million. As of February 28, 2017, IFA's SRF Equity Accounts held uncommitted balances in excess of \$436 million. Based on past experience, proceeds of new IFA's Type A (Leveraged and/or State Match) Bonds could made available (if necessary) in less than 60 days. Accordingly EPA is assured the IFA has the necessary resources and experience to move from this application concept to commencement of Eligible Project funding within a short period of time.
- G. IFA's Type B (WIFIA) Bonds will be payable from the same sources of payment and be secured by the same security as the IFA's Type A (Leveraged and/or State Match) Bonds, provided that their payment rights will be made subordinate to the payment rights of the IFA's Type A (Leveraged and/or State Match) Bonds. See the caption "SECURITY AND SOURCES OF PAYMENT" in the SRF Official Statement for additional information.
- H. By being payable from those same sources of payment (including accumulated assets held in the SRF Funds), the Subordinate Bonds will have the credit advantages that result from payments rights and security sourced to a large, diverse pool of seasoned and new Participant Loans. See the caption "SRF PROGRAMS—Funding Participant Loans and Future Capitalization" in the SRF Official Statement for additional information. To this end the IFA's Type A (Leveraged and/or State Match) Bonds are consistently rated in the highest rating category. See the caption "RATINGS" in the SRF Official Statement and the attached SRF Rating Letters related to its Bonds for additional information. The IFA proposes that the WIFIA program should be able to gain its desired level of credit assurance by looking to the foregoing without having to incur the added time and expense of undertaking a unique credit rating for the IFA's Type B (WIFIA) Bonds.

- I. By being subordinate, the SRF Loan Programs will assure the IFA's Type A (Leveraged and/or State Match) Bonds can continue to be issued to fund up the maximum amount of Eligible Projects that can be supported consistent with maintaining its high credit ratings (presently AAA/Aaa). Preserving the SRF Loan Programs as a funding source for Eligible Projects in the State of Indiana is an IFA paramount expectation. As such, the IFA looks to graft WIFIA funding onto the SRF Loan Programs in a manner that does not impact funding opportunities available from the IFA's Type A (Leveraged and/or State Match) Bonds (both prior and future ones). Hence, such a subordinate concept is an important proposed element of this letter of interest because of the significant increase in the lending capacity it will allow IFA to accomplish, in aggregate, through its SRF Loan Program.
- J. Because existing Indiana law does not permit the IFA (as the "obligor" of the "secured loan" within the meaning of 40 CFR § 35.10005) to seek discharge of its indebtedness under the Bankruptcy Code, the subordinate rights of the IFA's Type B (WIFIA) Bonds would not be expected to be subjected to 40 CFR § 35.10010 (i) concerns, which provides that "A secured loan will not be subordinated to the claims of any holder of project obligations in the event of bankruptcy, insolvency, or liquidation." Such 40 CFR § 35.10010 (i) provision will be expected to be mutually affirmed as only applicability in the event Indiana law is ever modified to permit the IFA to seek discharge of its indebtedness under the Bankruptcy Code, an unlikely circumstance.
- K. In summary, the IFA does not view WIFIA as a substitute for continuing SRF funding (particularly as such becomes available through future SRF capitalization grants), but rather IFA's plan of finance is viewed as a potentially significant increase to SRF capacity and its funding of Eligible Projects. WIFIA's interest rates are not expected to be lower than subsidized SRF interest rates offered through the SRF Loan Programs. Because there is no cost of interest to carry on the SRF capitalization grants to the SRF Loan Programs, its loaned dollars generate interest earnings that SRF retains to support payment of additional IFA's Type A (Leveraged and/or State Match) Bonds, and thereby makes more Participant Loans available at subsidized rates (i.e., leveraged loans often are in excess of 2x). The SRF Loan Program capitalization grants also make available some level of grant project funding (visa via additional subsidization), which often is a necessary inducement for a Participant (as a meaningful push) to undertake an Eligible Project. Finally, SRF capitalization grants also fund program administrative costs and other important set-aside purposes. Accordingly, working to structure WIFIA into the Indiana SRF Loan Program will serve as an important pilot opportunity to demonstrate nationally that WIFIA funding and ongoing SRF funding are complementary and additive concepts, and do not have to be considered as competing funding vehicles.

SECTION E: SELECTION CRITERIA

1. **National or regional significance: describe the extent to which the project is nationally or regionally significant, with respect to the generation of economic and public health benefits.**

RESPONSE:

- a. As of March 31, 2017, the Indiana Drinking Water (DW) and Clean Water (CW) SRF Loan Programs have closed 734 loans, totaling \$4,262,773,633. See attached DWSRF and CWSRF Loan Program maps, for State Fiscal Year ending June 30, 2016, which demonstrate the state-wide significance of the programs. Savings realized by SRF participants over the last five years total \$283,535,279, as determined by comparing actual gross debt service for SRF loans closed during the period against estimated gross debt service on such loans had those loans been completed through non-SRF available sources.
 - b. Projects funded by the DWSRF must provide public health benefits and projects funded by the CWSRF must provide environmental water quality benefits. Safe drinking water and proper sanitation systems are crucial to fostering economic development in Indiana communities. WIFIA Funded Improvements would be required to provide the same kind of public health and environmental water quality benefits, which indirectly foster economic development opportunities. The foregoing represents an allocation of a limited resource (namely funding through the SRF Loan Programs) in a systematic manner to assure it is applied in comprehensive, prioritized manner, largely based on vetting and prioritizing that starts with the Drinking Water and Clean Water Project Priority Lists. As can be seen from the enclosed historical DWSRF and CWSRF Loan Program completed project maps, the SRF Programs reach across the State and can be expected therefore to demonstrate significance state-wide benefits.
 - c. In the same manner, by investing in needs based allocations (as represented by the current SRF Drinking Water and Clean Water Project Priority Lists), any financial assistance made available to IFA through WIFIA in response to this letter of interest will likewise be an allocation of a limited resource undertaken in a systematic manner to assure it is applied in a comprehensive, prioritized manner, using a statewide / regional comparison of needs. The Indiana SRF Programs compares needs and benefits across the state (and it can be expected to include assessing effects on and benefits to downstream watercourses originating from state of Indiana sited activities). This type of vetting best assure WIFIA sub-recipients' projects achieve consistently high outcomes that can be expected to generate significant positive impacts to regional or national economics and/or public health benefits.
 - d. Additionally, by making financial assistance available to IFA through WIFIA in response to this letter of interest, a template will be established to serve as an important pilot opportunity to demonstrate nationally that WIFIA funding and ongoing SRF funding are complementary and additive concepts, and do not have to be considered as competing funding vehicles.
 - e. Finally, because of the Indiana SRF Programs' strong credit quality, this should be achievable without resulting in any significant commitment of limited WIFIA appropriations to fund any related loan loss reserves (tied to presumed default rates on WIFIA loan to the IFA). Accordingly, funding activities as described in this letter of intent should not materially reduce the aggregate amount of WIFIA funding available to other WIFIA projects of lesser credit quality than IFA's, nor should WIFIA staff be expected to have to commit significant WIFIA staff time to managing activities as described in this letter of intent because of IFA/SRF's significant experience in these activities.
2. **Enables project to proceed earlier: describe the likelihood that assistance under this subtitle would enable the project to proceed at an earlier date than the project would otherwise be able to proceed.**

RESPONSE:

- a. Typically, faced with demand for financial assistance in the amount currently estimated for the Drinking Water and Clean Water Project Priority Lists for SFY 2017, SRF would expect to establish a SFY 2018 fundable range of \$35 million for Drinking Water projects and \$200 million for Clean Water projects. With the increase in funding capacity resulting from the WIFIA request, IFA believes it would be able to satisfy the entire current financial assistance need (as requested by Indiana communities and as is currently estimated to be shown on the Drinking Water and Clean Water Project Priority Lists). Accordingly, IFA expects Indiana communities would not be required to wait for possible funding commitments until later SRF funding cycles. IFA would strive to enable significantly more Indiana communities to commence funding their needed projects within the SFY 2018 and the following SFY.
 - b. Additionally, by making up to 35 year loan amortizations available, it is expected by IFA that many WIFIA Funded Improvements will occur significantly sooner because monthly system user rates can be managed to acceptable lower levels, making decisions to proceed affordable. From experience and SRF community's requests, IFA knows that many communities desire and seek out loan amortization in excess of the standard SRF 20 years. In many instances, such communities have not proceeded with projects due to an inability to afford user rate increases. A certain number of such projects may never otherwise occur but for having access to such longer amortization terms. WIFIA will provide this lending niche to what IFA can offer WIFIA sub-recipients' projects.
3. **New or innovation approaches: describe the extent to which the project uses new or innovative approaches such as the use of energy efficient parts and systems, or the use of renewable or alternate sources of energy; green infrastructure; and the development of alternate sources of drinking water through aquifer recharge, water recycling or desalination.**

RESPONSE:

- a. WIFIA sub-recipients will be strongly encouraged to participate in the SRF Loan Program's Green Project Reserve Sustainability Incentive Program, which enables eligible communities to receive priority ranking on the Project Priority List and an interest rate break when eligible energy efficient, water conservation, and environmentally-innovative components are incorporated in its project. In the past three SFYs, SRF Loan Program participants have incorporated over \$45 million of Green Project Reserve eligible components. See attached fact sheet.
4. **Protection against extreme weather events: describe the extent to which the project protects against extreme weather events, such as floods or hurricanes, as well as the impacts of climate change.**

RESPONSE:

- a. The SRF Loan Program recently initiated its Climate and Extreme Weather Resiliency Program, whereby participants that incorporate eligible components or activities, which guard against extreme weather events, can receive priority ranking on the Project Priority List and an interest rate break. One recent SRF project included nearly \$200,000 of improvements to make their utility more climate resilient. Similar to SRF Loan Program participants, WIFIA sub-recipients will be encouraged to protect against extreme weather events as well.

- b. Similar to SRF Loan Program projects, WIFIA Funded Improvements will be expected to meet State and local standards for flood risk and floodplain management as part of undergoing the State Environmental Review Process (which includes standards related to flood risk and floodplain management and which is an EPA-approved NEPA-like process).

5. **Maintain or protect the environment or public health: describe the extent to which the project helps maintain or protect the environment or public health.**

RESPONSE:

- a. Similar to SRF Loan Program projects, WIFIA Funded Improvements will be required to provide either public health or environmental water quality benefits.
- b. Vetting and priority scoring by means the SRF Drinking Water and Clean Water Project Priority Lists will best assure WIFIA sub-recipients' projects achieve consistently high findings of generating significant positive impacts to regional or national economic and/or public health benefits including resolving any public health or environmental violations or enforcement actions.

6. **Serves energy exploration or production areas: describe the extent to which the project serves regions with significant energy exploration, development, or production areas**

RESPONSE:

- a. Energy exploration is not a primary focus of IFA's SRF Loan Programs. However, the DWSRF Loan Program has provided financial assistance to several communities that provide water to Ethanol production facilities. In addition, the CWSRF Loan Program provided financial assistance for the construction of a Fats, Oils, and Grease receiving facility and a cogeneration system. The Fats, Oils, and Grease facility produces methane, which is burned by the cogeneration system to produce energy and heat in the form of hot water. The system has reduced the participant's electrical costs as well as the amount of natural gas needed to heat the digesters.
- b. WIFIA Funded Improvements may also benefit energy production areas when financial assistance is provided to utilities that serve energy production facilities or construct their own.

7. **Serves regions with water resource challenges: describe the extent to which the project serves regions with significant water resource challenges, including the need to address water quality concerns in areas of regional, national, or international significance; water quantity concerns related to groundwater, surface water or other resources; significant flood risk; water resources challenges identified in existing regional, state, or multistate agreements; and water resources with exceptional recreational value or ecological importance.**

RESPONSE:

- a. Similar to SRF Loan Program projects, WIFIA Funded Improvements will address state-wide water quality needs, which may include groundwater contaminated by petroleum, groundwater under the direct influence of surface water, finished water quality issues (e.g. TTHM and Disinfection Byproducts) caused by surface water quality issues, water quality issues caused by failed residential septic systems and/or combined sewer overflows.
- b. In 2016, the IFA undertook a comprehensive state-wide study and analysis of drinking water infrastructure needs and water audit of all public water utilities titled "Evaluation of Indiana's Water Utilities" (the "**2016 Water Evaluation and Report**"); see attached. Findings in the 2016 Water Evaluation and Report included:
 - i. \$2.3 Billion is needed immediately to remedy Indiana's aging infrastructure.

- ii. \$815 Million is needed annually to maintain infrastructure upgrades.
 - iii. Over \$50 million gallons of water is lost each year at a cost of over \$54 Million.
 - iv. There is no obvious lead agency for State-wide water management.
 - v. A comprehensive water plan is needed that includes both supply and demand needs.
- a. In response to the 2016 Water Evaluation and Report, a legislative initiative was commenced and is ongoing to identify and consider actions to address the 2016 Water Evaluation and Report findings and related matters.
 - b. The IFA anticipates that need for additional funding sources (like WIFIA) will accelerate over the foreseeable future. Making progress to address the findings in the 2016 Water Evaluation and Report will require new tools and resources, with WIFIA being one that IFA considers to offer very promising possibilities in relation to the identified water resource challenges.
- 8. Addresses identified priorities: describe the extent to which the project addresses identified municipal, state, or regional priorities.**
- RESPONSE:
- a. Along with SRF Loan Program projects, WIFIA Funded Improvements will be ranked on the DWSRF and CWSRF Project Priority Lists according to a publically-reviewed scoring criteria.
 - b. As noted in 2016 Water Evaluation and Report the water resource challenges are not meet by any one project. IFA has concluded that such challenges are best addressed by a collective review and prioritization of sub-recipient projects, which is what occurs through the development of the DWSRF and CWSRF Project Priority Lists.
- 9. Financing plan: describe the extent to which the project financing plan includes public or private financing.**
- RESPONSE:
- a. The financing plan utilizes a combination SRF Loan Program assistance (both lendable funding and SRF staff experience/expertise) and WIFIA funding assistance. Existing SRF resources are expected to be sufficient to fully fund the 51% component of total funding which is required to be from a non-WIFIA sourced.
 - b. SRF funding is not expected to be sourced to funds made directly available by EPA SRF capitalization grants related to any project associated with this letter of interest.
 - c. No funding is expected or required to be made available by or through any private finance mechanism related to any project associated with this letter of interest.
- 10. Reduction of Federal assistance: describe the extent to which assistance under this subtitle reduces the contribution of Federal assistance to the project.**
- RESPONSE:
- a. No federal assistance that is available for any project associated with this letter of interest is expected to be reduced.
 - b. This letter of interest is expected to expand the aggregate volume of sub-recipient projects undertaken in the State of Indiana.
 - c. Because SRF funding is not expected to be sourced to funds made directly available by EPA SRF capitalization grants related to any project associated with this letter of interest, applying WIFIA funding for sub-recipient projects will increase federal funding for each of them.

- 11. Readiness to proceed: describe the readiness of the project to proceed toward development, including a demonstration by the prospective borrower that there is a reasonable expectation that the contracting process for construction of the project can commence by not later than 90 days after the date on which a Federal credit instrument is obligated for the project.**

RESPONSE:

- a. WIFIA sub-recipients will be required to follow the SRF requirement that borrowers have obtained needed construction permits and bids prior to closing a loan. Once a loan is closed, borrowers are required to have loan drawn down and achieve Substantial Completion within 24 months, absent unusual and communicated circumstances.
 - b. Because of similarities as to what is required for SRF Loan Program projects and WIFIA Funded Improvements, there is expected to be a seamless and timely addressing of WIFIA requirements (such as those related to the use of American Iron and Steel, Davis-Bacon wages, National Environment Policy Act, floodplain management, National Historic Preservation Act, Endangered Species Act, Civil Rights Acts, etc.). By working a project through two programs having common origins and requirements (as well as a developed and known compliance structure), time and expenses can be saved (both on the IFA/SRF/WIFIA side as well as by sub-recipients); quality compliance will be better assured; and common goals will be more effectively and timely achieved.
- 12. Repair, rehabilitation or replacement: describe the extent to which the project addresses needs for repair, rehabilitation or replacement of a treatment works, community water system, or aging water distribution or wastewater collection system;**

RESPONSE:

- a. Varies, but during the course of project review, SRF technical staff ask if repair, rehabilitation or replacement is a viable option when new facilities are planned. WIFIA sub-recipients will be obligated to follow the SRF Preliminary Engineering Report preparation requirements and technical review process.
 - b. As also required of SRF borrowers, WIFIA sub-recipients will be required to agree to the following contractual commitments: to own, operate and maintain the WIFIA Funded Improvements for their useful life, or cause them to be operated and maintained for their useful life; at all times maintain the WIFIA Funded Improvements in good condition and operate it in an efficient manner and at a reasonable cost; and not sell, transfer, lease or otherwise encumber the WIFIA Funded Improvements or any portion thereof or any interest therein without the prior written consent of the IFA.
 - c. Also Clean Water SRF assistance Participant's must agree to develop and implement a Fiscal Sustainability Plan, which means in connection with a project such will provide for the repair, replacement, or expansion of an existing treatment works, a plan that is consistent with SRF Policy Guidelines including applicable requirements of the Clean Water SRF Act and includes (a) an inventory of critical assets that are a part of the treatment works; (b) an evaluation of the condition and performance of inventoried assets or asset groupings; (c) a certification that the Participant has evaluated and will be implementing water and energy conservation efforts as part of the plan; and (d) a plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities.
- 13. Economically stressed communities: describe the extent to which the project serves economically stressed communities, or pockets of economically stressed rate payers within otherwise non-economically stressed communities.**

RESPONSE:

- a. Making up to 35 year loan amortizations available to WIFIA sub-recipients will be a major opportunity because monthly system user rates can be managed to much lower levels. Without such an opportunity, many economically stressed communities will not move forward with vital and necessary improvements.
- b. Similar to SRF Loan Program participants, WIFIA sub-recipients will be assessed according to State Affordability Criteria, which is an evaluation of User Rates and Median Household Income. This criteria could be applied in this context.

SECTION F: CONTACT INFORMATION

1. Primary point of contact

RESPONSE:

- a. **James McGoff**
 - b. **COO and Director of Environmental Programs**
 - c. **Indiana Finance Authority**
 - d. **One North Capitol, Suite 900, Indianapolis, IN 46204**
 - e. **Phone: 317-232-2972**
 - f. **Email: jmcgoff@ifa.in.gov**
2. Secondary point of contact

RESPONSE:

- a. **Bill Harkins**
- b. **SRF Program Director**
- c. **Indiana Finance Authority**
- d. **100 N. Senate Avenue, Room 1275, Indianapolis IN 46204**
- e. **Phone: 317-234-4862**
- f. **Email: wharkins@ifa.in.gov**

SECTION G: CERTIFICATIONS

RESPONSE: IFA, as the prospective “obligor” of the “secured loan” within the meaning of 40 CFR § 35.10005, hereby certifies that:

1. It is not currently or in the last three years it has not been:
 - a. debarred, suspended, or declared ineligible from participating in any Federal program;
 - b. formally proposed for debarment, with a final determination still pending;
 - c. voluntarily excluded from participation in a Federal transaction; or
 - d. indicted, convicted, or had a civil judgment rendered against it for any of the offenses listed in the WIFIA Regulations.
2. It is not currently in default or delinquent on any debt or loans provided or guaranteed by the Federal Government.
3. It has no subsidiaries or affiliates.
4. The facts stated and the certifications and representations made in the letter of interest are true.
5. The undersigned is an authorized representative of the IFA, the interested party herein.

**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest**

April 7, 2017

Person Making the Section G. Certifications:

**James McGoff
COO and Director of Environmental Programs
Indiana Finance Authority
One North Capitol, Suite 900, Indianapolis, IN 46204
Phone: 317-232-2972
Email: jmcgoff@ifa.in.gov**

INDIANA FINANCE AUTHORITY

BY: _____

James McGoff, COO and Director of Environmental Programs

Date Signed: _____

April 7, 2017

**SECTION H: NOTIFICATION OF STATE INFRASTRUCTURE FINANCING
AUTHORITY**

RESPONSE: The IFA is the Infrastructure Financing Authority for the State of Indiana, and thus notification is not applicable.

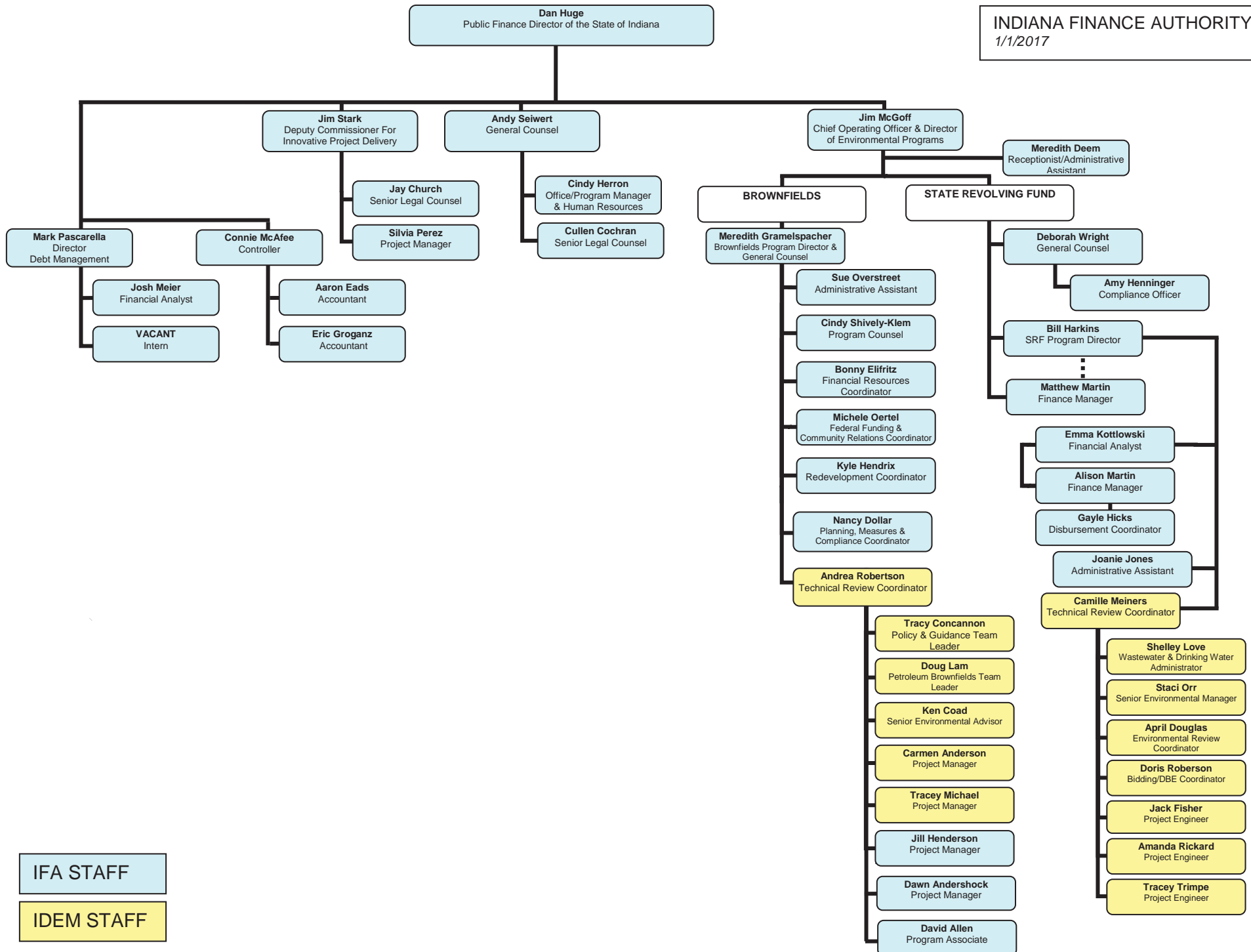
List of Attachments:

1. IFA Organizational Chart
2. 2017 3rd Quarter Project Priority List for Drinking Water SRF Loan Program
3. 2017 3rd Quarter Project Priority List (Large Systems) for Clean Water SRF Loan Program
4. 2017 3rd Quarter Project Priority List (Small Systems) for Clean Water SRF Loan Program
5. Drinking Water SRF Loan Program Guidelines
6. Clean Water SRF Loan Program Guidelines
7. Financial Due Diligence Checklist
8. SRF Rating Letters related to its Bonds
9. Drinking Water SRF Loan Program Map of Projects
10. Clean Water SRF Loan Program Map of Projects
11. GPR Fact Sheet
12. Evaluation of Indiana's Water Utilities

List of Items Incorporated by Reference:

- A. Description of IFA: www.in.gov/ifa
- B. Description of SRF Programs: <http://www.in.gov/ifa/srf/2373.htm>
- C. SRF Official Statement related to its Bonds (including most current financial statement):
<http://emma.msrb.org/ES829742-ES650842-ES1045920.pdf>

**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest
Attachment: IFA Organizational Chart**



IFA STAFF

IDEM STAFF

Indiana Finance Authority

US EPA WIFIA Program

Letter of Interest

**Attachment: 2017 3rd Quarter Project Priority List for
Drinking Water SRF Loan Program**

INDIANA DRINKING WATER STATE REVOLVING FUND (DWSRF) LOAN PROGRAM
2017 Project Priority List, January 3, 2017, 3rd Quarter
Projects Applying for Financial Assistance (20 Year Loan) In State Fiscal Year 2017 (July 1, 2016- June 30, 2017)

Preliminary Engineering Reports

PPL Rank ¹	PPL Score	Participant	MHI ^{2,3}	Population	PWSID #	SRF Project No.	Project Description	EPA's Sustain-ability Policy Category ⁴	Green Project Reserve Cost	Green Project Reserve Category ⁵	Post-Project / Current User Rate (per 4,000 gallons) ²	Total Project Cost	Cumulative DWSRF Request
1	87	East Chicago	\$27,215	29,698	5245012	DW161645 04	Age, capacity and condition of system require improvements to the collection system and a new storage tank.	1	TBD	TBD	\$16	\$16,545,000	\$16,545,000
1	80	Cayuga	\$46,953	1,867	5283002	DW161283 02	Nitrates in wells require connection to a municipal water system.	1	TBD	TBD	\$22	\$750,000	\$17,295,000
2	37	Andrews	\$33,333	1,149	5235001	DW160935 01	Age of plant requires replacement.	1	TBD	TBD	\$67	\$2,739,000	\$20,034,000
3	36	Jasonville	\$27,569	4,147	5228004	DW150728 01	Wells in the town are under the influence of groundwater. A new well field and the addition of disinfection to the WTP are proposed.	2,3	\$0	NA	\$36	\$1,750,000	\$21,784,000
4	17	Ligonier	\$37,256	4,357	5257010	DW140957 01	The condition of the WTP is poor due to age. The project includes updates to the WTP, SCADA and improvements to the distribution system.	1,2	TBD	WE	\$29	\$2,611,893	\$24,395,893
5	17	Hillsdale Water Corporation	\$42,524	742	5283007	DW151483 01	Daily demand currently exceeds supply. Well rehabilitation and a new tower will be included. Age of the plant and water odor and color also concern citizens. Modifications at the plant will correct this problem.	1,2,3	TBD	TBD	\$54	\$1,613,000	\$26,008,893
6	17	Cordry-Sweetwater CD	\$57,254	3,957	5207004	DW160807 01	Age of current pipe requires replacement in areas. Age of storage tank requires painting of interior and exterior. Site security will add fencing. Meters and a portable generator will also be added.	1, 2	TBD	TBD	TBD	\$1,600,000	\$27,608,893
7	17	South Whitley	\$46,094	1,751	5292007	DW161492 01	The town does not have a water filtration plant. A new plant and improvements to the undersized water mains are needed.	1,2	TBD	TBD	\$38	\$2,451,384	\$30,060,277
8	16	Shirley	\$36,538	1,080	5233013	DW150330 01	Water loss and security issues. Pipe replacement, new hydrants and valves, new generator and new fence.	1, 2	TBD	EE, GI	\$31	\$721,855	\$30,782,132
9	16	Montezuma	\$39,167	1,022	5261005	DW151561 01	The distribution system will be upgraded due to age and failing components.	1,2,3	TBD	TBD	\$40	\$1,223,000	\$32,005,132
10	16	Atlanta	\$47,083	760	5229002	DW160329 01	The existing system is aged and undersized. Lines will be looped, replaced or upsized.	1,2,3	TBD	TBD	\$58	\$1,380,290	\$33,385,422
11	16	Tell City	\$42,840	9,315	5262004	DW170433 02	The existing system is aged and requires updates to the WTP, pump station, and storage tank. Meters will also be replaced.	1	TBD	TBD	\$42	\$2,088,630	\$35,474,052
12	14	Greentown Water Authority	\$43,631	2,415	5234006	DW151134 01	Age of the system is causing outdated equipment to not perform as designed. Wells, treatment plant, distribution system and tanks will be repaired/replaced as needed.	1,2,3	TBD	TBD	\$32	\$1,114,000	\$36,588,052
13	14	LaGrange County RUD	\$40,833	2,625	5244001	DW170344 01	Age of the Travel Plaza infrastructure requires updating. Plant abandonment and regionalization with LCRUD.	1	TBD	TBD	TBD	\$2,913,600	\$39,501,652
14	13	Ingalls	\$52,813	2,390	5248012	DW161548 02	Age of system requires improvements and/or replacement of wells, water department building and vacuum truck.	1	TBD	TBD	TBD	\$1,396,000	\$40,897,652
15	12	Charlestown	\$43,046	7,802	5210003	DW161310 02	Age of system contributes to poor circulation in the distribution lines. Improvements include looping of lines, new line to storage tank and storage tank rehabilitation.	1	TBD	TBD	\$18	\$3,000,000	\$43,897,652
16	11	Eastern Bartholomew Water Corporation	\$54,165	13,270	5203004	DW160403 01	Age of plant #1 requires replacement. A new maintenance building is included.	1	TBD	TBD	TBD	\$7,670,000	\$51,567,652
17	9	Mount Vernon	\$44,485	8,912	5265006	DW150165 02	Individual wells failing. Connect to municipal water system.	2	TBD	TBD	\$28	\$5,537,000	\$57,104,652
18	3	Newton County RWSD	\$49,769	14,244	5256009	DW161156 01	Known expansion of the area requires new lines and increased capacity. This project will build new wells, new storage tower and a new WTP.	1	TBD	TBD	TBD	\$9,000,000	\$66,104,652

TOTAL PRELIMINARY ENGINEERING REPORTS SUBMITTED

\$0

\$66,104,652

INDIANA DRINKING WATER STATE REVOLVING FUND (DWSRF) LOAN PROGRAM
2017 Project Priority List, January 3, 2017, 3rd Quarter
Projects Applying for Financial Assistance (20 Year Loan) In State Fiscal Year 2017 (July 1, 2016- June 30, 2017)

Applications Only: Not Scored and Unranked

PPL Rank ¹	PPL Score	Participant	MHI ^{2,3}	Population	PWSID #	SRF Project No.	Project Description	EPA's Sustainability Policy Category ⁴	Green Project Reserve Cost	Green Project Reserve Category ⁵	Post-Project / Current User Rate (per 4,000 gallons) ²	Total Project Cost	Cumulative DWSRF Request
Application Only	--	Batesville	\$62,045	2,935	5269001	DW170569 01	Rainfall dependant community looking for source water. New wells, transmission main and new groundwater treatment plant.	1	TBD	TBD	TBD	\$16,500,000	\$16,500,000
Application Only	--	Lawrence	\$49,849	46,001	5249005	DW170149 01	Age, capacity and condition of system require improvements to the WTP, collection system and a new storage tank.	1, 2, 3	TBD	TBD	TBD	\$17,900,000	\$34,445,000
TOTAL APPLICATIONS ONLY SUBMITTED												\$34,400,000	

TOTAL PRELIMINARY ENGINEERING REPORTS and APPLICATIONS SUBMITTED

\$0

\$100,504,652

Footnotes:

¹A community must submit a complete Preliminary Engineering Report to the DWSRF Loan Program in order for the project to be scored and ranked on the Project Priority List (PPL).

² Additional subsidization may be provided to participants who have a low Median Household Income (MHI) and/or high post-project user rates as outlined in the Intended Use Plan (IUP). The amount of the additional subsidization shall be determined and set forth in the financial assistance agreement.

³The Indiana DWSRF Loan Program defines a Disadvantaged Community in section VII of the IUP.

⁴ EPA's Clean Water and Drinking Water Infrastructure Sustainability Policy, Category 1: projects that are based on a "fix it first" approach that focuses on system upgrade and replacement in existing communities. Category 2: investigations, studies, or plans that improve the technical, managerial, and financial capacity of the assistance recipient to operate, maintain, and replace financed infrastructure. Category 3: preliminary planning, alternatives assessment, and eligible capital projects that reflect the full life cycle costs of infrastructure assets, conserve natural resources, or use alternative approaches to integrate natural or "green" systems into the built environment.

⁵ EE = Energy Efficiency, EI = Environmentally Innovative, GI = Green Infrastructure, WE = Water Efficiency, CR = Climate Resiliency.

Indiana Finance Authority

US EPA WIFIA Program

Letter of Interest

**Attachment: 2017 3rd Quarter Project Priority List (Large
Systems) for Clean Water SRF Loan Program**

INDIANA WASTEWATER STATE REVOLVING FUND (WWSRF) LOAN PROGRAM
 2017 Project Priority List, January 3, 2017, 3rd Quarter
 Projects Applying for Financial Assistance (20 year loan) in State Fiscal Year 2017 (July 1, 2016 - June 30, 2017)
 List B: Large Systems: Population greater than 10,000

Preliminary Engineering Reports

PPL Rank ¹	PPL Score	Participant	MHI ²	Population	NPDES #	SRF Project No.	Project Description	Needs Category ³	Sustainability Policy Category ⁴	Estimated Green Project Reserve Cost	Green Project Reserve Category ⁵	Estimated Post-Project User Rate ²	Estimated Total Project Cost*	Cumulative Total
1	51	Allen County RWSD	\$49,124	355,329	IN0048119	WW142802 07	Failing septic systems. New sewers.	IV-A	2	\$0	NA	TBD	\$7,535,000	\$7,535,000
2	43	Allen County RWSD	\$49,124	355,329	IN0048119	WW162502 08	Failing septic systems. New sewers.	IV-A	2	0	NA	TBD	\$10,462,000	\$17,997,000
3	39	Citizens Water Authority	\$42,076	903,393	IN0023183	WW162749 01	The CSO LTCP requires improvements to the system. Deep tunnels are required to hold flows.	IV-B	1	TBD	TBD	TBD	\$547,500,000	\$565,497,000
4	38	Portage	\$51,180	36,828	IN0024368	WW162964 02	WWTP and collection system is aging and requires upgrades and improvements.	I,III-B	1, 2, 3	TBD	TBD	\$33	\$5,678,000	\$571,175,000
5	32	Jeffersonville	\$51,706	44,953	IN0023302	WW121213 07	CSO LTCP Improvements. Construct new interceptor sewer.	IV-B, V	TBD	\$1,305,000	EE	\$54	\$34,000,000	\$605,175,000
6	29	Crown Point	\$64,250	27,317	IN0025963	WW160845 05	CSO LTCP Improvements. WWTP, I/I and collection system improvements needed.	I, IIIA, V	TBD	TBD	TBD	TBD	\$6,500,900	\$611,675,900
7	27	Richmond	\$29,802	36,812	IN0025615	WW162689 06	I/I in the system and age of pipes. This project will replace sewers and Force Main.	III-A, III-B	1, 2, 3	TBD	TBD	\$37	\$11,429,000	\$623,104,900
8	27	Greensburg	\$45,363	11,492	IN0020122	WW161216 04	Peak hourly flow for the LTCP require expansion of the clarifiers. The NPDES Permit will also require phosphorus removal to be part of this project.	I, II	1, 3	TBD	TBD	\$33	\$7,664,000	\$630,768,900
9	26	Newton County RWSD	\$49,769	14,244	IN0063479	WW161456 01	Local expansion requires new lines, FM and LS, and a WWTP upgrade.	I	1	TBD	TBD	\$14	\$17,680,000	\$648,448,900
10	25	Delaware County RWD	\$35,996	87,531	IN002563	WW162018 06	Failing septic systems. New sewers and a new regional WWTP.	II, IV-A, IV-B	1	TBD	TBD	TBD	\$12,200,000	\$660,648,900
TOTAL PRELIMINARY ENGINEERING REPORTS SUBMITTED										\$1,305,000			\$660,648,900	

* All projects listed above may receive a maximum amount of \$25 Million each in subsidized SRF Funds during the Fundable Range period.

INDIANA WASTEWATER STATE REVOLVING FUND (WWSRF) LOAN PROGRAM
 2017 Project Priority List, January 3, 2017, 3rd Quarter
 Projects Applying for Financial Assistance (20 year loan) in State Fiscal Year 2017 (July 1, 2016 - June 30, 2017)
 List B: Large Systems: Population greater than 10,000

Applications Only: Not Scored and Unranked

PPL Rank ¹	PPL Score	Participant	MHI ²	Population	NPDES #	SRF Project No.	Project Description	Needs Category ³	Sustainability Policy Category ⁴	Estimated Green Project Reserve Cost	Green Project Reserve Category ⁵	Estimated Post-Project User Rate ²	Estimated Total Project Cost	Cumulative Total
Application Only	---	Hammond SD	\$ 39,771	150,050	IN0023060	WW150811 10	WWTP is deteriorating, I/I in the system, CSO LTCP included. WWTP upgrades and sewer work.	I,II, III-B, IV-B, V	TBD	TBD	TBD	\$19	\$67,447,000	\$67,447,000
Application Only	---	Logansport	\$ 33,164	18,396	IN0023604	WW150709 05	LTCP requirements. Interceptor replacement.	IV-B	2	TBD	TBD	\$14	\$5,000,000	\$72,447,000

TOTAL APPLICATIONS ONLY SUBMITTED

\$72,447,000

TOTAL PRELIMINARY ENGINEERING REPORTS and APPLICATIONS SUBMITTED

\$1,305,000

\$733,095,900

Footnotes:

¹ A community must submit a complete Preliminary Engineering Report to the WWSRF Loan Program in order for the project to be scored and ranked on the PPL.

² Additional subsidization may be provided to participants who have a low MHI and/or high post-project user rates as outlined in the Intended Use Plan. The amount of the additional subsidization shall be determined and set forth in the financial assistance agreement.

³ Needs Categories

I. Secondary Wastewater Treatment	VI. Stormwater Management Programs	VII-B. NPS Control: Agriculture (Animals)	VII-J. NPS Control: Sanitary Landfills
II. Advanced Wastewater Treatment	VI-A. Stormwater Conveyance Infrastructure	VII-C. NPS Control: Silviculture	VII-K. NPS Control: Hydromodification
III-A. Infiltration/Inflow Correction	VI-B. Stormwater Treatment Systems	VII-E. NPS Control: Ground Water Protection	VII-M. NPS Control: Other Estuary Management Activities
III-B. Sewer Replacement/Rehabilitation	VI-C. Green Infrastructure	VII-F. NPS Control: Marinas	X. Recycled Water Distribution
IV-A. New Collector Sewers and Appurtenances	VI-D. General Stormwater Management	VII-G. NPS Control: Resource Extraction	XII. Decentralized Wastewater Treatment Systems
IV-B. New Interceptors Sewer and Appurtenances	VII. Nonpoint Source (NPS) Control	VII-H. NPS Control: Brownfields	
V. Combined Sewer Overflow (CSO) Correction	VII-A. NPS Control: Agriculture (Cropland)	VII-I. NPS Control: Storage Tanks	

⁴ EPA's Clean Water and Drinking Water Infrastructure Sustainability Policy. Category 1: projects that are based on a "fix it first" approach that focuses on system upgrade and replacement in existing communities. Category 2: investigations, studies, or plans that improve the technical, managerial, and financial capacity of the assistance recipient to operate, maintain, and replace financed infrastructure. Category 3: preliminary planning, alternatives assessment, and eligible capital projects that reflect the full life cycle costs of infrastructure assets, conserve natural resources, or use alternative approaches to integrate natural or "green" systems into the built environment.

⁵ EE = Energy Efficiency, EI = Environmentally Innovative, GI = Green Infrastructure, WE = Water Efficiency, CR = Climate Resiliency.

Indiana Finance Authority

US EPA WIFIA Program

Letter of Interest

**Attachment: 2017 3rd Quarter Project Priority List (Small
Systems) for Clean Water SRF Loan Program**

INDIANA WASTEWATER STATE REVOLVING FUND (WWSRF) LOAN PROGRAM
 2017 Project Priority List, January 3, 2017, 3rd Quarter
 Projects Applying for Financial Assistance (20 year loan) in State Fiscal Year 2017 (July 1, 2016 - June 30, 2017)
 List A: Small Systems: Population less than 10,000

Preliminary Engineering Reports

PPL Rank ¹	PPL Score	Participant	MHI ²	Population	NPDES #	SRF Project No.	Project Description	Needs Category ³	Sustainability Policy Category ⁴	Estimated Green Project Reserve Cost	Green Project Reserve Category ⁵	Estimated Post-Project User Rate ²	Estimated Total Project Cost	Cumulative Total
1	45	Attica	\$ 36,342	3,245	IN0020222	WW170523 02	CSO LTCP requirements. NODES permit also requires phosphorous improvements.	I, IIIB	1,2	TBD	TBD	\$42	\$4,886,350	\$4,886,350
2	42	Oxford	\$ 41,972	1,163	IN0021342	WW131904 02	Overflow from CSO points. Addition of wetland treatment for overflow.	I, V	1,2,3	\$0	NA	\$61	\$3,000,000	\$7,886,350
3	42	Woodburn	\$ 40,707	1,520	IN0021407	WW162202 02	Permit changes requires WWTP improvements. Failing septs require new sewer lines.	I, IV-A	1	\$0	NA	TBD	\$5,238,700	\$13,125,050
4	40	Cayuga	\$ 46,953	1,162	IN0060461	WW140983 02	WWTP is at 90% capacity. WWTP Expansion.	I, II	1, 2	TBD	TBD	TBD	\$2,669,000	\$15,794,050
5	40	Cromwell	\$ 27,321	512	IN0021814	WW151457 01	The system age requires upgrades to the WWTP and collection system.	I, III-A, III-B	1, 2, 3	TBD	TBD	\$52	\$1,903,700	\$17,697,750
6	40	Michigantown	\$ 54,583	467	IN0040355	WW170112 01	New phosphorous limits require WWTP improvements.	I	1,2,3	TBD	TBD	\$56	\$1,020,000	\$18,717,750
7	38	Romney RSD	\$ 50,938	377	TBD	WW102079 01	Failing septic systems. Install new WWTP and Sewers.	I, IV-A	2	TBD	TBD	\$177	\$3,832,605	\$22,550,355
8	34	Chandler	\$ 43,028	2,887	IN0020435	WW141187 03	Failing septic systems. Install new sewers for connection to existing system.	IV-A	1, 2	TBD	TBD	TBD	\$1,370,000	\$23,920,355
9	34	Western Wayne RSD	\$ 34,885	3,677	IN0054402	WW141789 01	Performance issues with undersized and aged WWTP. WWTP upgrades and rehabilitation.	I, II	1, 2, 3	\$2,344,000	EE, EI	TBD	\$12,875,000	\$36,795,355
10	34	Portland	\$ 33,726	6,223	IN0020095	WW162138 03	WWTP is not meeting permit limits. WWTP modifications to meet limits.	I	1,2,3	TBD	TBD	\$47	\$12,800,000	\$49,595,355
11	32	Palmyra	\$ 47,188	930	IN0039403	WW150931 01	Excessive flow entering the system and SSO occurrences. Sewer rehabilitation.	IIIB	1, 2, 3	\$1,215,500	EE	TBD	\$1,215,500	\$50,810,855
12	32	Andrews	\$ 33,333	1,149	IN0022268	WW160935 01	Age of plant and size of community require upgrades to the WWTP.	1	1, 2	TBD	TBD	\$56	\$4,488,000	\$55,298,855
13	31	New Palestine	\$ 66,339	2,055	IN0042358	WW161730 01	Age of system requires WWTP and collection system upgrades.	1	1, 2, 3	TBD	TBD	\$59	\$2,214,000	\$57,512,855
14	30	Kirklin	\$ 52,823	788	IN0020630	WW161312 02	WWTP operational problems requires replacement pf pumps and controls in the clarifiers and piping.	I, II	1, 2, 3	TBD	TBD	\$69	\$889,500	\$58,402,355

INDIANA WASTEWATER STATE REVOLVING FUND (WWSRF) LOAN PROGRAM
 2017 Project Priority List, January 3, 2017, 3rd Quarter
 Projects Applying for Financial Assistance (20 year loan) in State Fiscal Year 2017 (July 1, 2016 - June 30, 2017)
 List A: Small Systems: Population less than 10,000

PPL Rank ¹	PPL Score	Participant	MHI ²	Population	NPDES #	SRF Project No.	Project Description	Needs Category ³	Sustainability Policy Category ⁴	Estimated Green Project Reserve Cost	Green Project Reserve Category ⁵	Estimated Post-Project User Rate ²	Estimated Total Project Cost	Cumulative Total
15	29	Uniondale	\$ 52,500	310	IN0021098	WW162390 01	New phosphorous permit limits require WWTP upgrade.	I, II	1, 2	TBD	TBD	TBD	\$1,415,000	\$59,817,355
16	28	Wadesville-Blairsville	\$ 51,705	1,250	TBD	WW101665 01	Failing septic systems. Install new WWTP and sewers.	IV-A	2	\$0	NA	TBD	\$10,549,598	\$70,366,953
17	28	Cannelton	\$ 25,121	1,563	IN0021016	WW140562 01	CSO LTCP Requirements. WWTP and collection system improvements.	V	1, 2	\$0	NA	\$50	\$3,508,500	\$73,875,453
18	28	Georgetown	\$ 69,125	3,700	IN0063371	WW160522 02	WWTP is at 80% capacity and requires expansion.	1	1, 3	TBD	TBD	\$65	\$3,400,000	\$77,275,453
19	27	Northwest Shelby County RSD	\$ 49,965	2,015	IN0032867	WW150573 01	Failing septic systems. Install new sewers and connect to a municipal system.	IV-A	2, 3	TBD	TBD	TBD	\$8,621,000	\$85,896,453
20	27	Mount Vernon	\$ 44,485	6,687	IN0035696	WW161865 05	New phosphorous limits require WWTP improvements.	I	1, 2	TBD	TBD	TBD	\$2,506,900	\$88,403,353
21	27	Bryant	\$ 41,250	252	IN0055158	WW162438 01	New phosphorous limits require WWTP improvements.	I	1, 2	TBD	TBD	TBD	\$889,000	\$89,292,353
22	26	Advance	\$ 47,500	562	IN0039705	WW141206 01	Excessive wet weather flow and aged WWTP require EQ Tank and WWTP upgrades.	I	1, 2	\$0	NA	\$72	\$769,000	\$90,061,353
23	24	LaGrange County RUD (Cedar Lake)	\$ 40,833	2,625	TBD	WW170244 02	Failing septic systems. New sewers to a regional connection via force main.	1	TBD	TBD	TBD	\$78	\$3,865,000	\$93,926,353
24	24	LaGrange County RUD (Travel Plaza #7)	\$ 40,833	2,625	TBD	WW170244 01	Age and condition of Travel Plaza #7 requires improvements. New WWTP.	1, III-B	1,2	TBD	TBD	\$78	\$5,836,900	\$99,763,253
25	22	Linden	\$ 43,625	700	IN0040274	WW110854 01	Capacity and operational problems. WWTP upgrade and improvements.	I	1, 2, 3	\$74,500	EE	\$42	\$1,104,050	\$100,867,303
26	19	Lynn	\$ 42,750	1,097	IN0040967	WW161068 01	Age of WWTP requires upgrades and improvements.	I, II	1, 2, 3	TBD	TBD	\$43	\$947,000	\$101,814,303

TOTAL PRELIMINARY ENGINEERING REPORTS SUBMITTED

\$3,634,000

\$101,814,303

INDIANA WASTEWATER STATE REVOLVING FUND (WWSRF) LOAN PROGRAM
 2017 Project Priority List, January 3, 2017, 3rd Quarter
 Projects Applying for Financial Assistance (20 year loan) in State Fiscal Year 2017 (July 1, 2016 - June 30, 2017)
 List A: Small Systems: Population less than 10,000

Applications Only: Not Scored and Unranked

PPL Rank ¹	PPL Score	Participant	MHI ²	Population	NPDES #	SRF Project No.	Project Description	Needs Category ³	Sustainability Policy Category ⁴	Estimated Green Project Reserve Cost	Green Project Reserve Category ⁵	Estimated Post-Project User Rate ²	Estimated Total Project Cost	Cumulative Total
Application Only	--	Elberfeld	\$ 54,250	625	IN0020788	WW131687 04	WWTP at capacity. Sewer experiences I/I. Upgrades to WWTP and Sewer rehabilitation is proposed.	I, III-A	1, 2	TBD	TBD	\$62	\$3,040,000	\$3,040,000
Application Only	--	Green Acres HOA	\$ 42,078	210	IN0063754	WW170434 01	Purchase of WWTP from private owner to maintain service.	1	1, 2, 3	TBD	TBD	\$69	\$1,910,000	\$4,950,000
Application Only	--	Harbortown HOA	\$ 59,969	70	IN0109924	WW170665 01	Failing WWTP requires replacement. Age of sewers requires replacement.	I, IV-A	1, 2, 3	TBD	TBD	\$368	\$1,052,900	\$6,002,900
Application Only	--	Jennings Northwest Regional Utilities	\$ 44,128	4,315	IN0056049	WW160140 05	WWTP is not meeting permit limits. WWTP modifications to meet limits.	1	1, 2, 3	TBD	TBD	\$75	\$1,910,000	\$7,912,900
Application Only	--	North Vernon	\$ 35,417	6,636	IN0020451	WW161140 02	Failing septic tanks require elimination. New sewers will be installed.	IV-A	1	TBD	TBD	TBD	\$4,197,253	\$12,110,153
Application Only	--	Osceola	\$ 58,034	1,859	TBD	WW131271 01	Failing Septic tanks. Projects involves new WWTP and collection system.	I, IV-A	1, 2	TBD	TBD	\$65	\$15,546,000	\$27,656,153
Application Only	--	Scottsburg	\$ 40,571	6,747	IN0020397	WW131772 01	Excessive I/I in the system. Project will identify and provide corrections in the system.	III-B	1	TBD	NA	\$53	\$1,000,000	\$28,656,153
Application Only	--	Syracuse	\$ 45,000	2,854	IN0021172	WW143243 01	Aging WWTP and poor operation. WWTP rehabilitation and upgrade.	I	1, 2	TBD	TBD	\$24	\$2,760,000	\$31,416,153

TOTAL APPLICATIONS ONLY SUBMITTED

\$31,416,153

TOTAL PRELIMINARY ENGINEERING REPORTS and APPLICATIONS SUBMITTED

\$3,634,000

\$133,230,546

Footnotes:

¹A community must submit a complete Preliminary Engineering Report to the WWSRF Loan Program in order for the project to be scored and ranked on the PPL.

² Additional subsidization may be provided to participants who have a low MHI and/or high post-project user rates as outlined in the Intended Use Plan. The amount of the additional subsidization shall be determined and set forth in the financial assistance agreement.

³ Needs Categories

- | | | | |
|--|--|---|---|
| I. Secondary Wastewater Treatment | VI. Stormwater Management Programs | VII-B. NPS Control: Agriculture (Animals) | VII-J. NPS Control: Sanitary Landfills |
| II. Advanced Wastewater Treatment | VI-A. Stormwater Conveyance Infrastructure | VII-C. NPS Control: Silviculture | VII-K. NPS Control: Hydromodification |
| III-A. Infiltration/Inflow Correction | VI-B. Stormwater Treatment Systems | VII-E. NPS Control: Ground Water Protection | VII-M. NPS Control: Other Estuary Management Activities |
| III-B. Sewer Replacement/Rehabilitation | VI-C. Green Infrastructure | VII-F. NPS Control: Marinas | X. Recycled Water Distribution |
| IV-A. New Collector Sewers and Appurtenances | VI-D. General Stormwater Management | VII-G. NPS Control: Resource Extraction | XII. Decentralized Wastewater Treatment Systems |
| IV-B. New Interceptors Sewer and Appurtenances | VII. Nonpoint Source (NPS) Control | VII-H. NPS Control: Brownfields | |
| V. Combined Sewer Overflow (CSO) Correction | VII-A. NPS Control: Agriculture (Cropland) | VII-I. NPS Control: Storage Tanks | |

⁴EPA's Clean Water and Drinking Water Infrastructure Sustainability Policy. Category 1: projects that are based on a "fix it first" approach that focuses on system upgrade and replacement in

⁵ EE = Energy Efficiency, EI = Environmentally Innovative, GI = Green Infrastructure, WE = Water Efficiency, CR = Climate Resiliency.

**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest**

Attachment: Drinking Water SRF Loan Program Guidelines



DRINKING WATER STATE REVOLVING FUND LOAN PROGRAM GUIDELINES

Table of Contents

Section 1:	Purpose.....	2
Section 2:	Definitions.....	2
Section 3:	Uses of the Drinking Water SRF	6
Section 4:	Criteria for Determining Financial Assistance Eligibility	6
Section 5:	Program Standards.....	6
Section 6:	Preliminary Engineering Report	7
Section 7:	Environmental Impact Assessment	9
Section 8:	Due Diligence Process.....	10
Section 9:	Bidding and Procurement	11
Section 10:	Pre-Construction	12
Section 11:	Construction.....	13
Section 12:	Disbursement of Loan Proceeds.....	14
Section 13:	Reservation of Rights.....	15
Section 14:	Criteria for Supplemental Drinking Water and Wastewater Assistance... Fund	15



DRINKING WATER STATE REVOLVING FUND LOAN PROGRAM GUIDELINES

Section 1: Purpose

Pursuant to IC 4-4-11-15 (2), the following Guidelines shall be used to implement the Drinking Water State Revolving Fund (SRF) Loan Program (Program) established by IC 13-18-21. The purpose of the Program is to:

- (1) Provide funding for Loans and other Financial Assistance to or for the benefit of Participants, including forgiveness of principal if allowed under federal law.
- (2) Provide funding for Participants to plan, design, construct, renovate, improve, or expand public water systems (PWS) that will facilitate compliance with national primary drinking water regulations applicable to PWS under the federal Safe Drinking Water Act or otherwise significantly further the health protection objectives of the federal Safe Drinking Water Act and other activities necessary or convenient to complete these tasks.
- (3) Pay the cost of administering the Drinking Water SRF Program, as provided in the federal Safe Drinking Water Act.
- (4) Conduct any other activity permitted by the Safe Drinking Water Act.

Section 2: Definitions

The following definitions apply throughout this document:

Additional Subsidization means to provide additional subsidization, including forgiveness of principal, negative interest loans, and/or grants in accordance with the most recent EPA Capitalization Grant Terms and Conditions. Priority for additional subsidies may be given to communities that could not otherwise afford such projects as determined by the Authority.

Authority means the Indiana Finance Authority, created under IC 4-4-11, which administers the Program.

Authorized Representative means a person who has been designated by the governing Board of a Participant to sign documents on behalf of that Board.

Board means the governing body of the Participant seeking Financial Assistance.

Bond is the debt instrument which evidences the long term financing undertaken by a Participant in accordance with Indiana statutes for incurring debt.

Categorically Excluded means categorically excluded from substantive environmental review, which applies to a Proposed Project that has no physical impact, such as a planning project or to

a Proposed Project with minimal environmental impact as defined in the State Environmental Review Process (SERP) document.

Categorical Exclusion or CE is an environmental document issued when a Proposed Project has no physical impact or has minimal environmental impact as defined by the SERP.

Change Order means proposed work that is being added to or deleted from the original contract, which may alter the original contract amount and/or completion date.

Drinking Water SRF or DWSRF means the Drinking Water State Revolving Fund as authorized by the Safe Drinking Water Act, 42 U.S.C. 1452 et seq., and IC 13-18-21.

Due Diligence means a process that provides financial disclosures to the Program, as well as economic matters related to the Participant and its ability to repay a Loan to the Program.

Environmental Assessment or EA is a report prepared pursuant to the State Environmental Review Process (SERP) upon completion of the Program's review of a Preliminary Engineering Report or any other document describing the Proposed Project and its environmental impacts.

Environmental Impact Statement or EIS is a document prepared for a Proposed Project if it is determined by the Program that the construction or operation, or both, of a Proposed Project will result in significant environmental impacts. The purpose, content, and format of an EIS will be in accordance with the SERP.

Environmental Protection Agency (EPA) Capitalization Grant means a federal grant, as evidenced by an agreement with the United States Environmental Protection Agency that provides funds to capitalize the Drinking Water SRF program.

Equivalency Project means a project or projects in an amount equal to the current Capitalization Grant. Equivalency Projects must comply with all of the following: a) FFATA Reporting Requirements, b) Single Audit Act (see 2 CFR 200 Subpart F), c) Federal Cross Cutters, d) Disadvantaged Business Enterprise, e) signage requirement and f) other equivalency requirements set forth in the current Capitalization Grant terms and conditions.

Financial Aid Agreement means an agreement between the Participant and the Authority pursuant to IC 13-18-21-27 that contains the terms and conditions of the grant, loan or other financial assistance provided from the Supplemental Drinking Water and Wastewater Assistance Fund.

Financial Assistance means the types of financial assistance authorized by the Safe Drinking Water Act and by the terms and conditions of the current Capitalization Grant, which may include providing Additional Subsidization.

Financial Assistance Agreement means an agreement between the Participant and the Authority pursuant to IC 13-18-21-12 that contains the covenants between the Participant and the Authority concerning Financial Assistance from the Drinking Water SRF.

Financial Assistance Closing means the occasion in which a Participant tenders its note, bond, guaranty agreement, or credit enhancement agreement to the Authority and the Authority provides a portion, or all, of the Drinking Water SRF Financial Assistance to the Participant.

Finding of No Significant Impact or FNSI means a finding of no significant impact, issued with an EA, that the construction and operation of a Proposed Project or the improvements thereto will not significantly impact the environment.

Funded Project means a Proposed Project which received funding through an executed Financial Assistance Agreement or Financial Aid Agreement by and between the Authority and the Participant

Green Project Reserve Sustainability Incentive Program or GPR means assistance in the form of interest rate discounts to address green infrastructure, water or energy efficiency improvements, other environmentally innovative activities, or climate resiliency planning.

Intended Use Plan or IUP means a plan prepared by the Authority identifying the intended uses of the amount of funding available to the Drinking Water SRF. The IUP shall include all requirements set forth in the Safe Drinking Water Act.

Loan means purchasing the notes or bonds of a Participant to finance a Proposed Project or Refinancing an existing eligible debt obligation.

Note means a legal instrument (financial instrument), in which the Participant promises in writing to pay a sum of money to the Authority, either at a fixed or future time or on demand of the Authority, under specific terms.

Operation and Maintenance includes the activities required to ensure the continuing dependable and economic function of the PWS, including maintaining compliance with primary and secondary drinking water standards, as follows:

- (1) Operation is the control and management of the unit processes and equipment that make up the Public Water System or PWS. This includes financial and personnel management, records, reporting, laboratory control, process control, safety and emergency operation planning, and operating activities.
- (2) Maintenance is the preservation of the functional integrity and efficiency of equipment and structures by implementing systems of preventive and corrective maintenance.

Participant means the following:

- (1) Political Subdivision as defined in IC 36-1-2-13.
- (2) Regional Water, Sewage, or Solid Waste District organized under IC 13-26-1.
- (3) Qualified entity described in IC 5-1.5-1-8(4) that is a public water utility as described in IC 8-1-2-125.
- (4) Conservancy District established for the purpose set forth in IC 14-33-1-1(a)(4).
- (5) Any other owner of a PWS that is authorized by the Safe Drinking Water Act to borrow from the Drinking Water SRF.

Project Priority List or PPL ranks, in descending priority of need, Proposed Projects for which Participants have requested Financial Assistance from the Drinking Water SRF for eligible expenses. The PPL is created by the Program, updated quarterly, and may be amended as necessary.

Preliminary Engineering Report or PER means the document(s) submitted by the Participant that provide the information necessary for the Program to determine the technical, economic, and environmental adequacy of the Proposed Project.

Program means the Drinking Water State Revolving Fund Loan Program as established by IC 13-18-21.

Proposed Project means the activities or tasks a Participant identifies in its PER or any other document required by the Program related to the planning, design, and or construction of a Proposed Project for which the Participant may commit and expend funds.

Public Water System or PWS means a public water system as described in 327 IAC 8-2-1(74).

Refinancing means the refinancing of a Participant's issued and outstanding bond, note or other debt obligation as permitted by the Safe Drinking Water Act through the Drinking Water SRF under criteria used by the Authority from time to time.

Record of Decision or ROD means a record of decision issued by the Program upon the completion of an EIS which includes a determination of whether to proceed with a Proposed Project.

Safe Drinking Water Act or SDWA means the federal act as amended by the Safe Drinking Water Act Amendments of 1986, the Lead Contamination Control Act of 1988, and the Safe Drinking Water Act Amendments of 1996.

State Environmental Review Process or SERP means the State Environmental Review Process which is a National Environmental Policy Act-compliant environmental review approved by the U.S. Environmental Protection Agency.

Study Area means the geographical area comprising a Participant's boundaries which also includes the location of the Proposed Project to be financed or refinanced by such Participant through the Drinking Water SRF.

Substantial Completion Date of Construction means the date determined by the Participant and provided to the Program when all but minor components of a Funded Project have been constructed, all equipment is operational, and the Funded Project is capable of functioning as designed.

Substantive Environmental Impact means a significant adverse environmental impact resulting directly or indirectly from the construction, upgrade, expansion or operation of a Proposed Project.

Supplemental Drinking Water and Wastewater Assistance Fund means the fund established under IC 13-18-21-21 to provide money for grants, loans, and other financial assistance to participants for the purposes described in IC 13-18-21-23.

Section 3: Uses of the Drinking Water SRF

The Drinking Water SRF will be used to do the following:

- (1) Provide Financial Assistance for Proposed Project planning, design, and/or construction or for other activities that are permitted by the Safe Drinking Water Act.
- (2) Refinance a Participant's outstanding indebtedness as determined to be eligible for repurchase by the Authority under the Safe Drinking Water Act.
- (3) Pay reasonable direct and indirect program administration costs.
- (4) Provide funds for set aside accounts as permitted by the Safe Drinking Water Act.

Section 4: Criteria for Determining Financial Assistance Eligibility

4-1 Project Priority List

A Proposed Project must be on the PPL to be awarded Financial Assistance from the Authority.

4-2 Intended Use Plan

- (1) The Program will prepare annually an IUP and PPL pursuant to the Safe Drinking Water Act, to be effective on the first day of the State's fiscal year.
- (2) The Program will adopt an IUP after public notice of the plan and after responding to any comments received as determined by Program staff. The Program may amend the IUP to add eligible Proposed Projects, and change or amend Proposed Projects as necessary.
- (3) Placement on the PPL will be based on the following criteria:
 - (a) The Proposed Project must be consistent with the uses of the Drinking Water SRF as identified in the Safe Drinking Water Act and IC 13-18-21-3.
 - (b) A Participant must submit general project information on an application form provided by the Program that is signed by the Participant's Authorized Representative.

Section 5: Program Standards

Loans and other available Drinking Water SRF Financial Assistance for Proposed Projects will be made only to a Participant that meets all of the following criteria:

- (1) Owns, operates, and maintains, or causes to be operated and maintained, a PWS for its useful life.
- (2) Demonstrates financial, managerial, technical, and legal capability to meet the terms of the Financial Assistance Agreement and to operate and maintain the PWS for its useful life.

- (3) Establishes and maintains just and equitable rates and charges for the use of and the service rendered by the drinking water system.
- (4) Agrees to:
 - (a) Maintain financial records in accordance with generally accepted government accounting principles for utilities; and
 - (b) Provide to the Authority, as it may request from time to time, a copy of audits of the PWS financial records as conducted by the state board of accounts or other certified independent auditor during the term of its Financial Assistance Agreement.
- (5) Agrees to allow inspection by the Authority of the financial records related to the PWS during the term of the Financial Assistance Agreement.
- (6) Meets all other Program requirements.

Section 6: Preliminary Engineering Report (PER)

6-1 Purpose

The purpose of the PER is to provide the information necessary for the Program to determine the technical, economic, and environmental adequacy of the Proposed Project. The PER must be approved by the Program prior to award of Financial Assistance for a Proposed Project, unless it is a refinancing. PER information and data requirements are dependent on the type of Proposed Project and shall be determined by Program staff.

The Program may request additional information from a Participant that it deems necessary to adequately assess the technical, economic, and environmental adequacy of the Proposed Project.

6-2 Development and Implementation of Fiscal Sustainability Plan

Upon request by the DWSRF Program, the community shall include in the PER a section identifying the status of the development of the Participant's Fiscal Sustainability Plan (FSP). The FSP shall meet the criteria as determined by the DWSRF Program.

6-3 Development of Feasible Alternatives

The PER will contain a section identifying and evaluating the range of feasible alternatives that were evaluated during the planning process, including that of taking no action. The rationale for the selected alternative along with the reasons for rejecting the others must be included.

6-4 Environmental Information

The PER consists of the following environmental information:

- (1) A comparison of the potential environmental impacts among feasible alternatives, including that of taking no action.
- (2) An assessment of the cumulative environmental impacts of the feasible alternatives within each of the following categories:

- (a) Disturbed and undisturbed land;
 - (b) Historic and Architectural Resources;
 - (c) Wetlands;
 - (d) Surface Waters;
 - (e) 100-Year Floodplains and Floodways;
 - (f) Groundwater;
 - (g) Plants and animals.
 - (h) Prime Farmland and Geology;
 - (i) Air Quality;
 - (j) Open Space & Recreational Opportunities;
 - (k) National Natural Landmarks;
 - (l) Lake Michigan Coastal Zone (Lake, Porter & LaPorte counties only); and
 - (m) Secondary Impacts
- (3) The environmental information document will include an evaluation of the environmental impacts of taking no action to modify, improve, or expand an existing PWS.
 - (4) Specific mitigation measures will be listed, as necessary, which will eliminate, minimize, or compensate for the environmental impacts enumerated above.
 - (5) If a Proposed Project is to be completed in several distinct phases, the environmental information associated with the first phase must consider the cumulative impacts of the entire proposed system, including all succeeding phases. As succeeding phases are constructed, no additional environmental information will be required if there have been no significant changes to the original PER.
 - (6) If, however, a Proposed Project contemplates significant changes to the original PER, the Program will conduct a review of the environmental impacts of the Proposed Project.

If the construction of a Proposed Project is initiated five or more years after the date of approval of a PER, an additional environmental information document will be required unless it is determined by the SRF Program that there have been no substantial changes in the environmental impacts of the Proposed Project.

6-5 Green Project Reserve (GPR) Sustainability Incentive Program

The Program may provide assistance in the form of an interest rate discount to eligible communities which request funding for Proposed Projects that address green infrastructure, water or energy efficiency improvements, other environmentally innovative activities, or climate resiliency planning in an approved PER. The Participant must prepare and submit a Business Case or Categorical Exclusion during PER review in order to establish GPR eligibility.

6-6 Public Participation

The PER will include the following:

- (1) A record of the public hearing.
- (2) A copy of the publisher's affidavit from the newspaper with the public hearing notice.

Copies of all written comments submitted by the public during the PER process will be routed through the Program for comment.

6-7 Public Hearings

At least one Public Hearing will be held by the Participant within the Proposed Project's Study Area for the purpose of discussing the Proposed Project. A copy of the PER and/or documents reasonably describing a Proposed Project will be available to all attendees at the Public Hearing. Requirements for the Public Hearing will include the following:

- (1) The Public Hearing will be publicized in at least one newspaper of general circulation in the Study Area a minimum of ten days prior to the date of the Public Hearing.
- (2) The PER will be available for public review for a minimum of ten days prior to the date of the Public Hearing.
- (3) Written comments will be accepted during the Public Hearing and for a period of five days following the Public Hearing according to SRF Guidelines.
- (4) A sign-up sheet will be available at the Public Hearing for all individuals interested in receiving the CE, EA/FNSI, or EIS/ROD or environmental documents.

6-8 Amendment and Addendum

If there is a significant change in the scope of the project after the PER has been approved then the Participant will be required to prepare a PER Amendment (needed for work prior to a loan closing) or a PER Addendum (needed for work following a loan closing).

Section 7: Environmental Impact Assessment

7-1 Categorical Exclusions

The following classes of projects may be Categorically Excluded from substantive environmental review:

- (1) Minor addition, rehabilitation, improvement, or expansion of any existing PWS's treatment facilities that will disturb only previously disturbed land.
- (2) Rehabilitation of a PWS's distribution system that will disturb only previously disturbed land.
- (3) Planning and design or other "non-construction" projects.

A CE may be rescinded by the Program if it is determined that sufficient information exists to suggest that substantive environmental impacts may occur as a result of the construction or operation, or both, of any PWS construction project that received a CE.

The Program will public notice all new or rescinded Categorical Exclusions in one newspaper of general circulation within the Study Area and to www.srf.in.gov.

7-2 Environmental Assessment

The purpose of an EA is to document for public evaluation and comment the potential environmental impacts of the Proposed Project and describe the feasible PWS alternatives. The EA will be provided as an attachment to the FNSI document and will be prepared according to the SERP.

7-3 Finding of No Significant Impact

The purpose of issuing a FNSI is to notify the public that based upon the Program's evaluation of all pertinent information submitted in the PER and information submitted by State and federal agencies, the construction and operation of the Proposed Project will result in no significant adverse environmental impact.

- (1) The FNSI and attached EA will be issued for public comments for thirty days. If significant public comments are received during the public comment period, the FNSI will be reevaluated and a new FNSI, if appropriate, will be issued for public comments for thirty days.
- (2) A final decision to proceed, or not to proceed, with the Proposed Project will be issued by the Program after all public comments have been evaluated

7-4 Environmental Impact Statement

The criteria for initiating an EIS are established under 40 CFR 6.108. A ROD will be issued by the Program upon completion of an EIS that will include a determination of whether to proceed with the Proposed Project. The ROD will contain specific mitigation measures that will minimize, eliminate, or compensate for the environmental impacts of the construction or operation, or both, of the Proposed Project. The ROD will be issued for public comments for thirty days and will be considered final in the absence of significant public comments. If significant public comments are received during the comment period, the ROD will be reevaluated and a new ROD, if appropriate, will be issued for public comments for thirty days.

Section 8: Due Diligence Process

The Due Diligence process will include the following tasks:

- (1) The Participant will submit a completed Due Diligence form issued or authorized by the Program with the required documentation.
- (2) The Program staff will review or cause to be reviewed the Due Diligence form and documentation.

8-1 Approval of rate study; water rate ordinance

- (1) Every Participant will obtain the Authority's approval of its water system rates and charges as part of the financial due diligence process.

- (2) Each Participant will establish rates and charges at a level adequate to produce and maintain sufficient revenue to properly operate and maintain the treatment works, and to repay all debt obligations of the treatment works.

8-2 Interlocal Agreement

If the Proposed Project will serve two or more Participants, the Participant will submit an interlocal service agreement, contract, or other legally binding instrument necessary for the financing, construction, operation, and maintenance of the Proposed Project for approval by the Authority's staff prior to loan closing. If the Participant is a multi-county infrastructure Authority under IC 36-7-23, the Authority may require similar documentation and assurances.

8-3 Additional Subsidization

The Program may provide assistance in the form of principal forgiveness, negative interest rate loans, or grants to communities which meet eligibility requirements. Priority shall be given to communities that could not otherwise afford such projects. The Program will determine eligibility prior to loan closing.

Section 9: Bidding and Procurement

Section 9 will not apply to a Refinancing.

9-1 Professional Services

Participants conducting procurement for the uses authorized by the Drinking Water SRF for professional services will proceed pursuant to IC 5-16-11.1.

9-2 Procurement of Construction and Equipment

Participants conducting procurement for the uses authorized by the Drinking Water SRF for any activity other than professional services will proceed pursuant to IC 36-1-12.

9-3 Disadvantaged Business Enterprises (DBEs) (including Minority and Women's Business Enterprises)

The Participant shall make the following good faith efforts to ensure that disadvantaged business enterprises are utilized when possible. Good faith efforts include taking the following actions:

- (1) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities; including placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- (2) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive

process. This includes, whenever possible, posting solicitation for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

- (3) Consider in the contracting process whether firms competing for large contracts could be subcontracted with DBEs. This will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- (4) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- (5) Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce.
- (6) If the prime contractor awards subcontracts, require the prime contractor to take the steps in numbers 1 through 5 above.

Section 10: Pre-Construction

Section 10 does not apply to a Refinancing unless noted below.

10-1 Construction Permit

The Participant must obtain a construction permit from the Department of Environmental Management (IDEM) in accordance with State rules or other permitting authority if applicable, in conjunction with the approved PER prior to awarding any construction contract. The Participant must receive authorization from the Program prior to initiating procurement for construction.

10-2 Acquisition of Land, Easements, and Existing Facilities

The Participant is responsible for acquisition of land, easements, and any existing facilities necessary to construct, operate, and maintain the Proposed Project. The Participant must certify to the Program that it has, or will have by a mutually agreeable date, the required property rights prior to entering into any contract to construct, operate and maintain the Proposed Project. All acquisitions of property by exercise of power of eminent domain will comply with the procedure in IC 32-24-1 et seq. and Section 1452(a)(2) of the Safe Drinking Water Act.

10-3 Bid Tabulations

Certified bid tabulations and recommendations of award will be submitted by the Participant to the Program for review and approval prior to Participant's award of any construction contract.

10-4 Pre-Construction Contract Requirements

Participant must provide copies of the following to the Program for the Participant to enter into any construction contract:

- (1) Executed contracts.
- (2) Notices to contractors to proceed.
- (3) Bid bonds.

- (4) Performance and payment bonds.
- (5) Construction schedules.

10-5 Construction Wage Rates/Federal Prevailing Wages

Standard wage rates shall be paid for each Proposed Project as is generally prescribed for Indiana construction projects funded with public funds unless federal prevailing wages as prescribed by the Davis-Bacon Act are required under the EPA Capitalization Grant providing funding for the Proposed Project. Federal prevailing wages may be required for refinancings if the project was constructed after October 30, 2009.

10-6 Pre-Construction Conference

Prior to the initiation of construction, Participant must hold a Pre-Construction Conference with all necessary parties, including the Program.

10-7 American Iron and Steel

Participants, absent a waiver or exception, are required to use iron and steel products produced in the United States for projects for the construction, alteration, maintenance or repair of a public water system. Applies to refinancing after January 17, 2014.

Section 11: Construction

Section 11 does not apply to a Refinancing.

11-1 Change Orders

- (1) The Participant will submit copies of every and all Change Order(s) issued for the Funded Project to the Program for review and approval, including but not limited to Change Orders which:
 - (a) Alter the scope or design of the Funded Project; or
 - (b) Increase the amount of financing needed for the Funded Project; or
 - (c) Increase or decrease the completion date.
- (2) If the Change Order will result in the expenditure of more Drinking Water SRF funds than the current amount of Financial Assistance approved by the Authority, an amendment increasing the amount of Financial Assistance must be executed prior to the implementation of the Proposed Projects contemplated by the Change Order. Any additional Financial Assistance will comply with existing law as to the borrowing power of the Participant.

11-2 Inspections

- (1) The Program will conduct construction inspections in order to:
 - (a) Determine compliance with the Program approved PER, IDEM construction permit, the Financial Assistance Agreement and other applicable federal requirements.
 - (b) Determine completion of any GPR components.
 - (c) Confirm substantial completion of the Funded Project(s) in the final inspection.
 - (d) Protect the Authority's financial interest in the Funded Project(s).

Inspections performed by the Program are not conducted to replace the Participant's responsibility to properly monitor the construction of its Funded Project(s).

- (2) During the construction of the Funded Project(s), the Participant will:
 - (a) Conduct construction inspections to ensure that the construction complies with the Program approved PER, IDEM construction permit(s), and the terms and conditions of each construction contract.
 - (b) Maintain inspector logs, written in ink, with entries sufficient to establish the amount and quality of work completed by the contractor including weather conditions and problems encountered, if any.
 - (c) If applicable, maintain the required records related to Participant's compliance with the Davis Bacon Act and the American Iron and Steel requirements.
 - (d) Conduct a pre-final inspection making a punch list of incomplete and unacceptable work to be corrected before final inspection.
 - (e) Provide the Program with the Certificate of Substantial Completion for each Funded Project, the final certification of Davis Bacon compliance (if applicable) and other certifications as required by the Authority to meet federal requirements.

11-3 As-Built Plans

Upon request by the Program and after completion of the Funded Project, the Participant shall provide as-built plans for the Funded Project to the Program. These may be submitted in electronic format.

Section 12: Disbursement of Loan Proceeds

The Financial Assistance will be disbursed as follows:

- (1) The Program will review and certify the Drinking Water SRF loan share of the appropriate costs incurred for the Funded Project. These costs will be documented as requested by the Program. The Authority may pay these costs in accordance with the Financial Assistance Agreement.
- (2) The Participant will approve all requests for loan disbursement and provide such approval to the Program.

- (3) Loan proceeds disbursed to or on behalf of the Participant will be used only for authorized purposes. Funds will not be applied to pay costs associated with an unapproved contract Change Order.
- (4) The Program may at any time review and audit requests for loan disbursements and make adjustments for circumstances including, but not limited to, the following:
 - (a) Mathematical errors.
 - (b) Items not yet purchased or constructed.
 - (c) Ineligible items.
- (5) All files and records pertaining to the Funded Project will be maintained by the Participant and made accessible to the Program upon request. These files and records will be retained by the Participant for at least six years after initiation of operation as determined by the Program. However, if any litigation, claim, negotiation, audit, or other action involving the records has been started before the expiration of the six-year period, the records will be retained until completion of the action and resolution of all issues that arise from it or until the end of the regular six- year period, whichever is later.

Section 13: Reservation of Rights

The following rights are reserved:

- (1) The Drinking Water State Revolving Fund Loan Program Guidelines does not prohibit a Participant from requiring more assurances, guarantees, or indemnity, or other contractual requirements from any party performing work on any Proposed or Funded Project.
- (2) The Drinking Water State Revolving Fund Loan Program Guidelines do not affect the Program's right under existing rules to take remedial action, including, but not limited to, administrative enforcement action and actions for breach of contract against a Participant that fails to carry out its obligations under these Guidelines.
- (3) Review or approval by or for the Program does not relieve the Participant of its responsibility to properly plan, design, build, and effectively operate and maintain the PWS as required by federal and state statutes, rules, regulations, permits, and best management practices. Neither the Program nor the Authority is responsible for increased costs resulting from defects in the plans, design drawings, specifications, inspections, construction, or other sub-agreement documents related to any Proposed or Funded Project.

Section 14: Criteria for Supplemental Drinking Water and Wastewater Assistance Fund

- (1) The proposed project must be consistent with uses of the Supplemental Drinking Water and Wastewater Assistance Fund as set forth in IC 13-18-21-23.
- (2) A Participant must submit general project information on an application form provided by the Program or in a form acceptable to the Program that is signed by the Participant's Authorized Representative.
- (3) Preference may be given to less populated and/or lower income areas.

**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest**

Attachment: Clean Water SRF Loan Program Guidelines



CLEAN WATER STATE REVOLVING FUND LOAN PROGRAM GUIDELINES

Table of Contents

Section 1:	Purpose	2
Section 2:	Definitions	2
Section 3:	Uses of the Clean Water SRF.....	6
Section 4:	Criteria for Determining Financial Assistance Eligibility	6
Section 5:	Program Standards	7
Section 6:	Preliminary Engineering Report.....	7
Section 7:	Environmental Impact Assessment.....	9
Section 8:	Due Diligence Process	11
Section 9:	Bidding and Procurement.....	12
Section 10:	Pre-Construction	13
Section 11:	Construction	14
Section 12:	Disbursement of Loan Proceeds	15
Section 13:	Reservation of Rights	16
Section 14:	Criteria for Supplemental Drinking Water & Wastewater Assistance..	16
	Fund	



CLEAN WATER STATE REVOLVING FUND LOAN PROGRAM GUIDELINES

Section 1: Purpose

Pursuant to IC 4-4-11-15 (2), the following Guidelines shall be used to implement the Clean Water State Revolving Fund (SRF) Loan Program established by IC 13-18-13. The purpose of the SRF Loan Program is to:

- (1) Provide funding for Loans or other Financial Assistance to or for the benefit of Participants for the planning, design, construction, renovation, improvement, or expansion of wastewater collection and treatment systems and other activities necessary or convenient in order to facilitate compliance with state and federal water quality standards.
- (2) Conduct all other activities permitted by the Clean Water Act.
- (3) Pay the cost of administering the Clean Water SRF Program.

Section 2: Definitions

The following definitions apply throughout this document:

Additional Subsidization means to provide additional subsidization, including forgiveness of principal, negative interest loans, and/or grants in accordance with the Clean Water Act Section 603(i) as amended by the Water Resources Reform and Development Act of 2014 (WRRDA). Priority may be given to Participants that could not otherwise afford such projects as determined by the Authority.

Authority means the Indiana Finance Authority, created under IC 4-4-11, which administers the Program.

Authorized Representative means a person who has been designated by the governing Board of a Participant to sign documents on behalf of that Board.

Best management practice means a practice or combination of practices that have been determined to be the most effective and practicable means of preventing or reducing water pollution to a level compatible with water quality goals.

Board means the governing body of the Participant seeking Financial Assistance.

Bond is the debt instrument which evidences the long term financing undertaken by a Participant in accordance with Indiana statutes for incurring debt.

Categorically Excluded means categorically excluded from substantive environmental review, which applies to a Proposed Project that has no physical impact, such as a planning project, or to a Proposed Project with minimal environmental impact as defined in the State Environmental Review Process (SERP) document.

Categorical Exclusion or CE is an environmental document issued when a Proposed Project has no physical impact or has minimal environmental impact as defined by the SERP.

Change Order means proposed work that is being added to or deleted from the original contract, which may alter the original contract amount and/or completion date.

Clean Water Act or CWA means the Federal Water Pollution Control Act (FWPCA), 33 U.S.C. 1251 et seq., in effect on January 1, 1989, amended on December 16, 1996, and further amended by the Water Resources Reform and Development Act of 2014 (WRRDA), in effect on October 1, 2014.

Clean Water SRF or CWSRF means the State's Clean Water State Revolving Fund created in accordance with the CWA and State Law.

Due Diligence means a process that provides financial disclosures to the Program, as well as economic matters related to the Participant and its ability to repay a Loan to the Program.

Environmental Assessment or EA is a report prepared pursuant to the SERP upon completion of the SRF Program's review of a Preliminary Engineering Report or any other document describing the Proposed Project and its environmental impacts.

Environmental Impact Statement or EIS is a document prepared for a Proposed Project if it is determined by the Program that the construction or operation, or both, of a Proposed Project will result in significant environmental impacts. The purpose, content, and format of an EIS will be in accordance with the SERP.

Environmental Protection Agency (EPA) Capitalization Grant means a federal grant, as evidenced by an agreement with the United States Environmental Protection Agency that provides funds to capitalize the Clean Water SRF program.

Equivalency Project means a project or projects in an amount equal to the current Capitalization Grant. Equivalency Projects must comply with all of the following: a) FFATA Reporting Requirements, b) Single Audit Act (see 2 CFR 200 Subpart F), c) Federal Cross Cutters, d) Disadvantaged Business Enterprise, e) 40 U.S.C. Chapter 11 Procurement for Architectural and Engineering Services, f) signage requirement and g) other equivalency requirements set forth in the current Capitalization Grant terms and conditions.

Financial Aid Agreement means an agreement between the Participant and the Authority pursuant to IC 13-18-21-27 that contains the terms and conditions of the grant, loan or other financial assistance provided from the Supplemental Drinking Water and Wastewater Assistance Fund.

Financial Assistance means the types of financial assistance authorized by the Clean Water Act, including providing Additional Subsidization.

Financial Assistance Agreement means an agreement between the Participant and the Authority pursuant to IC 13-18-13-12 that contains the covenants between the Participant and the Authority concerning Financial Assistance from the Clean Water SRF.

Financial Assistance Closing means the occasion in which a Participant tenders its note, bond, guaranty agreement, or credit enhancement agreement to the Authority and the Authority provides a portion, or all, of the Clean Water SRF Financial Assistance to the Participant.

Finding of No Significant Impact or FNSI means a finding of no significant impact, issued with an EA, that the construction and operation of a Proposed Project or the improvements thereto will not significantly impact the environment.

Funded Project means a Proposed Project which received funding through an executed Financial Assistance Agreement or Financial Aid Agreement by and between the Authority and the Participant.

Green Project Reserve Sustainability Incentive Program or GPR means assistance in the form of interest rate discounts to address green infrastructure, water or energy efficiency improvements, other environmentally innovative activities, or climate resiliency planning.

Intended Use Plan or IUP means a plan prepared by the Authority identifying the intended uses of the amount of funding available to the Clean Water SRF. The IUP shall include all requirements set forth in the CWA.

Loan means purchasing the notes or bonds of a Participant to finance a Proposed Project or Refinancing an existing eligible debt obligation.

Note means the legal instrument (financial instrument), in which the Participant promises in writing to pay a sum of money to the Authority, either at a fixed or future time or on demand of the Authority, under specific terms.

Operation and Maintenance includes the activities required to ensure the continuing dependable and economic function of the Treatment Works, including maintaining compliance with National Pollutant Discharge Elimination System permits as follows:

- (1) Operation is the control and management of the unit processes and equipment that make up the Treatment Works. This includes financial and personnel management, records, reporting, laboratory control, process control, safety and emergency operation planning, and operating activities.
- (2) Maintenance is the preservation of the functional integrity and efficiency of equipment and structures by implementing systems of preventive and corrective maintenance.

Participant means the following:

- (1) Political Subdivision as defined in IC 36-1-2-13.
- (2) Regional Water, Sewage, or Solid Waste District organized under IC 13-26-1.
- (3) Conservancy District established for purpose set forth in IC 14-33-1-1(a)(5).

- (4) Any other owner of a Treatment Works that is authorized by the Clean Water Act to borrow from the Clean Water SRF.

Preliminary Engineering Report or PER means the document(s) submitted by the Participant that provides the information necessary for the Program to determine the technical, economic, and environmental adequacy of the Proposed Project.

Program means the Clean Water State Revolving Fund Loan Program as established by IC 13-18-13.

Project Priority List or PPL ranks, in descending priority of need, Proposed Projects for which Participants have requested Financial Assistance from the Clean Water SRF for eligible expenses. The PPL is created by the Program, updated quarterly, and may be amended as necessary.

Proposed Project means the activities or tasks a Participant identifies in its PER or other document required by the SRF Program related to the planning, design, and or construction of a Proposed Project for which the Participant may commit and expend funds.

Refinancing means the refinancing of a Participant's issued and outstanding bond, note or other debt obligation as permitted by the Clean Water Act through the Clean Water SRF under criteria used by the Authority from time to time.

Record of Decision or ROD means a record of decision issued by the SRF Program upon the completion of an EIS which includes a determination of whether to proceed with a Proposed Project.

Sewer Charge System means a set of documents submitted by the Participant to the Program that may include a rate study, sewer rate ordinance, and any interlocal agreements or contracts that will determine the financial and legal capability associated with the operation and use of the Treatment Works project financed by the CWSRF.

State Environmental Review Process or SERP means the State Environmental Review Process which is a National Environmental Policy Act-compliant environmental review approved by the U.S. Environmental Protection Agency.

Study Area means the geographical area comprising a Participant's boundaries which also includes the location of the Proposed Project to be financed or refinanced by such Participant through the Clean Water SRF.

Substantial Completion Date of Construction means the date determined by the Participant and provided to the Program when all but minor components of a Funded Project have been constructed, all equipment is operational, and the Funded Project is capable of functioning as designed.

Substantive Environmental Impact means a significant adverse environmental impact which may result directly or indirectly from the construction, upgrade, expansion or operation of a Proposed Project.

Supplemental Drinking Water and Wastewater Assistance Fund means the fund established under IC 13-18-21-21 to provide money for grants, loans, and other financial assistance to Participants for the purposes described in IC 13-18-21-23.

Treatment Works means any devices and systems for storage, transport, treatment, recycling, and reclamation of municipal sewage, domestic sewage, or liquid industrial wastes used to implement the Clean Water Act, or necessary to recycle or reuse water at the most economical cost over the design life of the works. These include one or all of the following:

- (1) Intercepting sewers, outfall sewers, sewage collection systems, individual systems, pumping, power, and other equipment and their appurtenances.
- (2) Extensions, improvements, remodeling, additions, and alterations thereof.
- (3) Elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities.
- (4) Any works including land that will be an integral part of the treatment process or is used for ultimate disposal of residue resulting from such treatment (including land for composting sludge, temporary storage of such compost, and land used for the storage of treated Clean Water in land treatment systems before land application) and interests in land that are necessary for construction.)
- (5) Any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste or industrial waste, including waste in combined storm water, sanitary sewer systems and from nonpoint sources.
- (6) Any other activities that are permitted by the CWA under the definition of Treatment Works.

Water Resources Reform and Development Act of 2014 (WRRDA) means the law signed by the President on June 10, 2014. Among its provisions are amendments to Title I, II, V and VI of the Federal Water Pollution Control Act.

Section 3: Uses of the Clean Water SRF

The Clean Water SRF will be used to do the following:

- (1) Provide Financial Assistance for Proposed Project planning, design, and/or construction or for other activities that are permitted by the Clean Water Act.
- (2) Refinance a Participant's outstanding indebtedness as determined to be eligible for repurchase by the Authority under the Clean Water Act.
- (3) Pay reasonable direct and indirect Program administration costs.

Section 4: Criteria for Determining Financial Assistance Eligibility

4-1 Project Priority List

A Proposed Project must be on the PPL to be awarded Financial Assistance from the Authority.

4-2 Intended Use Plan

- (1) The Program will prepare annually an IUP and PPL pursuant to the Clean Water Act, to be effective on the first day of the State's fiscal year.
- (2) The Program will adopt an IUP after public notice of the plan and after responding to any comments received as determined by Program staff. The Program may amend the IUP to add eligible Proposed Projects, and change or amend Proposed Projects as necessary from time to time.
- (3) Placement on the PPL will be based on the following criteria:
 - (a) The Proposed Project must be consistent with the uses of the Clean Water SRF as identified in the Clean Water Act and IC 13-18-13.
 - (b) A Participant must submit general project information on an application form provided by the Program that is signed by the Participant's Authorized Representative.

Section 5: Program Standards

Loans and other available Clean Water SRF Financial Assistance for Proposed Projects will be made only to a Participant that meets all of the following criteria:

- (1) Owns, operates, and maintains, or causes to be operated and maintained, a Treatment Works for its useful life.
- (2) Demonstrates financial, managerial, technical, and legal capability to meet the terms of the Financial Assistance Agreement and to operate and maintain the Treatment Works for its useful life.
- (3) Establishes and maintains just and equitable rates and charges for the use of and the service rendered by the Treatment Works. Agrees to:
 - (a) Maintain financial records in accordance with generally accepted government accounting principles for utilities (including standards relating to the reporting of infrastructure); and
 - (b) Provide to the Authority, as it may request from time to time, a copy of audits of the Treatment Works financial records as conducted by the State Board of Accounts or other certified independent auditor during the term of its Financial Assistance Agreement.
- (4) Agrees to allow inspection by the Authority of the financial records related to the Treatment Works during the term of the Financial Assistance Agreement.
- (5) Meets all other Program requirements.

Section 6: Preliminary Engineering Report (PER)

6-1 Purpose

The purpose of the PER is to provide the information necessary for the Program to determine the technical, economic, and environmental adequacy of the Proposed Project. The PER must be approved by the Program prior to award of Financial Assistance for a Proposed Project,

unless it is a refinancing. PER information and data requirements are dependent on the type of Proposed Project and shall be determined by Program staff.

The Program may request additional information from a Participant that it deems necessary to adequately assess the technical, economic, and environmental adequacy of the Proposed Project.

6-2 Development and Implementation of Fiscal Sustainability Plan

The PER will contain a section identifying the status of the development of the Participant's Fiscal Sustainability Plan (FSP). The Participant must identify the status of the FSP in the PER by discussing whether the FSP is already completed and implemented or currently under development and will be completed before the final disbursement is approved and associated funds are released. The FSP shall meet the criteria as set forth in CWA Section 603 (d) (1) (E) and as determined by the Program. The Participant shall certify to the Program that it has met the above requirement.

6-3 Cost and Effectiveness Analysis

The Participant shall certify to the Program prior to closing a loan that it has conducted a cost and effectiveness analysis as described in the PER Guidance and as set forth in Section 602(b)(13)(A) and (B) in the CWA.

6-4 Development of Feasible Alternatives

The PER will contain a section identifying and evaluating the range of feasible alternatives that were evaluated during the planning process, including that of taking no action. The rationale for the selected alternative along with the reasons for rejecting the others must be included.

6-5 Environmental Information

The PER consists of the following environmental information:

- (1) A comparison of the potential environmental impacts among feasible alternatives, including that of taking no action.
- (2) An assessment of the cumulative environmental impacts of the feasible alternatives within each of the following categories:
 - (a) Disturbed and undisturbed land;
 - (b) Historic and Architectural Resources;
 - (c) Wetlands;
 - (d) Surface Waters;
 - (e) 100-Year Floodplains and Floodways;
 - (f) Groundwater;
 - (g) Plants and animals;
 - (h) Prime Farmland and Geology;
 - (i) Air Quality;

- (j) Open Space & Recreational Opportunities;
 - (k) National Natural Landmarks;
 - (l) Lake Michigan Coastal Zone (Lake, Porter & LaPorte counties only); and
 - (m) Secondary Impacts
- (3) The environmental information document will include an evaluation of the environmental impacts of taking no action to modify, improve, or expand an existing Treatment Works.
 - (4) Specific mitigation measures will be listed, as necessary, which will eliminate, minimize, or compensate for the environmental impacts set forth in 8-3 (2).
 - (5) If a Proposed Project is to be completed in several distinct phases, the environmental information associated with the first phase must consider the cumulative impacts of the entire proposed system, including all succeeding phases. As succeeding phases are constructed, no additional environmental information will be required if there have been no significant changes to the original PER.
 - (6) If, however, a Proposed Project contemplates significant changes to the original PER, the Program will conduct a review of the environmental impacts of the Proposed Project.

If the construction of a Proposed Project is initiated five or more years after the date of approval of a PER, an additional environmental information document will be required unless it is determined by the SRF Program that there have been no substantial changes in the environmental impacts of the Proposed Project.

6-6 Green Project Reserve (GPR) Sustainability Incentive Program

The Program may provide assistance in the form of an interest rate discount to eligible communities which request funding for Proposed Projects that address green infrastructure, water or energy efficiency improvements, other environmentally innovative activities or climate resiliency planning in an approved PER. The Participant must prepare and submit a Business Case or Categorical Exclusion during PER review in order to establish GPR eligibility.

6-7 Public Participation

The PER will include the following:

- (1) A record of the public hearing.
- (2) A copy of the publisher's affidavit from the newspaper with the public hearing notice.

Copies of all written comments submitted by the public during the PER process will be routed through the Program for comment.

6-8 Public Hearings

At least one Public Hearing will be held by the Participant within the Proposed Project's Study Area for the purpose of discussing the Proposed Project. A copy of the PER and/or documents reasonably describing a Proposed Project will be available to all attendees at the Public Hearing. Requirements for the Public Hearing will include the following:

- (1) The Public Hearing will be publicized in at least one newspaper of general circulation in the Study Area a minimum of ten days prior to the date of the Public Hearing.
- (2) The PER will be available for public review for a minimum of ten days prior to the date of the Public Hearing.
- (3) Written comments will be accepted during the Public Hearing and for a period of five days following the Public Hearing according to SRF Guidelines.
- (4) A sign-up sheet will be available at the Public Hearing for all individuals interested in receiving the CE, EA/FNSI, or EIS/ROD or environmental documents.

6-9 Amendment and Addendum

If there is a significant change in the scope of the project after the PER has been approved then the Participant will be required to prepare a PER Amendment (needed for work prior to a loan closing) or a PER Addendum (needed for work following a loan closing).

Section 7: Environmental Impact Assessment

7-1 Categorical Exclusions

The following classes of projects may be Categorically Excluded from substantive environmental review:

- (1) Minor addition, rehabilitation, improvement, or expansion of any existing treatment works that will disturb only previously disturbed land.
- (2) Rehabilitation of a Treatment Works distribution system that will disturb only previously disturbed land.
- (3) Planning and design or other “non-construction” projects.

A Categorical Exclusion (CE) may be rescinded by the Program if it is determined that sufficient information exists to suggest that substantive environmental impacts may occur as a result of the construction or operation, or both, of any Treatment Works construction project that received a CE.

The Program will public notice all new or rescinded Categorical Exclusions in one newspaper of general circulation within the Study Area and to www.srf.in.gov.

7-2 Environmental Assessment

The purpose of an EA is to document, for public evaluation and comment, the potential environmental impacts of the Proposed Project and describe the feasible Treatment Works alternatives. The EA will be provided as an attachment to the FNSI document and will be prepared according to the SERP.

7-3 Finding of No Significant Impact

The purpose of issuing a FNSI is to notify the public that based upon the Program's evaluation of all pertinent information submitted in the PER and information submitted by State and federal agencies, the construction and operation of the Proposed Project will result in no significant adverse environmental impact.

- (1) The FNSI and attached EA will be issued for public comments for thirty days. If significant public comments are received during the public comment period, the FNSI will be reevaluated and a new FNSI, if appropriate, will be issued for public comments for thirty days.
- (2) A final decision to proceed, or not to proceed, with the Proposed Project will be issued by the Program after all public comments have been evaluated

7-4 Environmental Impact Statement

The criteria for initiating an EIS are established under 40 CFR 6.108. A ROD will be issued by the Program upon completion of an EIS that will include a determination of whether to proceed with the Proposed Project. The ROD will contain specific mitigation measures that will minimize, eliminate, or compensate for the environmental impacts of the construction or operation, or both, of the Proposed Project. The ROD will be issued for public comments for thirty days and will be considered final in the absence of significant public comments. If significant public comments are received during the comment period, the ROD will be reevaluated and a new ROD, if appropriate, will be issued for public comments for thirty days.

Section 8: Due Diligence Process

The Due Diligence process will include the following tasks:

- (1) The Participant will submit a completed Due Diligence form issued or authorized by the Program with the required documentation.
- (2) The Program staff will review or cause to be reviewed the Due Diligence form and documentation.

8-1 Sewer Charge System

- (1) Every Participant will obtain the Authority's approval of its sewer charge system as part of the financial due diligence process.
- (2) Each Participant will establish rates and charges at a level adequate to produce and maintain sufficient revenue to properly operate and maintain the Treatment Works, and to repay all debt obligations of the Treatment Works.

8-2 Sewer Use Ordinance

The Participant's sewer use ordinance will meet the following requirements:

- (1) Prohibit any new unapproved connections into the Treatment Works.

- (2) Require that new sewers and connections to the Treatment Works be properly designed, constructed, and not subject to excessive infiltration and inflow.
- (3) Require that all Clean Water introduced into the Treatment Works meet the following criteria:
 - (a) Not contain toxins or other pollutants in amounts or concentrations that endanger public safety or physical or biological integrity of the Treatment Works.
 - (b) Not cause violation of effluent or water quality limitations
- (4) Ensure that applicants for privately owned individual systems provide assurance of access to these systems at all reasonable times for such purposes as inspection, monitoring, building, operation, rehabilitation, and replacement.

8-3 Interlocal Agreement

If the Proposed Project will serve two or more Participants, an interlocal service agreement, contract, or other legally binding instrument necessary for the financing, construction, operation, and maintenance of the Proposed Project will be submitted for approval by Authority staff prior to loan closing. If the Participant is a multi-county infrastructure Authority under IC 36-7-23, the Authority may require similar documentation and assurances.

8-4 Additional Subsidization

The Program may provide assistance in the form of principal forgiveness, negative interest rate loans, or grants to communities which meet eligibility requirements as set forth in Section 603(i) of the CWA. Priority shall be given to communities that could not otherwise afford such projects. The Program will determine eligibility prior to loan closing.

Section 9: Bidding and Procurement

Section 9 will not apply to a Refinancing.

9-1 Professional Services

Participants conducting procurement for the uses authorized by the Clean Water SRF for professional services will proceed pursuant to IC 5-16-11.1. Equivalency Projects must comply with 40 U.S.C. Chapter 11 or an equivalent State requirement for the procurement of architectural and engineering services.

9-2 Procurement of Construction and Equipment

Participants conducting procurement for the uses authorized by the Clean Water SRF for any activity other than professional services will proceed pursuant to IC 36-1-12.

9-3 Disadvantaged Business Enterprises (DBEs) (including Minority and Women's Business Enterprises)

The Participant shall make the following good faith efforts to ensure that disadvantaged business enterprises are utilized when possible. Good faith efforts include taking the following actions:

- (1) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities; including placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- (2) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitation for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- (3) Consider in the contracting process whether firms competing for large contracts could be subcontracted with DBEs. This will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- (4) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- (5) Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce.
- (6) If the prime contractor awards subcontracts, require the prime contractor to take the steps in numbers 1 through 5 above.

Section 10: Pre-Construction

Section 10 does not apply to a Refinancing unless noted below

10-1 Construction Permit

The Participant must obtain a construction permit from the Department of Environmental Management (IDEM) in accordance with State rules or other permitting authority if applicable, in conjunction with the approved Preliminary Engineering Report prior to awarding any construction contract. The Participant must receive authorization from the Program prior to initiating procurement for construction.

10-2 Acquisition of Land, Easements, and Existing Facilities

The Participant is responsible for acquisition of land, easements, and any existing facilities necessary to construct, operate, and maintain the Proposed Project. The Participant must certify to the Program that it has, or will have by a mutually agreeable date, the required property rights prior to entering into any contract to construct, operate and maintain the Proposed Project. All acquisitions of property by exercise of power of eminent domain will comply with the procedure in IC 32- 24-1 et seq.

10-3 Bid Tabulations

Certified bid tabulations and recommendations of award will be submitted by the Participant to the Program for review and approval prior to Participant's award of any construction contract.

10-4 Pre-Construction Contract Requirements

Participant must provide copies of the following to the Program for the Participant to enter into any construction contract:

- (1) Executed contracts.
- (2) Notices to contractors to proceed.
- (3) Bid bonds.
- (4) Performance and payment bonds.
- (5) Construction schedules.

10-5 Federal Prevailing Wages (Davis Bacon Act)

Federal prevailing wages as prescribed by the Davis-Bacon Act are required for any treatment works projects that are funded by the CWSRF Program. Applies to refinancings if project was constructed after October 30, 2009.

10-6 Pre-Construction Conference

Prior to the initiation of construction, Participant must hold a Pre-Construction Conference with all necessary parties, including the Program.

10-7 American Iron and Steel

Participants, absent a waiver or exception, are required to use iron and steel products produced in the United States for projects for the construction, alteration, maintenance, and repair of treatment works. Applies to refinancings if there is construction after January 1, 2014.

Section 11: Construction

Section 11 does not apply to a Refinancing.

11-1 Change Orders

- (1) The Participant will submit copies of every and all Change Order(s) issued for the Funded Project to the Program for review and approval, including but not limited to Change Orders which:
 - (a) Alter the scope or design of the Funded Project; or
 - (b) Increase the amount of financing needed for the Funded Project; or
 - (c) Increase or decrease the completion date.

- (2) If a Change Order will result in the expenditure of more Clean Water SRF funds than the current amount of Financial Assistance approved by the Authority, an amendment increasing the amount of Financial Assistance must be executed prior to the implementation of the Proposed Projects contemplated by the Change Order. Any additional Financial Assistance will comply with existing law as to the borrowing power of the Participant.

11-2 Inspections

- (1) The Program will conduct construction inspections in order to:
 - (a) Determine compliance with the Program approved PER, IDEM construction permit, the Financial Assistance Agreement and other applicable federal requirements, including but not limited to, the Davis Bacon Act and American Iron and Steel provisions as set forth in the CWA.
 - (b) Determine completion of any GPR components.
 - (c) Confirm development and implementation of the Participant's Fiscal Sustainability Plan or FSP.
 - (d) Confirm substantial completion of the Funded Project(s) in the final inspection.
 - (e) Protect the Authority's financial interest in the Funded Project(s).

Inspections performed by the Program are not conducted to replace the Participant's responsibility to properly monitor the construction of its Funded Project(s).

- (2) During the construction of the Funded Project(s), the Participant will:
 - (a) Conduct construction inspections to ensure that the construction complies with the Program approved PER, IDEM construction permit(s), and the terms and conditions of each construction contract.
 - (b) Maintain inspector logs, written in ink, with entries sufficient to establish the amount and quality of work completed by the contractor including weather conditions and problems encountered, if any.
 - (c) Maintain the required records related to the Participant's compliance with the Davis Bacon Act and the American Iron and Steel requirements.
 - (d) Conduct a pre-final inspection making a punch list of incomplete and unacceptable work to be corrected before final inspection.
 - (e) Provide the Program with the Certificate of Substantial Completion for each Funded Project, the final certification of Davis Bacon compliance and other certifications as required by the Authority to meet federal requirements, including the FSP certification.

11-3 As-Built Plans

Upon request by the Program and after completion of the Funded Project, the Participant shall provide as-built plans for the Funded Project to the Program. These may be submitted in an electronic format.

Section 12: Disbursement of Loan Proceeds

The Financial Assistance will be disbursed as follows:

- (1) The Program will review and certify the Clean Water SRF loan share of the appropriate costs incurred for the Funded Project. These costs will be documented as requested by the Program. The Authority may pay these costs in accordance with the Financial Assistance Agreement.
- (2) The Participant will approve all requests for loan disbursement and provide such approval to the Program.
- (3) Loan proceeds disbursed to or on behalf of the Participant will be used only for authorized purposes. Funds will not be applied to pay costs associated with an unapproved contract Change Order.
- (4) The Program may at any time review and audit requests for loan disbursements and make adjustments for circumstances including, but not limited to, the following:
 - (a) Mathematical errors.
 - (b) Items not yet purchased or constructed.
 - (c) Ineligible items.
- (5) All files and records pertaining to the Funded Project will be maintained by the Participant and made accessible to the Program upon request. These files and records will be retained by the Participant for at least six years after initiation of operation as determined by the Program. However, if any litigation, claim, negotiation, audit, or other action involving the records has been started before the expiration of the six-year period, the records will be retained until completion of the action and resolution of all issues that arise from it or until the end of the regular six- year period, whichever is later.

Section 13: Reservation of Rights

The following rights are reserved:

- (1) The Clean Water State Revolving Fund Loan Program Guidelines do not prohibit a Participant from requiring more assurances, guarantees, indemnity, or other contractual requirements from any party performing work on any Proposed or Funded Project.
- (2) The Clean Water State Revolving Fund Loan Program Guidelines do not affect the Program's right under existing rules to take remedial action, including, but not limited to, administrative enforcement action and actions for breach of contract against a Participant that fails to carry out its obligations under these Guidelines.
- (3) Review or approval by or for the Program does not relieve the Participant of its responsibility to properly plan, design, build, and effectively operate and maintain the Treatment Works as required by federal and state statutes, rules, regulations, permits, and best management practices. Neither the Program nor the Authority is responsible for increased costs resulting from defects in the plans, design drawings, specifications, inspections, construction, or other sub-agreement documents related to any Proposed or Funded Project.

Section 14: Criteria for Supplemental Drinking Water and Wastewater Assistance Fund

- (1) The Proposed project must be consistent with the uses of the Supplemental Drinking Water and Wastewater Assistance Fund as set forth in IC 13-18-21-23.
- (2) A Participant must submit general project information on an application form provided by the Program or in a form acceptable to the Program that is signed by the Participant's Authorized Representative.
- (3) Preference may be given to less populated and/or lower income areas.

**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest
Attachment: Financial Due Diligence Checklist**

STATE REVOLVING FUND LOAN PROGRAMS

REQUIRED FINANCIAL DUE DILIGENCE MATERIALS

SRF Qualified Entity (Name): _____
Contact Person (Name): _____ Phone #: _____
Financial Advisor (Name): _____ Phone #: _____
Due Diligence Information Received By SRF (Date): _____
Proposed SRF Closing (Date): _____

All Due Diligence Submissions MUST include the following; each separated by the appropriate numbered tab.

- ___ 1. Completed Due Diligence Submission Form
- ___ 2. Three Years of Audited Financial Statements (with notes)
- ___ 3. Copies of the last 3 years Internal Financial Reports (e.g. Gateway Report)
- ___ 4. Current Year's Budget
- ___ 5. Rate Consultant's Report
 - ___ a. Detail of Estimated Project cost
 - ___ b. Sources and Uses of Funds Statement
 - ___ c. Proposed Amortization Schedule
 - ___ d. Amortization Schedules of Outstanding Bonds (if any)
 - ___ e. Historical Financial Statements
 - ___ f. Pro Forma or Forecasted Financial Statements
 - ___ g. Detail of Adjustments or Detail of Assumptions Used in Forecast
 - ___ h. Schedule of Present and Proposed Rates
 - ___ i. Calculation of Debt Service Coverage (1.25x)
 - ___ j. Schedules of Proposed Outstanding Bonds
- ___ 6. A Copy of the Signed Rate and Bond Ordinance (net revenue issues)
- ___ 7. A Copy of the Department of Local Government Finance Order (tax backed issues)
- ___ 8. IURC Rate Order (if under IURC jurisdiction)
- ___ 9. Source and Use of Funds Statement
- ___ 10. Amortization Schedule for the Proposed Bonds
- ___ 11. Proof of Surety Bond for Reserve (if using a surety bond)
- ___ 12. Inter-local Agreement

Additional Required Submissions for Qualified Entities with Outstanding Bonds:

- ___ 13. List of all Outstanding Bonds
- ___ 14. Status of Parity and Junior Bonds
- ___ 15. Identify source of payment for each Bond Issue
- ___ 16. Copy of Bond Ordinances for ANY Outstanding Senior Bonds
- ___ 17. Combined Amortization Schedule for All Proposed and Outstanding Bonds
- ___ 18. Parity Test and Proof of Appropriate Coverage

State Use Only:

SRF Reviewer (Name): _____

Forwarded to SRF-reviewer for an opinion (Date): _____

SRF Due Diligence Approved (Date): _____

SRF-Due Diligence Form 03-2017

**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest**

Attachment: SRF Rating Letters related to its Bonds

Indiana Finance Authority

State Revolving Fund Program New Issue Report

Ratings

New Issues

State Revolving Fund Program Bonds, Series 2016D (Green Bonds)	AAA
State Revolving Fund Program Refunding Bonds, Series 2016E (Green Bonds)	AAA

Outstanding Debt

Parity State Revolving Fund Debt	AAA
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Rating Outlook

Stable

New Issue Details

Sale Information: Approximately \$158,080,000 State Revolving Fund Program Bonds, Series 2016D (Green Bonds), and \$134,430,000 State Revolving Fund Program Refunding Bonds, Series 2016E (Green Bonds), via negotiation the week of Sept. 19.

Security: Loan repayments, debt service reserve funds and/or releases from such funds, and other accounts pledged under the series and master trust indentures.

Purpose: Series 2016D to finance certain eligible water and wastewater system projects in the state and pay costs of issuance; series 2016E to refund certain outstanding series of bonds and pay costs of issuance.

Final Maturity: Series 2016D: Aug. 1, 2046; series 2016E: Feb. 1, 2030.

Key Rating Drivers

Sound Financial Structure: Fitch Ratings' cash flow modeling demonstrates that Indiana Finance Authority's (IFA) combined clean water state revolving fund (CWSRF) and drinking water state revolving fund program (DWSRF, or the program) can continue to pay bond debt service even with loan defaults in excess of Fitch's 'AAA' liability rating stress hurdle produced using our Portfolio Stress Calculator (PSC).

Below-Average Pool Quality: Approximately 55% of IFA's loan portfolio consists of unrated entities, which Fitch conservatively assumes in our analysis to be of speculative-grade credit quality. Overall, pool credit quality is slightly below average compared with other state revolving funds (SRFs) rated by Fitch.

Moderate Portfolio Diversity: IFA's combined loan pool is large and moderately diverse. The largest borrower, the city of Fort Wayne, represents an above-average 19.3% of the combined pool. The largest 10 borrowers represent approximately 49% of the total pool.

Strong Program Management: IFA adheres to consistent, conservative underwriting policies. Management and underwriting strength is exhibited by the fact that the program has never experienced a default.

Rating Sensitivities

Reduction in Modeled Stress Cushion: Significant deterioration in aggregate borrower credit quality, increased pool concentration, or increased leveraging resulting in the program's inability to pass Fitch's 'AAA' liability rating stress hurdle would put downward pressure on the rating. The Stable Rating Outlook reflects Fitch's view that these events are unlikely to occur.

Related Research

[Fitch Rates Indiana Finance Authority's \\$292MM SRF Bonds 'AAA'; Outlook Stable \(September 2016\)](#)

[State Revolving Fund and Municipal Loan Pool Peer Review \(October 2015\)](#)

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Rating History

Rating	Action	Outlook/ Watch	Date
AAA	Affirmed	Stable	9/8/16
AAA	Affirmed	Stable	2/5/15
AAA	Affirmed	Stable	3/21/14
AAA	Affirmed	Stable	12/5/13
AAA	Affirmed	Stable	1/19/12
AAA	Affirmed	Stable	1/5/10
AAA	Affirmed	Stable	11/16/07
AAA	Affirmed	Stable	11/10/06
AAA	Affirmed	Stable	12/6/02
AAA	Assigned	—	8/9/98

[Need the full rating history, not abbreviated.]

Credit Profile

IFA's SRF programs were created to provide loans to local entities for wastewater and drinking system improvements. IFA is responsible for the administration and management of the SRFs. Bond proceeds and recycled funds are combined with federal grants and a state matching requirement to provide loans for such projects.

Most of the program's credit metrics — including those of the financial structure and pool credit quality — have remained stable over the past several years. Like many SRF programs, IFA is in the process of transitioning the program from primarily a reserve fund structure, wherein loss protection is provided by reserves, to a cash flow structure, or one in which loss protection is provided by available surplus cash flows.

Sound Financial Structure

Fitch measures the financial strength of SRFs by calculating each program's asset strength ratio (PASR). The PASR includes the sum of the total scheduled pledged loan repayments and reserves divided by total scheduled bond debt service. IFA's PASR is 1.4x, which is slightly lower than Fitch's 2015 'AAA' rating category median of 1.9x but considered to be supportive of Fitch's 'AAA' rating.

Largest Borrowers

Borrower	% of Portfolio
Fort Wayne	19.3
Terre Haute	7.4
Evansville	6.6
Columbus	3.1
Jeffersonville	3.0
Hammond Sanitary District	2.3
Fort Wayne	2.0
Huntington	1.9
East Chicago	1.6
Goshen	1.5
Total	48.5

Due to the strength of the financial structure, cash flow modeling demonstrates that the program can continue to pay bond debt service, even with hypothetical loan defaults of 85.1% in the first year and 100% in the middle and last four years of the program's life (per Fitch criteria, a 90% recovery is also applied in its cash flow model when determining default tolerance). This is in excess of IFA's 'AAA' liability rating stress hurdle of 40%, as produced by Fitch's PSC. The rating stress hurdle is calculated based on overall program credit quality as measured by the ratings of underlying borrowers, borrower size, loan term, and concentration.

Loss Protection Provided by Overcollateralization and Reserves

Under the SRF program's structure, each bond series is protected from losses by borrower loans made in excess of bond debt service (overcollateralization) and, in certain prior series, separately secured debt service reserves. As series bonds amortize, released reserves, excess loan repayments and interest earnings are deposited into a deficiency fund, which is available to make debt service payments on any bonds issued under the master trust indenture. The method by which excess amounts are deposited into the deficiency fund allows for cross-collateralization between the CWSRF and DWSRF, increasing pool diversity and potentially lower total loss amounts. Due to the cross-collateralization feature, Fitch combines the programs in its cash flow modeling.

No dedicated reserve fund is expected to be funded with the series 2016 bonds. However, the bonds benefit from excess reserve deallocations released from previous series' reserves, as described in the preceding paragraph. At the direction of IFA, funding of dedicated reserves for the series bonds may be initiated by delivering written notice to the trustee. The combined

Related Criteria

[Revenue-Supported Rating Criteria \(June 2014\)](#)

[State Revolving Fund and Leveraged Municipal Loan Pool Criteria \(October 2015\)](#)

reserve balance from previous bond issues is approximately \$176 million, or roughly 12% of total outstanding bonds.

Minimum annual debt service coverage is calculated to be about 1.06x, which is low but typical for SRF structures enhanced by reserve funds. As the transition from a reserve fund to a cash flow structure continues, minimum annual debt service coverage is expected to improve. Current projections demonstrate coverage improving to 1.25x by 2022 and then remaining around or better than this level through maturity.

Quality Loan Pool with Average Diversity

The combined loan pool is composed of about 351 borrowers. Excluding the Indianapolis Local Public Improvement Bond Bank, whose loans were defeased via an escrow agreement in 2011, the city of Fort Wayne is the largest participant, representing about 19.3% of the pool. The city of Fort Wayne's loan pool concentration has increased, as the current financing will provide an additional \$138 million to help the city address its combined sewer overflow issues. At 7.4% and 6.6%, respectively, the second and third largest borrowers are the Terre Haute Sanitation District (THSD) and the city of Evansville.

Although the specific loan securities pledged by these borrowers are not rated by Fitch, all three are assessed to be of strong credit quality. However, management reports that THSD has had recent trouble managing its expenses under its property tax cap. As a result, IFA has prudently required additional provisions to ensure THSD's loans are paid in full and on time. Most notably, the utility is raising rates by 15% this year and has deposited \$3 million with IFA's trustee until the rate increase takes effect. Fitch will continue to monitor this situation.

Each remaining program participant accounts for 3% or less of the total pool. In aggregate, the top 10 borrowers represent approximately 49% of the loan pool versus Fitch's 'AAA' median level of 55%. Based on these attributes, Fitch views the loan pool as having somewhat better diversity than similar 'AAA' programs.

While approximately 45% of the pool is rated 'BBB+' or better, the remaining 55% does not have a public rating. Therefore, in accordance with Fitch criteria, the unrated portion of the pool was conservatively estimated to be of speculative-grade credit quality ('BB') in our analysis.

Due largely to the number of unrated entities, credit quality is somewhat weaker than that of similar municipal pools rated by Fitch, as reflected by an 'AAA' PSC liability stress hurdle of 40% versus Fitch's 'AAA' median level of 31% (lower liability stresses correlate to stronger credit quality). However, the strong loan security pledges, which consist primarily of water/wastewater net system revenues, and above-average pool diversity somewhat mitigate the pool credit risk.

Strong Program Management

IFA manages both the CWSRF and DWSRF programs using strong underwriting practices. Among other factors, IFA takes into consideration in its borrower assessment the creditworthiness of the borrower and environmental goals of the SRF program. Loans secured by system revenue pledges (the primary source of loan security) must demonstrate minimum coverage of 1.25x annual debt service coverage and are also required to create a local debt service reserve fund equal to 1.0x maximum annual debt service.

Annual loan monitoring is conducted on outstanding borrowers and includes verification of local reserves and a review of financial statements. No loan defaults have been reported within the IFA SRFs to date.

The ratings above were solicited by, or on behalf of, the issuer, and therefore, Fitch has been compensated for the provision of the ratings.

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CREDIT OPINION

7 September 2016

New Issue

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Indiana Finance Authority

New Issue - Moody's assigns Aaa to Indiana Finance Authority State Revolving Fund Bonds, Series 2016 D&E; outlook stable

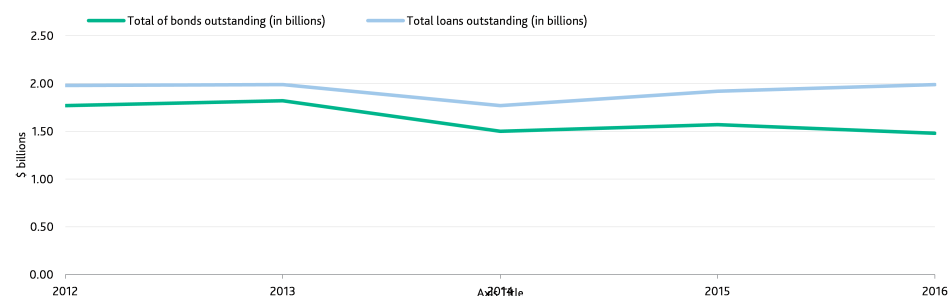
Summary Rating Rationale

Moody's Investors Service has assigned an Aaa rating to the proposed Indiana Finance Authority's (Authority) \$158 million State Revolving Fund (SRF) Program Bonds, Series 2016 D (Green Bonds), and \$130.4 million SRF Program Refunding Bonds, Series 2016 E (Green Bonds). Concurrently, Moody's has affirmed the Aaa rating on all of the Authority's outstanding parity SRF bonds. The outlook on the rating is stable.

The Aaa rating is based on the high default tolerance of the combined wastewater and drinking water SRF programs (program), the satisfactory credit quality of the combined wastewater and drinking water loan pools (loan pool), the programs' structure that allows for the capture of de-allocated funds in the Deficiency Fund where they are made available to cure program debt service shortfalls before they are released to the general equity account (not pledged), and strong management's oversight.

Exhibit 1

Program's outstanding loans increase relative to bonds reflecting transition from a reserve model to a cash flow model (funds that would have been pledged as reserves are used to originate loans)



As of Moody's review date
 Source: Indiana Finance Authority

Credit Strengths

- » Strong default tolerance remains the core strength of the program. Program resources enables it to absorb about 29% of potential defaults of underlying loans without impairing debt service for the life of the bonds. To date, no program participant has ever defaulted.
- » Adequate characteristics of program participants as reflected in the overall weighted average credit quality of the loan pool. The size and diversity of the loan pool makes the program less vulnerable to event risk and significant credit deterioration of any single participant.
- » Legal framework and structural features such as cross-collateralization of the waste water and drinking water SRF programs.
- » Strong program management and oversight practices that enhance credit stability.

Credit Challenges

- » De-allocated reserves (in proportion to principal repayments) and surpluses, once released to equity, are not pledged anymore; however, they are used to originate new loans which are generally pledged to future bonds series.

Rating Outlook

Moody's stable outlook reflects our expectation that the weighted average credit quality of the loan pool will remain sound and debt service coverage ratios and program default tolerance will also remain in line with the rating.

Factors that Could Lead to an Upgrade

- » N/A

Factors that Could Lead to a Downgrade

- » The rating may be pressured by significant increase in leverage, material deterioration in the credit quality of the Loan Pool, and/or very high borrower concentration.

Key Indicators

Exhibit 2

Indiana Finance Authority's State Revolving Fund Program

	2012	2013	2014	2015	2016
Total of bonds outstanding (in billions)	1.77	1.82	1.50	1.57	1.48
Default tolerance	26%	27%	26%	26%	29%
Number of unique borrowers	335	341	338	352	351
Percentage of pool top 5	34%	31%	31%	29%	36%
Percentage of pool below 1%	43%	45%	46%	47%	44%
Total loans outstanding (in billions)	1.98	1.99	1.77	1.92	1.99

As of our credit review date

Source: Indiana Finance Authority and Moody's Investor Service calculations

Recent Developments

Recent developments are incorporated in the Detailed Rating Considerations.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

Detailed Rating Considerations

Loan Portfolio: Weighted Average Credit Quality, Size and Diversity of the Loan Pool Provide adequate Credit Support

Program loan repayments are the primary source of security for debt service payment and therefore are a key rating driver. The SRF makes loans to local municipalities for eligible wastewater and drinking water projects under the federal Clean Water Act and Safe Drinking Water Act. Including the Indianapolis Local Public Improvement Bond Bank loan, which was defeased in 2011, the loan pool consists of 351 unique borrowers, accounting for about \$1.99 billion of loan principal outstanding. The loans back approximately \$1.48 billion of bonds outstanding. The vast majority of the loan pool participants pledge their system net revenues.

Although, the loan pool is largely composed of small unrated participants, it exhibits overall characteristics that are consistent with an average credit quality. To date, there have been no recorded defaults in this well-established program. Participants with less than 1% make up roughly 44% of total loan principal and the top five participants account for 36%. The share of the City of Fort Wayne Sewer Enterprise (rated A1) continue to increase and will double with this issuance, 18% of the total principal, but remains manageable at this level. Fort Wayne will use the funds to finance its Long Term Control Project per Consent Decree schedule with Environmental Protection Agency (EPA). The Authority reports that going forward Fort Wayne will have a "more routine and smaller" financing needs.

Underlying Credit Quality and Default Tolerance: Strong Default Tolerance Remains the Core Strength of the Program

The default tolerance reviewed by Moody's in conjunction with this issue is strong at about 29%, representing the amount of scheduled loan repayments that could default for the life of the bonds and debt service still gets paid. The high default tolerance can be attributed to excess participants' loan repayments and sizeable, although declining, program reserves are currently estimated at \$178 million or about 12% of bonds. The level of excess loan repayments continues to grow while reserves decline as the program slowly converts to a cash flow model from a reserve type model.

The default tolerance does not assume recovery from the defaulted loans, amongst other things. It also does not include equity and certain reserves ("local reserves") not directly pledged to bondholders. Management may, but is not required to, direct the SRF trustee to use equity to pay debt service, if needed. The combined wastewater and drinking water equity funds balance stood at about \$541 million, net of unfunded loan commitment, as of 6/30/2016. Similarly, local reserves, which each participant is typically required to fund at maximum annual debt service over a period of five years, are held by the SRF trustee and available to cure a short fall in the participant's debt service, if necessary. Local reserves' total balance is at about \$174 million.

LIQUIDITY

The program benefits from a strong liquidity position demonstrated by continuous de-allocation of SRF reserves as loans are repaid. This is enhanced by the presence of local reserves and substantial equity. Further, program reserve investment practices and guidelines are prudent as demonstrated by 100% of series reserves invested in Treasuries, Agencies, SLGS, and Cash Equivalents.

Legal Framework, Covenants and Debt Structure: Capture of Excess Funds in the Deficiency Funds to Cure Shortfalls is a Key Consideration

The bonds are issued pursuant to the respective Wastewater SRF Trust Indenture and Drinking Water SRF Trust Indentures. While the two programs are operated separately, they are similarly structured and administered and are cross-collateralized. The flow of funds allows for capture of de-allocated wastewater and drinking water reserves and excess cash flow in the Deficiency Fund and then made available to cure debt service shortfalls in either program before they are released to equity. The Deficiency Fund holds all excess funds on an annual basis and links all bond series. Under the program's reserve fund structure, each bond series is secured by borrower loans and a separate debt service reserve that is funded from federally capitalized grants. As bond series amortize, released reserves, excess loan repayments and interest earnings are deposited into the Deficiency Fund and made available for debt service payments on any bonds issued under the master trust estate. The program has been transitioning from a reserve model to a cash flow model and as such there is no debt service reserve fund requirement for the Series 2016 D & E. The cash flow model uses funds that would have been pledged as reserves to originate loans that are pledged to the bonds.

DEBT STRUCTURE

The Bonds will bear interest at fixed interest rates to their maturity or early redemption.

DEBT-RELATED DERIVATIVES

None.

PENSIONS AND OPEB

Not a material factor for this rating action.

Management and Governance: Active Role of Management Enhances Credit Stability

Management is deeply familiar with all aspect of the program. Management oversight is evidenced by formal policies and procedures for debt and investments, and contingency plans for unexpected events. It uses consistent underwriting practices and implements strategies and policies that safeguard program financial security in meeting mission goals. In its assessment, the SRF takes into consideration the creditworthiness of the borrower and environmental goals of the program, among other factors. Loans secured by system revenue pledges (the primary source of loan security) must demonstrate minimum coverage of 1.25x annual debt service at the closing of the loan and are also required to create a local reserve equal to maximum annual debt service. Loans are typically limited to 20 years and are structured with level annual payments. Annual loan monitoring is conducted on outstanding borrowers as needed, and includes verification of local reserves and a review of financial statements.

Legal Security

Limited obligation of the Indiana Finance Authority, payable from and secured by assets pledged to the bonds under the SRF series indentures and the master trust indenture, including loan repayments from pool participants, reserve funds and reserve fund earnings.

Use of Proceeds

The Series 2016 D bonds proceeds will be used to provide loans to participants for eligible projects while the Series 2016 E bonds will be used to refund certain previously issued series of bonds for a net PV savings of about \$16 million or 11% of refunded bonds, subject to market conditions. All savings will remain in the program.

Obligor Profile

The State established the program to provide financial assistance to political subdivision for eligible clean water and drinking water projects. The Indiana Finance Authority has responsibility for the administration and management of the program.

Methodology

The principal methodology used in this rating was U.S. State Revolving Fund Debt published in March 2013. Please see the Ratings Methodologies page on www.moody.com for a copy of this methodology.

Ratings

Exhibit 3

Indiana Finance Auth. - State Rev. Fd. Prog.

Issue	Rating
State Revolving Fund Program Refunding Bonds, Series 2016E (Green Bonds)	Aaa
Rating Type	Underlying LT
Sale Amount	\$130,430,000
Expected Sale Date	09/22/2016
Rating Description	Revenue: Pool
State Revolving Fund Program Bonds, Series 2016D (Green Bonds)	Aaa
Rating Type	Underlying LT
Sale Amount	\$158,080,000
Expected Sale Date	09/22/2016
Rating Description	Revenue: Pool

Source: Moody's Investors Service

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RatingsDirect®

Summary:

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Table Of Contents

Rationale

Outlook

Summary:

Indiana Finance Authority; State Revolving Funds/Pools

Credit Profile

US\$158.08 mil st revolving fd prog bnds (Green Bnds) ser 2016D due 08/01/2046		
<i>Long Term Rating</i>	AAA/Stable	New
US\$130.43 mil st revolving fd prog bnds (Green Bnds) ser 2016E due 02/01/2030		
<i>Long Term Rating</i>	AAA/Stable	New
Indiana Fin Auth, Indiana		
Indiana Bnd Bank, Indiana		
Indiana Fin Auth (Indiana Bond Bank) (state revolv fd prog)		
<i>Long Term Rating</i>	AAA/Stable	Affirmed

Rationale

S&P Global Ratings has assigned its 'AAA' long-term rating to the Indiana Finance Authority's (IFA) series 2016D and E state revolving fund (SRF) program bonds, both of which have been designated by IFA as green bonds. We have also affirmed our 'AAA' long-term rating on the IFA's previously issued debt under its bond indenture. The outlook is stable.

The ratings reflect the following characteristics:

- An extremely strong enterprise risk profile, given that the pool has ongoing support from multiple levels of government and was established by statute; and
- An extremely strong financial risk profile, reflected by its loss coverage score (LSC), operating performance, and financial policies.

Because we view securitizations backed by pools of public-sector assets as highly sensitive to country risk, the rating on the securitization is capped at two notches above the sovereign. However, no specific sovereign default stress is applied, given the U.S. sovereign rating is 'AA+'.

The authority will use the series 2016D bond proceeds to both make loans and use the series 2016E bond proceeds to refund existing bonds. Payment of debt service is secured through the trust estate, which primarily consists of loan principal and interest payments, as well as interest earnings and balances on various pledged reserve accounts.

We view the enterprise risk profile of the program as extremely strong. This is due to a combination of the low industry risk profile for municipal pools and the program's market position, which we consider extremely strong. The IFA performs both financial and environmental review for Indiana's SRF program, and receives financial support from multiple levels of government, including federal capitalization grants and state matching funds. The IFA is authorized by state statutes to manage both the drinking water and wastewater SRF programs.

We view the financial risk profile of the program as extremely strong, reflecting the combination of the LSC, historical

operating performance, and management policies.

Over-collateralization is primarily achieved through the program's various reserve funds pledged for repayment on specific series of bonds; reserve funds can then be released for any program purpose if deficiencies for debt service occur in any parity bonds in either program. Pledged to repayment on \$1.5 billion of bonds are \$176 million of reserve funds and \$2.0 billion of loans. The program's overall cash flows are structured to generate annual loan revenues and interest earnings that cover debt service from both state match and guarantee bonds by over 1x in most years (except in some years, when reserves are de-allocated specifically to pay debt service). Cross-collateralization is achieved through the program's deficiency fund. This fund holds reserve draws and excess program revenues that can be used to pay debt service on any outstanding parity debt. Excess program revenues can also be transferred to equity; program administrators can use this for any SRF purpose, including for debt service on parity debt.

Averaging all of the financial policies and practices, we view the corpus of these as generally strong. Management performs credit reviews for all new loans and require borrowers to exhibit debt service coverage (DSC) of at least 1.25x on SRF loans. Financial disclosure is required for all borrowers annually, and loan repayments are generally collected on an ongoing basis compared to semiannual debt service payments. The state's intended use plan is updated annually and project priority lists are also developed. Management also invests its cash in investments in compliance with state statutes; currently, all of the IFA's SRF-related investments are in cash-equivalents U.S. Treasury/agency obligations and money market funds.

Management has indicated that there have been no loan defaults or delinquent payments since the SRF program has been in existence.

Given these enterprise and financial risk profiles, the indicative rating is 'AAA'. The final rating is also 'AAA' because we did not make any negative overriding adjustments or adjust the rating downward as a result of the leverage test.

Program characteristics and bond provisions

The drinking water loan portfolio consists of 183 loans totaling \$358 million. The 10 leading borrowers account for 45% of the portfolio's principal balance, with the leading borrower being Fort Wayne, which borrowed \$40.7 million and accounts for 11.4% of the total. The wastewater loan portfolio consists of 319 loans totaling \$1.6 billion. The 10 leading borrowers account for 58% of the portfolio's principal balance, with the leading participant currently being a defeasance escrow related to Indianapolis Sanitary District (It is our understanding that all of the district's \$238 million, or 14% of wastewater loans, have been defeased). However, it is our understanding that after the 2016 D and E bonds are closed, Fort Wayne will also be the largest borrower in the wastewater loan portfolio. Because the authority reports that loan demand remains strong, we expect the portfolio will continue to expand and diversify.

Bonds are typically issued for state match and leveraged (guarantee revenue) portions. State match bonds have a priority claim on loan interest payments only, with excess interest revenues and all loan principal repayments available for debt service on the leveraged bonds. Interest earnings on the reserve funds are pledged for debt service on each specific issue the reserve fund is related to, although as with the reserve funds, interest earnings can also be used to pay debt service on any parity debt if a deficiency exists.

State match bonds do not fully enjoy the benefit of cross-collateralization since payment of debt service on that portion

of debt service is restricted to interest payments from loans made with the state match portion bonds. However, when combining loan interest payments with reserve fund earnings (pledged to all parity bonds), we consider coverage levels high and, in our view, they provide ample coverage of debt service.

Additional bonds are permitted provided that cash flow certificates by program administrators indicate that cash flows will be sufficient to pay pro forma debt service on all parity debt. The bond indenture also stipulates that subordinate obligations can be issued by the authority. As an additional security, pool participants can only issue additional debt if their own net revenues can cover pro forma average annual debt service by 1.25x.

Outlook

The stable outlook reflects our expectation that, as additional bonds are issued, management will maintain annual cash flows that over-collateralize debt service expenses in a manner consistent with the rating level.

Downside scenario

If loan defaults or significant reductions in pledged reserves occur, we could lower the rating. However, given the program's payment history, consistent financial management policies, and management's intent to continue to issue bonds and fund reserves in a manner consistent with historical trends, we do not expect to lower the rating within the two-year outlook horizon.

Ratings Detail (As Of September 7, 2016)

Indiana Fin Auth st revolv fd prog bnds		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Indiana Fin Auth SRFPOOL		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Indiana Fin Auth, Indiana		
Indiana		
Indiana Fin Auth (Indiana) state revolving fd prog		
<i>Long Term Rating</i>	AAA/Stable	Affirmed

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Indiana Finance Authority

US EPA WIFIA Program

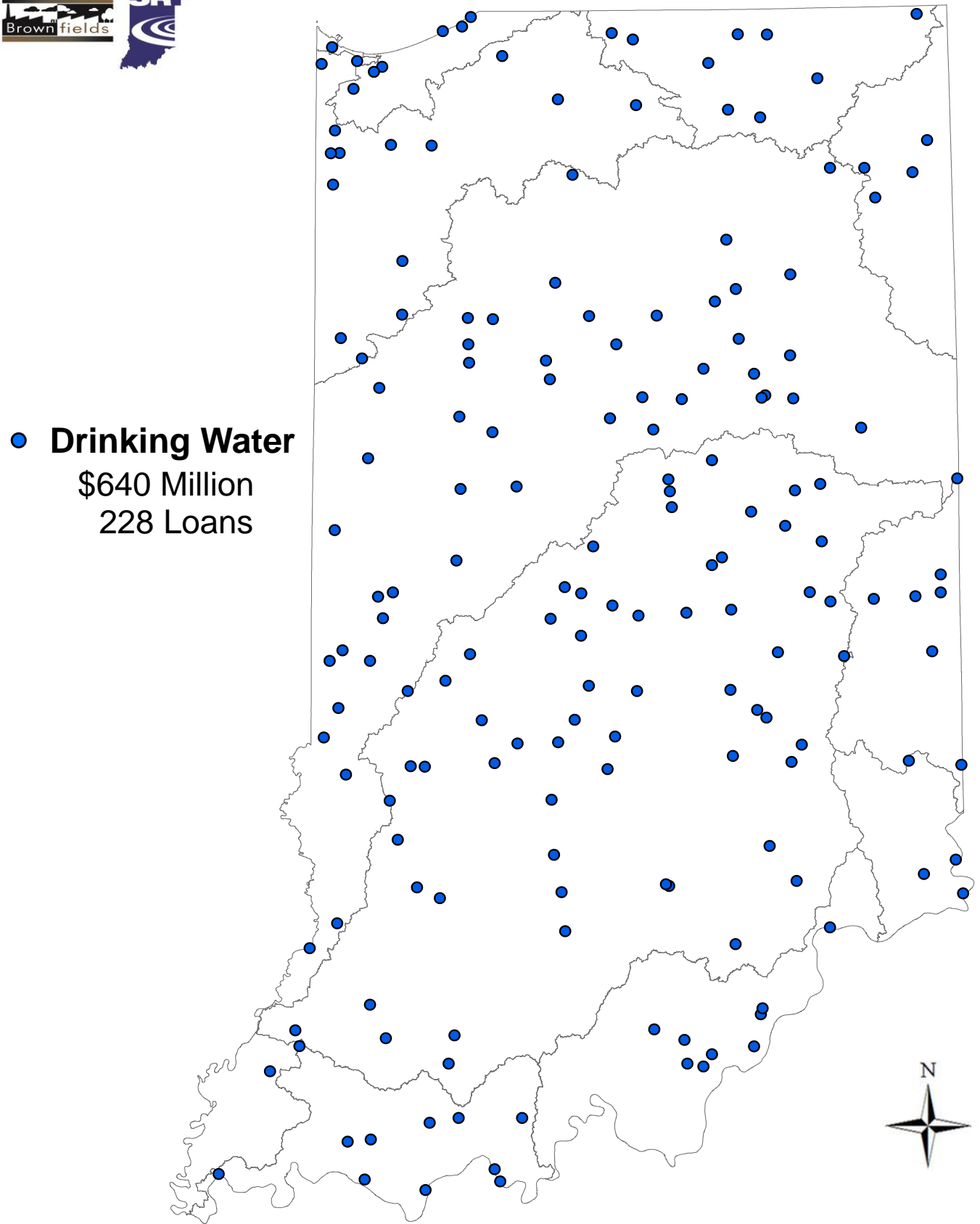
Letter of Interest

**Attachment: Drinking Water SRF Loan Program Map of
Projects**



Indiana Finance Authority State Revolving Fund Loan Programs

All Drinking Water Projects Closed Since 1999



● **Drinking Water**
\$640 Million
228 Loans

**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest**

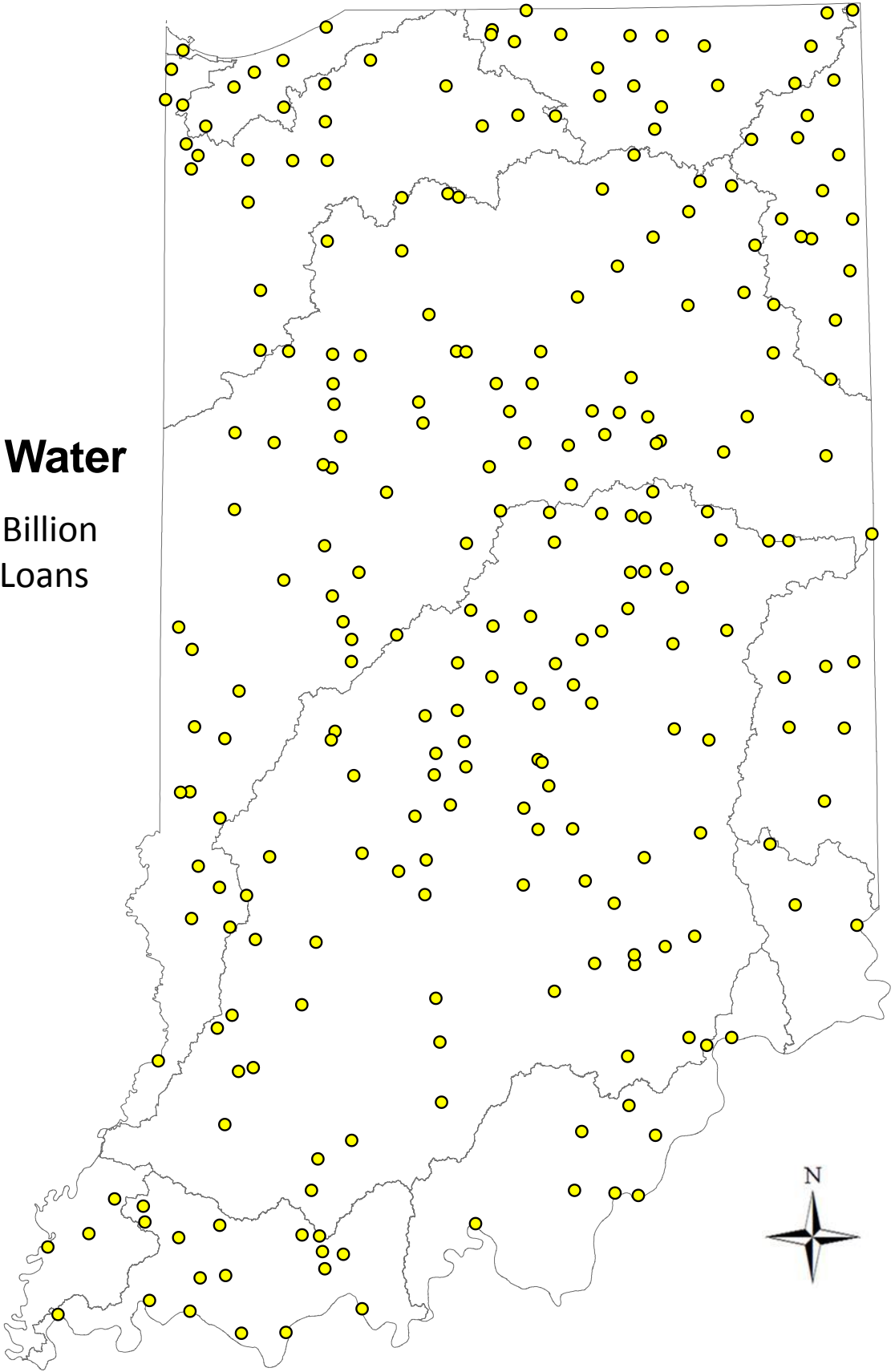
Attachment: Clean Water SRF Loan Program Map of Projects



Indiana Finance Authority State Revolving Fund Loan Programs All Clean Water Projects Closed Since 1992

● Clean Water

\$3.26 Billion
483 Loans



**Indiana Finance Authority
US EPA WIFIA Program
Letter of Interest
Attachment: GPR Fact Sheet**



State Revolving Fund Loan Programs **FACT SHEET**

Drinking Water, Wastewater, Nonpoint Source

GREEN PROJECT RESERVE SUSTAINABILITY INCENTIVE

What is the SRF Green Project Reserve (GPR) Sustainability Incentive?

The State Revolving Fund (SRF) Loan Program has a sustainability incentive for communities to include “green” project components in their SRF projects. Green projects include sustainable green infrastructure, water or energy efficiency measures or are environmentally innovative solutions. Based on the type and cost of the green component, a community may be eligible for improved ranking on the SRF Project Priority List as well as an interest rate break up to 0.5 % on its SRF Loan. The SRF Loan Program is required by the United States Environmental Protection Agency to allocate, or reserve, at least 20% of our capitalization grant to green projects, which is the Green Project Reserve (GPR). **All GPR projects, components and activities must be eligible for SRF funding.**

Who is eligible for the GPR?

Eligible Wastewater and Drinking Water SRF Loan Program participants include cities, towns, counties, regional sewer and/or water districts, conservancy districts and water authorities. Additionally, private and not-for-profit drinking water facilities are eligible for the DWSRF Loan Program GPR sustainability incentive.

How does a participant begin the SRF GPR Sustainability Incentive process?

Submit an SRF Loan Program application and GPR Checklist to the appropriate SRF administrator.

What are the requirements for the SRF GPR Sustainability Incentive?

GPR projects will follow the same process as SRF Loan Program projects and, in addition, are required to:

1. As part of the preliminary engineering report (PER), provide:
 - a. Description of the project or components that qualify toward the GPR.
 - b. Description of how the project will incorporate/meet the intent of each proposed GPR category.
 - c. Cost associated with the GPR project or component. Include both construction and planning and design costs, but provide separately.
 - d. Documentation for the project’s qualification toward the GPR. Documentation will vary depending on the project. Projects clearly eligible for the GPR are categorically eligible projects (See GPR Checklist). Projects not found to be categorically eligible will need additional information in the form of a business case(s). A business case provides a well-documented justification for a project to be considered a GPR project. The SRF Loan Program must review all business cases to determine GPR eligibility and post them to the SRF Web site by the end of the quarter in which the loan is made. The GPR Guidance provides information on categorically eligible projects and those requiring a business case.
 - e. If needed, provide an updated copy of the GPR Checklist and cost update.
 - f. Submittal of business case, if necessary.
2. At bidding, incorporate all the proposed GPR components identified in the approved PER in the Contract Documents plans and specifications. Complete the GPR section of the SRF Front-end Certification.
3. Submit GPR Completion Certificate at project completion date with the final contractor disbursement request. The contractor’s final disbursement request will not be processed until the GPR Completion Certificate is received.

When is a participant notified about its GPR Sustainability Incentive interest rate discount?

The GPR interest rate discount determination is made at the SRF loan closing. An estimated discount rate can be provided to participants after the SRF Loan Programs reviews the PER.

What happens if the project includes both non-point source and GPR components?

The GPR and non-point source components both will be evaluated to achieve the maximum interest savings over the entire loan, but the combined interest rate discount will not exceed 0.5%.

What happens if the GPR components are removed from a project after loan closing?

If a participant does not implement the GPR components for which it received an interest rate discount, the interest rate will be re-adjusted. The implementation of the GPR components will be verified via SRF Loan Program site inspections and submission of the GPR Completion Certificate.

Where can I get more information about the GPR Sustainability Incentive?

For more information or for contact information, please visit the SRF Web site at www.srf.in.gov. Contact the appropriate SRF Program Administrator with questions.

Indiana Finance Authority

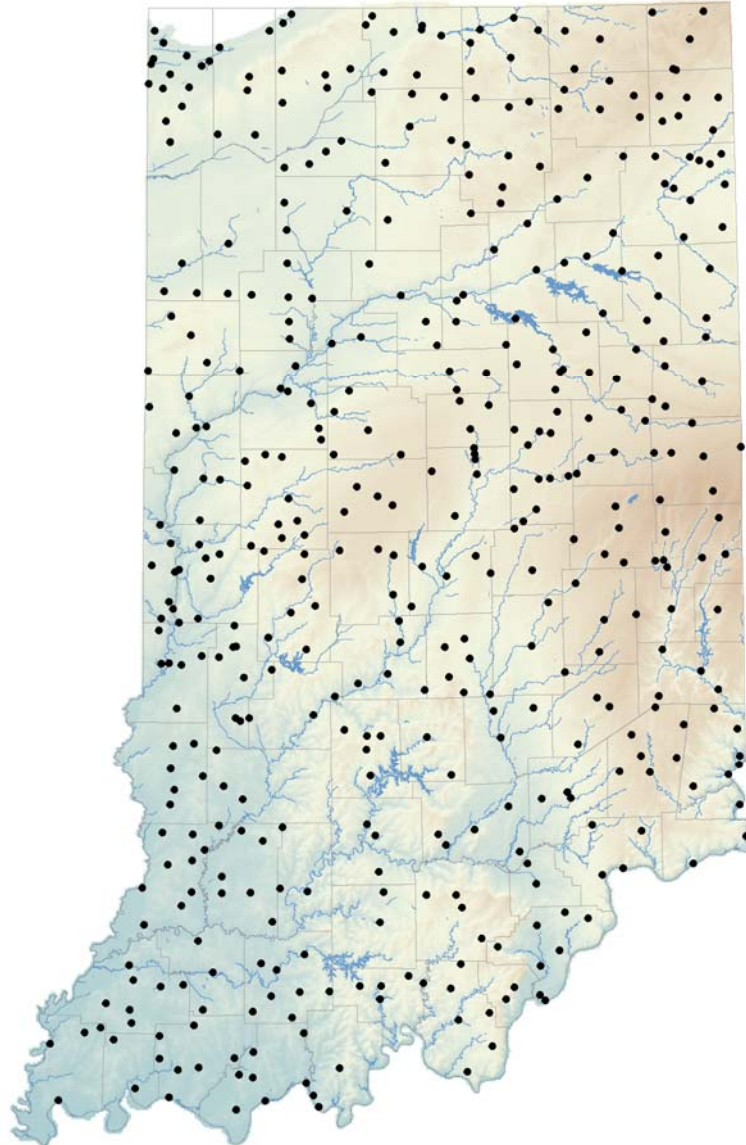
US EPA WIFIA Program

Letter of Interest

Attachment: Evaluation of Indiana's Water Utilities

Evaluation of Indiana's Water Utilities

An analysis of the State's aging infrastructure



November 2016



This report has been prepared pursuant to Senate Enrolled Act 347
for presentation to the Indiana State Legislature

November 2016

Table of Contents

List of Figures	ii
List of Tables	iii
List of Appendices	iii
Executive Summary.....	1
1.0 Introduction	4
2.0 Data Collection and Analysis.....	7
2.1 Most utilities are small, but larger systems serve 75 percent of the population	8
2.2 Economies of scale are evident as utilities increase in size	9
2.3 Average annual utility operating costs per capita decrease as size increases.....	10
2.4 Many water service lines in Indiana are nearing or at the end of their useful life	11
2.5 Some utilities reported having lead service lines.....	12
2.6 Many utilities do not consider treatment to prevent lead leaching	13
2.7 Non-revenue water is water produced which does not generate income	14
2.8 Non-revenue water amounts to over 50 billion gallons per year in Indiana	15
2.9 Average non-revenue water is 19-24 percent of total water supplied per utility	16
2.10 Total cost of non-revenue water is \$54 million	17
2.11 IURC-regulated utilities provide water to 62 percent of population served	18
2.12 Average annual operating costs are lower for IURC-regulated utilities.....	19
2.13 Non-revenue water per capita is less for medium-size IURC-regulated utilities	20
2.14 Mapping illustrates utility distribution.....	21
2.15 Each region of the State has a similar distribution of utility sizes.....	22
2.16 Utility size, not region, determines average annual operating costs per capita.....	23
2.17 Non-revenue water per capita is similar in each region	24
2.18 Average customer retail unit costs are higher in southern Indiana.....	25
2.19 Infrastructure cost estimates are based on standard best practices.....	26
2.20 Infrastructure costs vary widely across the State	27
2.21 Initial infrastructure costs are \$2.3 billion	28
2.22 Long-term infrastructure costs are \$815 million per year	29
3.0 Recommendations	30
3.1 Fund a new infrastructure program	30
3.2 Prioritize replacement of old water service lines.....	31
3.3 Cultivate and standardize asset management	31
3.4 Name a leader to coordinate the water financing program	32
3.5 The IFA could evaluate regionalizing utilities to improve efficiency.....	32
4.0 Next Steps	33
4.1 Suggested actions.....	33
4.2 Consider new funding sources using ideas from other states	34
Acknowledgements.....	37
Literature Cited	38
Acronyms	40
Appendices.....	41

LIST OF FIGURES

Figure 1. Average customer retail unit cost for survey utilities by size.....	9
Figure 2. Average annual operating cost per capita by utility size.....	10
Figure 3. Average age of pipe by size.....	11
Figure 4. Total water supplied and non-revenue water in 2015	15
Figure 5. Non-revenue water as percent volume supplied and as percent of operating costs by utility size	16
Figure 6. Total cost of non-revenue water by utility size	17
Figure 7. Customer retail unit cost and average annual operating cost per capita for IURC and non-IURC regulated utilities.....	19
Figure 8. Average annual non-revenue water per capita for IURC and non-IURC regulated utilities.....	20
Figure 9. Distribution of utilities in the regions of the State	21
Figure 10. Average annual operating cost per capita by utility size and region	23
Figure 11. Regional average non-revenue water per capita	24
Figure 12. Average customer retail unit cost by utility size and region	25
Figure 13. Initial infrastructure costs based on the Survey conducted in 2016 - \$2.3 billion ...	27
Figure 14. Initial infrastructure costs by type - \$2.3 billion	28
Figure 15. Annual long-term infrastructure costs by type - \$815 million	29

LIST OF TABLES

Table 1. Size and population served of utilities surveyed in the IFA Water Audit and Infrastructure Survey.....	8
Table 2. AWWA Audit water loss relationships defined.....	14
Table 3. Number and population served of IURC utilities versus non-IURC utilities.....	18
Table 4. Utility count and population served by region of the State	22
Table 5. Assumptions used in the IFA infrastructure costs estimate	26

LIST OF APPENDICES

Appendix A. Senate Enrolled Act 347
Appendix B. AWWA Water Audit
Appendix C. Infrastructure Survey
Appendix D. Details of Future Infrastructure Cost Model

EXECUTIVE SUMMARY

Senate Enrolled Act 347 (SEA 347) was signed into law in March of 2016. The bill required the Indiana Finance Authority (IFA) to coordinate the distribution, collection, and compilation of a AWWA Water Audit (Audit) and an Infrastructure Survey (Survey) to Community Water Systems throughout Indiana (Appendix A). The process of distributing and collecting the Audit and Survey was a cooperative effort between the IFA, the Indiana Rural Water Association (IRWA), the Rural Community Assistance Program (RCAP), the Indiana Department of Environmental Management (IDEM), the American Water Works Association (AWWA), and the Alliance of Indiana Rural Water.

The IFA aided the water utilities in completing the Audits and Surveys, including on-site workshops, site visits, and numerous email and phone communications. There was 100 percent participation by the utilities completing the Audit and Survey.

The Audit and Survey were used to investigate the relationships between water loss, operational costs, and infrastructure conditions in the State of Indiana. This 2016 IFA Utility Evaluation Report represents the best available information compiled about the current status of water loss and infrastructure conditions for Indiana's Community Water Systems.

Conclusions from Data Analysis

The analysis of the Audits and Surveys revealed the following conclusions:

- Non-revenue water (NRW) amounts to over 50 billion gallons per year in Indiana.
- Too many pipes in Indiana are nearing or at the end of their useful life.
- Average NRW as a percent of the water supplied ranges from 19 to 24 percent of water supplied for each utility, and does not vary significantly with utility size.
- Some utilities reported having active and inactive connection lines that are comprised of lead.
- Customer retail unit costs (CRUC) decrease with increasing utility size.
- Costs per capita decrease sharply with increasing utility size.
- CRUC are higher in southern Indiana.

Infrastructure Costs

Infrastructure costs were estimated based upon current utility needs itemized by the IFA and from the utility responses to the Survey. The IFA used standard best practices to construct an idealized infrastructure replacement plan (Appendix D). The immediate infrastructure costs calculated by the IFA are estimated to be \$2.3 billion. After the initial infrastructure upgrade to address the most critical needs, an additional \$815 million is needed annually to maintain the utilities into the future. This 2016 IFA Utility Evaluation Report estimates future infrastructure costs to be much higher than previous estimates.

Recommendations

1. Fund a new infrastructure program

The funding gap identified by the Water Audit and Infrastructure Survey is much larger than previous estimates. Water utilities are doing their best to balance the growing need for pipe replacement and infrastructure repair against the need to provide safe and affordable water to their customers. In the past several decades, the federal government has had a historically minor role in financing many construction projects, as reported by the Congressional Budget Office (CBO, 2015). While the federal role could expand, it would take broad changes in the political will of the U.S. Congress. Recent work by the CBO and the Congressional Research Service (CRS, 2010) on this topic indicates that current trends and conditions make it more likely that the states need to be the primary support for utilities on this topic.

2. Prioritize replacement of old water services lines

The utilities reported they have drinking water mains that are aging and many are failing. The replacement of these water mains needs to be the focus of a special program to address their vulnerable condition.

3. Cultivate and standardize asset management

The recommended approach to managing large public assets is to develop a schedule of asset management that organizes the construction needed to maintain and extend the life of a utility system (GAO, 2013). This means that life-cycle cost becomes the basis for equipment replacement and maintenance is done prior to failure on a schedule that avoids increased risks. This is a starting point for a more comprehensive assessment of the data that can be used to map and locate the features of a system and some information about the age and condition of the pipes, valves and other components of the utility. This approach to managing assets is the modern way to maintain system value and financial integrity. Asset management needs to become the primary way that utilities operate, not doing so puts Indiana's water supply at risk and creates a competitive disadvantage.

4. Name a leader to coordinate water financing program

An important finding of the 2015 IFA Water Utility Planning Report (IFA, 2015) was that the State has many programs that are involved in water resources, water supply and the public health issues of water development, but there is no single point of contact responsible for planning or managing interagency coordination. Sustainable development can only be accomplished at a regional level. The management responsibility could be given to a water program or agency that can act as a coordinating and management board for each region. This would enable data and tools to be developed by the State, and allow regional priorities to be determined by local water users.

5. The IFA could evaluate regionalizing utilities to improve efficiency

Given the observable economies of scale in water utilities, the State of Indiana may want to consider system regionalization. Collaborative planning has already begun among neighboring utilities in some areas of the State. The data from this 2016 IFA Utility Evaluation Report suggests that larger systems improve the economic performance for customers. In spite of this, new small systems continue to be formed instead of combining assets with existing utilities where value could be added. With larger size and capacity, regional utilities add efficiencies while being more reliable and sustainable than individual community water systems. To understand the economic and practical challenges of regional systems, the Indiana Finance Authority could evaluate the technical and regulatory hurdles that may exist to regional water utility development and planning.

Next Steps

The gaps in infrastructure funding and water loss described in this 2016 IFA Utility Evaluation Report can be closed with the following actions:

State Funded Infrastructure Program - Identify a source of new funding to begin fixing the problem.

Agency Coordination - Additional Full-Time Equivalentents are required in water and geology-related agencies. This work needs to be coordinated to address the most pressing problems and move towards immediate solutions.

Commission Water Availability and Demand Investigations in Priority Water Basins - Evaluate demand and availability of water resources to focus on the areas of greatest need.

State Data / Regional Authorities / Local Management - Educate the public, collect data, and create regional water authorities that use a common water resource. The State needs to support the framework for local planning and management.

1.0 INTRODUCTION

Around the country, drinking water utilities are struggling to maintain the quality of service as water mains, treatment plants, and storage tanks continue to age (GAO, 2013). One of the most difficult aspects of utility operation is investing in these long-lasting systems. Maintaining pipes and other underground assets needs to be balanced with the constant problems of improving treatment and maintaining adequate yield with new water users pumping from the same aquifers and rivers. While drinking water utility growth varies from community to community, the increase in all water uses, especially groundwater, is a national trend that is also evident in Indiana. Balancing the need for replacement of aging infrastructure against the need for new system improvements has become a serious dilemma for many utilities (ASCE, 2011). As more distribution mains in our utilities age, more treated water is lost through leakage and there may be new risks (and costs) that will be borne by the public.

In the older cities in the Midwest, the need to repair aging systems is becoming a larger issue that can have public health consequences. At the same time that many utilities are being forced to upgrade their sewer systems to improve water quality, drinking water utilities are becoming aware of the scale of the funding gap that exists to maintain their own distribution and treatment assets.

The cities in the Midwest grew rapidly in the early part of the last century so the age of pipes and the distribution of supplies reflect that history. Many utilities have reported 50 percent water loss between their wells and their customers. Leakage from these old mains has recently become urgent (IURC, 2014).

Western states have also struggled with this problem for years, but they are also battling increasingly frequent and severe drought that has threatened their water supply and severe water shortages have forced states to react. Many western states have poured millions of dollars into elaborate planning and management systems to provide some predictability for utilities and other water users.

The experience in the West can serve as a useful guide and some Midwestern states are recognizing that early planning may prevent the occurrence of similar events as those that occurred in the West.

If Indiana addresses the problem now, the cost of maintaining the system will not cause societal or economic disruption. However, even here in Indiana, some sectors of water use are growing. Over the last 10 years, irrigation has become a normal practice for row-crop agriculture in the Corn Belt. In Indiana, new irrigation systems have become the fastest growing water users that often pump from the same aquifers as the water utilities. Unfortunately, we do not know how much water these aquifers can provide or for how long.

Indiana is behind some of our neighboring states, but with action now, we could prevent problems and target our resources to the most critical areas of the State. This 2016 IFA Utility Evaluation Report summarizes data collected from Indiana's Community Water Systems, to determine: 1) the total costs of infrastructure needed within these utilities, and 2) the amount of non-revenue water produced by each system, including the amount leaking from their water mains in the distribution network. The estimate of infrastructure needs was produced with a custom survey developed by the engineering team at the Indiana Finance Authority (IFA). This

group is also responsible for providing the U.S. EPA with an estimate of Indiana's infrastructure needs as part of the State Revolving Fund (SRF) loan program. The non-revenue water estimate was produced with an audit tool developed by the AWWA for Community Water Systems.

This 2016 IFA Utility Evaluation Report summarizes the results by describing how the average water losses and infrastructure needs varied by several factors, including:

- size of the utility;
- regulatory status of water rates (some have rates that are regulated by the IURC, others manage rates through their town councils and Water Board of Directors); and,
- the location of the utility within the State (North, Central and Southern Indiana).

The results are rolled up into a statewide summary that can provide legislators and utilities a sense of the dimensions of this need relative to other fiscal priorities. Unlike other infrastructure, water utility systems can fail in ways that are both harmful to public health and the long-term economic identity of a community. This Report is designed to help focus on the infrastructure problems that need immediate action.

This document is organized into the following sections:

- an executive summary that gives context to the work;
- a description of infrastructure needs in the State and how that varies across the State;
- a summary of non-revenue water losses and what factors may explain its variability; and finally,
- a set of recommendations and funding options that consider how other states have improved the long-term stability of their community water systems.

This work reflects an ongoing commitment to utility stability that may require new state programs and funding.

Previous investigations

Over the last several years, multiple reports have been commissioned to determine if Indiana utilities are properly maintaining their infrastructure and whether utilities are prepared for water shortages. The most recent studies by the State and reports by public interest groups have provided a consistent call for a more comprehensive approach to managing water resources and water supplies. These assessments all conclude with a similar consensus of recommendations.

Some of the key findings:

1. Replacement of aging infrastructure needs immediate attention and presents a major challenge and few utilities are adequately investing in new water mains for their systems.
2. The State needs to identify a lead program/agency for the coordination of state agencies to assist Indiana's utilities and the management and planning of the use of the State's water resources.
3. Diminishing water quality often limits aquifer and surface water yield.
4. Conservation needs to become a standard practice of water utilities.

In the 2016 Legislative Session, the General Assembly passed Senate Enrolled Act 347 (SEA 347) to address the first of these findings, requiring the Indiana Finance Authority (IFA) to survey a total of 554 water systems that provide drinking water to the public (Appendix A). The investigation used a water-loss audit tool developed by the American Water Works Association (AWWA) to estimate the amount of water lost from utilities, to understand the cost of non-revenue water, and the efficiencies that might be gained from conservation and improvements in infrastructure. In addition, each utility was asked for an estimate of their particular infrastructure needs. The findings, as summarized in this 2016 IFA Utility Evaluation Report, both confirm the work that has been done by others (including the U.S. EPA) and provide a better estimate of the actual infrastructure needs and costs throughout the State.

2.0 DATA COLLECTION AND ANALYSIS

After SEA 347 was signed into law in March of 2016, the Indiana Finance Authority (IFA) coordinated the distribution, collection, and compilation of 1) the AWWA Water Audit (Audit) and 2) an Infrastructure Survey (Survey) to 554 Community Water Systems throughout Indiana (Appendix A).

The process of distributing and collecting the Audit/Survey was a cooperative effort between the IFA, the Indiana Rural Water Association, the Alliance of Indiana Rural Water, the Indiana Department of Environmental Management (IDEM), the American Water Works Association (AWWA), and the Rural Community Assistance Program (RCAP). The IFA provided assistance to the water utilities in completing the Audits and Surveys, including on-site workshops, site visits, and numerous email and phone communications. There was 100 percent participation by the utilities included in the Audit and Survey.

The IFA asked each utility to use the American Water Works Association (AWWA) Water Audit Software (2014). This software is free and is the industry standard to identify water losses. The software was used to collect, compile, and score water loss data for each Community Water System. An example of the information collected by the Audit Software is presented in Appendix B.

The Infrastructure Survey (Survey) was developed by the IFA in consultation with engineers, data analysts and utility operators. The Survey requests an inventory of water supply infrastructure for each Community Water System. The Survey formed the basis for a model of infrastructure needs and related costs for the State of Indiana, developed by the IFA. An example Infrastructure Survey is presented in Appendix C, and details of the infrastructure cost model are presented in Appendix D.

The Water Audit and Infrastructure Survey results were merged into a single data set for the purposes of this 2016 IFA Utility Evaluation Report. The combined data was analyzed to better understand the relationships between water loss, operational costs, and infrastructure conditions of utilities in the State of Indiana. Additional information was added to the data set including regulatory status, region of the State, and population served (U.S. EPA SDWIS) for each utility. This 2016 IFA Utility Evaluation Report represents the best available information compiled about the current status of water loss and infrastructure conditions for Indiana's Public Water Supplies. The merged data set includes 520 Community Water Systems, representing 531 individual Public Water Supply IDs (PWSIDs). The data reported by the utilities and included in this Report represent the year 2015.

2.1 Most utilities are small, but larger systems serve 75 percent of the population

The U.S. EPA divides Community Water Systems into sizes, according to the population served, from very small to very large, as presented in *Table 1*. Column 3 of *Table 1* presents the distribution of utility sizes among the Community Water Systems in Indiana, and Column 4 presents the population served by each size.

More than 4.76 million people in the State, or 72 percent of the population, are served by a Community Water System. 73 percent of the Community Water Systems in Indiana are very small to small, serving 10 percent of the population; 1 percent of the systems are large to very large, serving 75 percent of the population. Columns 5 and 6 of *Table 1* present the size distribution and population served for the merged data set.

- The data set includes 520 systems representing 97 percent of the State population served by Community Water Systems.

Table 1. Size and population served of utilities surveyed in the IFA Water Audit and Infrastructure Survey.

U.S. EPA Utility Size	Population Served Range	Indiana Community Water Systems	Population Served	Survey Water Systems	Population Served
Very Small	0 to 500	275	45,151	45	14,437
Small	501 to 3,300	302	432,863	269	390,453
Medium	3,301 to 10,000	126	729,577	121*	703,912
Large	10,001 to 100,000	81	2,095,023	80*	2,045,821
Very Large	> 100,000	5	1,462,621	5	1,467,192
	TOTAL	789	4,765,235	520	4,621,815

**Note- does not include universities and correctional facilities.*

Utility size was the most significant factor affecting the retail cost of water and the annual operating cost of producing and distributing water across the State. In the following subsections, we present average cost and water loss data by utility size. Distributions of data within each size category are informative, but the ranges are large with many outliers, and are not presented here. The outliers can be explained only by investigating the circumstances of each individual utility. Our results present aggregate values of average cost and water loss data, for each utility size.

2.2 Economies of scale are evident as utilities increase in size

Utility size, based upon the U.S. EPA population served designations, was found to have a significant impact on water utility costs. Cost information for each water system was provided in the AWWA Water Audit, including customer retail unit cost (CRUC) and the total annual cost of operating the water system. The CRUC reported in the Audit represents the average charge that customers pay for water service. *Figure 1* shows the relationship between the average CRUC in dollars per 1,000 gallons of water and utility size.

The economies of scale fade when utilities get larger for several reasons. Very large utilities have other problems that smaller systems don't encounter. For example, large systems need to have diverse water supply portfolios to be resilient to drought. They also must maintain pressures in a larger service area that creates engineering and design problems. In general, however, the customer retail unit cost (CRUC) for water is more than 1/3 lower for large systems than for smaller utilities.

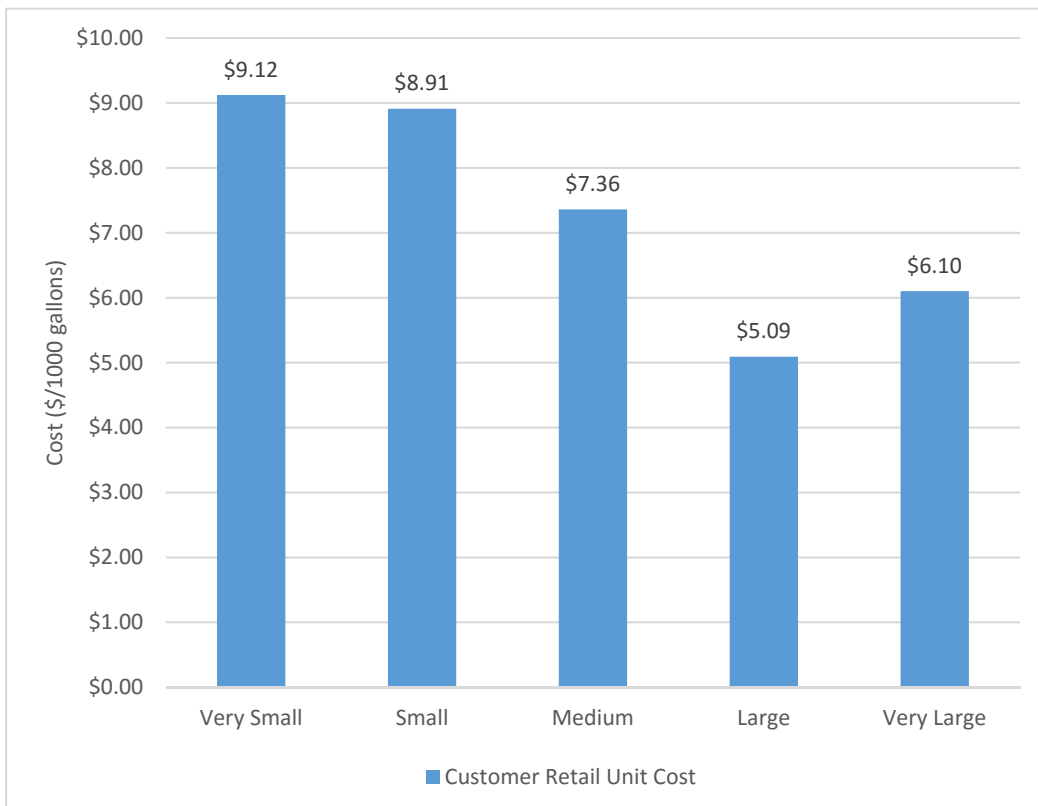


Figure 1. Average customer retail unit cost for survey utilities by size.

2.3 Average annual utility operating costs per capita decrease as size increases

The costs per capita decrease sharply with increasing utility size. The total annual cost of operating a water system includes operations, maintenance, and annually incurred costs for long-term up-keep of the drinking water supply and distribution system. It includes long-term financing such as repayment of bonds used to finance infrastructure expansion or improvement. *Figure 2* shows the average annual operating costs per capita for each utility size. The total reported annual operating cost of the utilities in the Infrastructure Survey was \$667.1 million. Sixty-seven percent of that total cost is attributed to the large and very large systems, which serve 75 percent of the population.

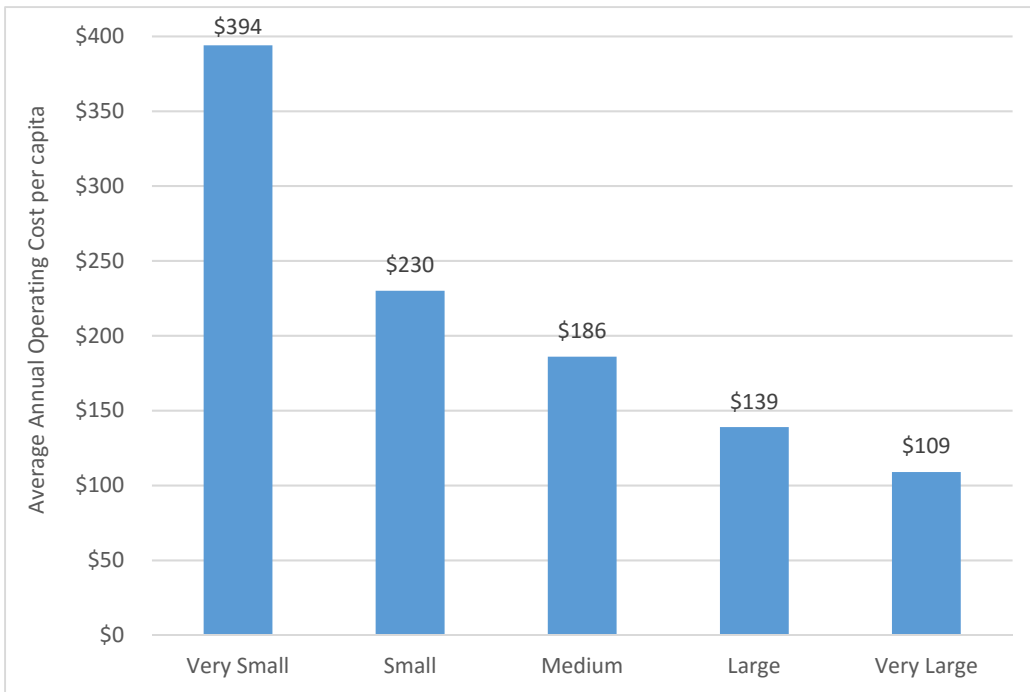


Figure 2. Average annual operating cost per capita by utility size.

2.4 Many water service lines in Indiana are nearing or at the end of their useful life

Too many water pipes in Indiana are nearing or at the end of their useful life and need to be replaced. Utilities were asked to report the age of pipe within their water systems according to size. Like most of the nation, a majority of Indiana pipes were installed post-World War II (AWWA, 2001a, Duffy, 2013). Now, pipes have been overused, undermanaged, and need to be replaced. Aging infrastructure contributes to the wear-and-tear of pipes that lead to multiple complications. Older pipes are subject to failures, main breaks, and water loss. The average age of a broken water main is 47 years (Folkman, 2012).

To meet the growing water demands of the State and reduce water loss, pipes must be appropriately replaced and maintained. Measuring over 46,000 miles, Indiana's pipes range in age from 1-120 years. Pipes sized between 6-12 inches were the most abundant in distribution systems. Pipes 4 inches and smaller were the oldest, with an average age of 49 years (*Figure 3*).

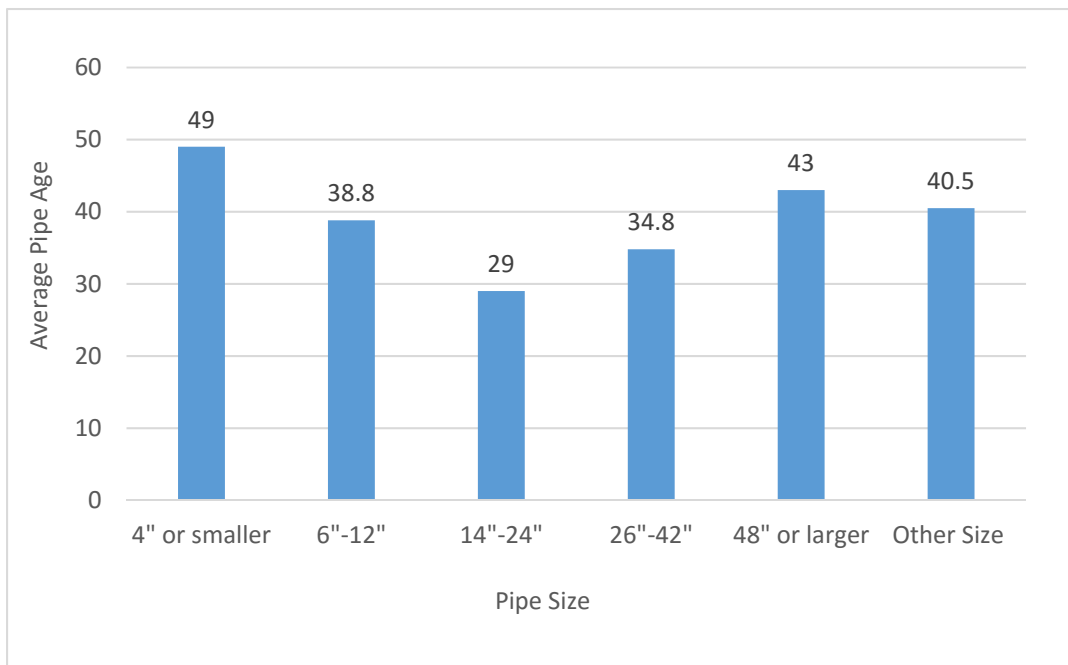


Figure 3. Average age of pipe by size.

2.5 Some utilities reported having lead service lines

Many utilities reported serving water through lead service lines. In most cases, the lead lines are the customer's property and not a part of the utility assets. Other utilities reported that they did not know whether they have lead lines and the remaining utilities did not respond to the question. Given the fact that there were 520 utilities surveyed, this response creates uncertainty that may have public health consequences. Lead may cause kidney damage, anemia, hypertension, and abnormal brain development (WHO, 2016).

Other water mains are made of materials that have different issues. Iron pipes generally have a life expectancy of 70 years before corrosion or other problems suggest the pipes should be replaced (AWWA, 2011b). Old corroded pipes may release chemicals into distributed drinking water and diminish water quality and cause public health problems. The potential for main breaks or failed pipes is influenced by pipe material. Plastic Polyvinyl Chloride (PVC), cast iron, and ductile iron make up the majority of pipes from surveyed utilities. Other pipe material included lead, asbestos cement and galvanized iron.

2.6 Many utilities do not consider treatment to prevent lead leaching

The recent disaster in Flint, Michigan changed the conversation about water utilities and the need to maintain infrastructure. In discussions taking place all over the country, utilities are struggling with the challenge of delivering water to homes, businesses and schools that may have lead service lines or plumbing on the customer's private property. In some utilities, there is no inventory of lead service lines. In others, these lines are clustered in the older parts of town where customers do not have the financial resources to pay for replacement. The risks posed are unprecedented and the problem is challenging because of the unforeseen difficulty of locating the problem pipes.

Along with continued treatment, the most effective way to assure the prevention of metals and other chemicals leaching into water systems is to remove lead lines and replace them with safer, corrosion-resistant material.

Utilities were asked if they have considered or currently use anti-corrosion treatment to prevent lead leaching. Many of responding utilities do not consider or use anti-corrosion treatment. It is important to note that those utilities that do use or consider anti-corrosion treatment serve a majority of the Community Water System population.

Some utilities further elaborated on their answers, explaining that no consideration for anti-corrosion practices is because they receive water previously treated by a supplier, or no lead lines are present in the distribution system. These utilities may not need this type of treatment. Though utilities serving the bulk of the population consider or implement anti-corrosion methods, it is not clear as to how many utilities perform the treatment or do so consistently. Further investigation will be needed to understand the risks of lead in the State.

2.7 Non-revenue water is water produced which does not generate income

The AWWA Audit is designed to estimate system water losses. In particular, non-revenue water (NRW) is the water produced which does not generate income for the utility (*Table 2*). Specifically, it is the portion of the total water supplied consisting of real losses, apparent losses, and unbilled authorized consumption. Water losses include real losses, and apparent losses as defined in *Table 2*. The total water supplied includes non-revenue water and revenue water which consists of all billed authorized consumption.

Table 2. AWWA Audit water loss relationships defined.

		Water Exported	Billed Water Exported			Revenue Water
			Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption (water exported is removed)	Revenue Water
Own Sources (Adjusted for known errors)	System Input	Water Supplied		Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption (water exported is removed)
			Unbilled Authorized Consumption		Billed Unmetered Consumption	
Water Imported			Water Losses	Apparent Losses	Unbilled Metered Consumption	Non-Revenue Water (NRW)
					Unbilled Unmetered Consumption	
					Unauthorized Consumption	
				Real Losses	Customer Metering Inaccuracies	
					Systematic Data Handling Errors	
Leakage on Transmission and/or Distribution Mains						
Leakage and Overflows at Utility's Storage Tanks						
Leakage on Service Connections						

2.8 Non-revenue water amounts to over 50 billion gallons per year in Indiana

The total non-revenue water in each system is proportional to the total volume of water supplied in each utility class size. The largest non-revenue water value is in the large systems and the lowest in the smallest systems. In each class, about 20 percent of the finished water produced ends up classified as non-revenue water. *Figure 4* shows the total volume of water supplied for 2015 and the total volume of non-revenue water by utility size. Non-revenue water amounts to over 50 billion gallons per year in Indiana.

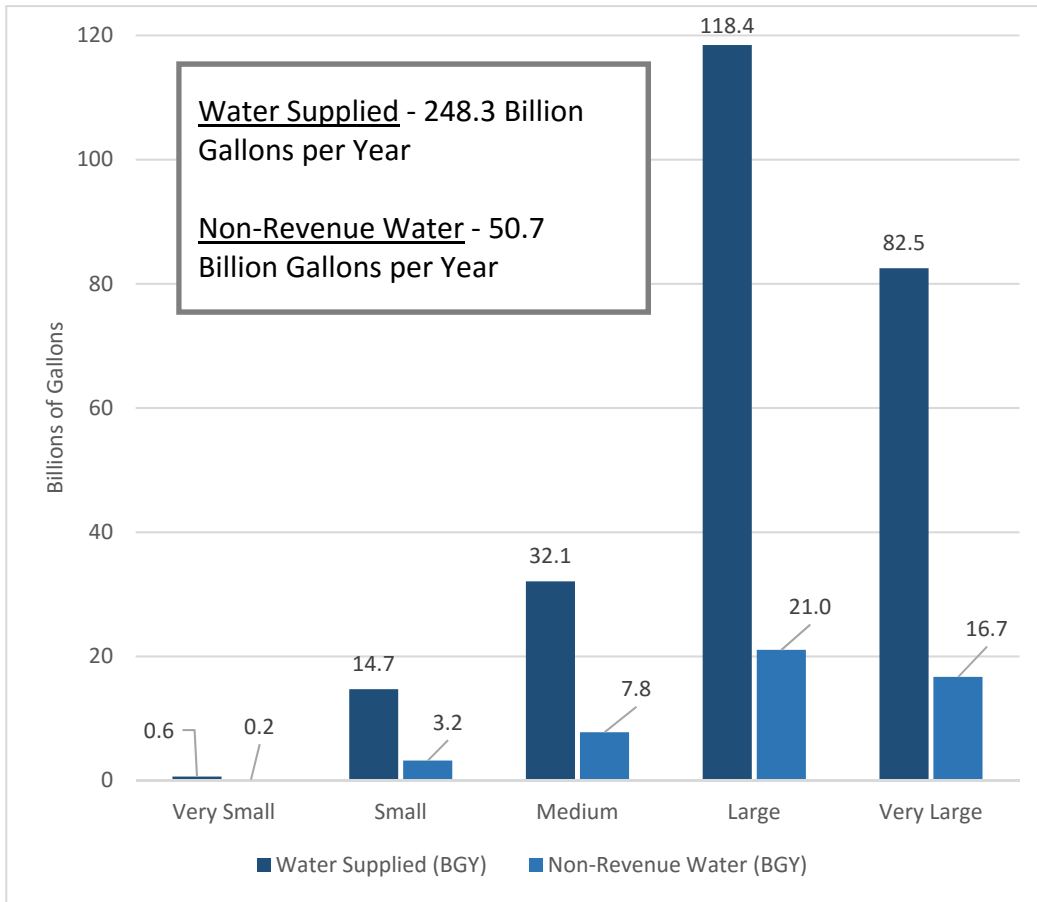


Figure 4. Total water supplied and non-revenue water in 2015.

2.9 Average non-revenue water is 19-24 percent of total water supplied per utility

Non-revenue water (NRW) as a percent of water supplied is a financial performance indicator for a utility. Average NRW as a percent of the water supplied for each utility size is presented in *Figure 5*. Average NRW ranges from 19 to 24 percent of water supplied, and does not vary considerably with utility size.

This is on par with the rest of the country. In the United States, utilities lose, on average, 20 percent of their water (Black and Veatch, 2016). *Figure 5* shows NRW as a percent of volume supplied and NRW as a percent of total operating costs. While the NRW as percent volume decline slightly with increasing size, the NRW as percent total costs increases with increasing utility size. The NRW as percent operating costs is high in very large utilities due to the already low cost operations of these systems.

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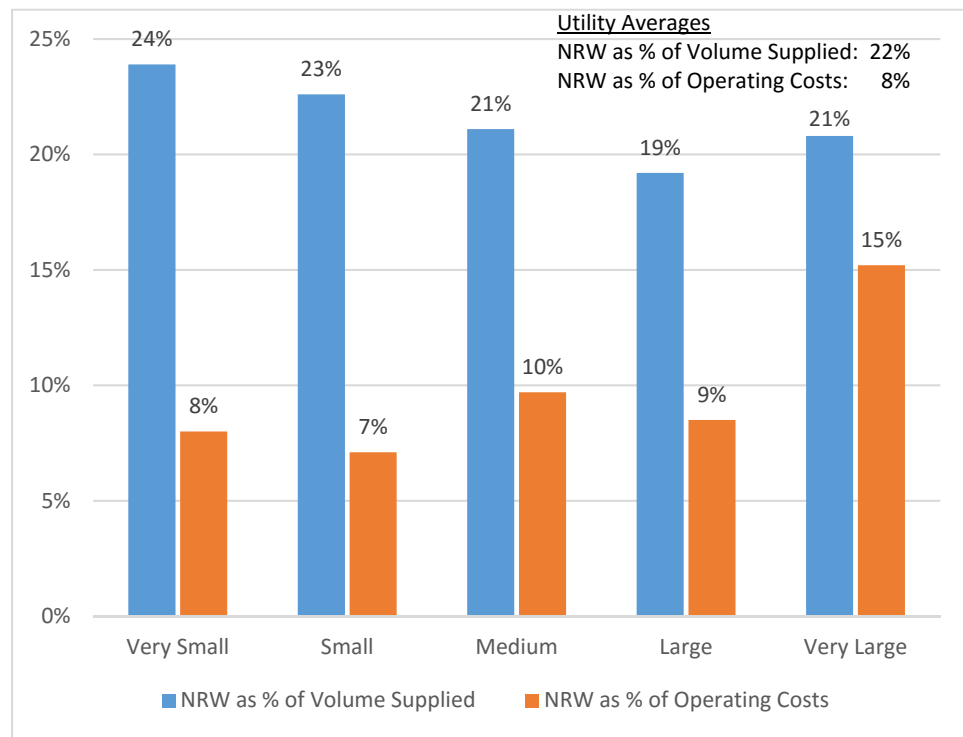


Figure 5. Non-revenue water as percent volume supplied and as percent of operating costs by utility size.

2.10 Total cost of non-revenue water is \$54 million

The costs for non-revenue water are an important indicator of overall system efficiency. As described earlier, larger systems are able to take advantage of economies of scale to produce a gallon of finished water at a lower price than smaller systems. The total costs of the non-revenue water when added across the State is over \$50 million. *Figure 6* shows the total cost of NRW distributed by utility size for 2015. The large and very large systems incur 74 percent of the cost of non-revenue water in the State.

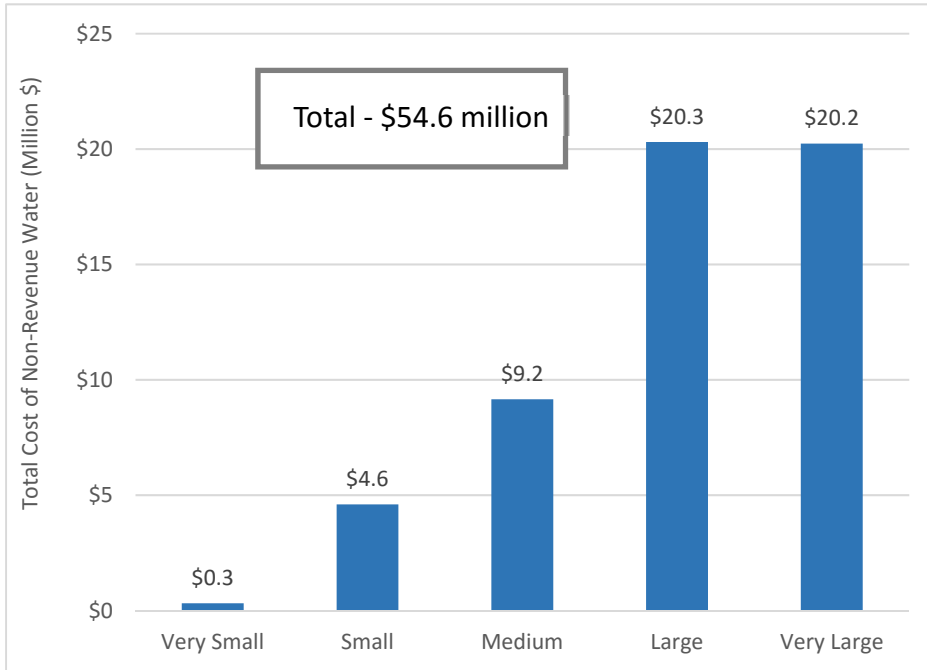


Figure 6. Total cost of non-revenue water by utility size.

2.11 IURC-regulated utilities provide water to 62 percent of population served

Using the combined dataset, we investigated the effect of regulation by the Indiana Utility Regulatory Commission (IURC) on water costs and losses. The IURC is an administrative agency that hears cases presented by utilities under its jurisdiction to ensure utilities provide safe and reliable service at just and reasonable rates. *Table 3* shows the number of utilities and population served, by size, for systems regulated by the IURC and those not regulated by the IURC. Ninety-four drinking water utilities in the Survey are regulated by the IURC, representing 62 percent of the population, with the largest population served by large and very large systems.

This 2016 IFA Utility Evaluation Report includes 426 utilities that are not regulated by the IURC, representing 38 percent of the population, with the majority of the systems being small, and the majority of the population served by medium and large systems. As shown in the *Table 3*, IURC regulated and non-regulated systems are composed of different distributions of utility sizes. Utility size was shown to have a large impact on costs. It is difficult to compare the effects of regulation on costs when the two data sets are composed of different utility sizes. Here, average cost values for each utility size are presented, focusing on medium and large systems, where the two data sets overlap, with similar utility counts and populations served.

Table 3. Number and population served of IURC utilities versus non-IURC utilities.

Utility Size	IURC		Non IURC	
	Utility Count	Population Served	Utility Count	Population Served
Very Small	7	1,409	38	13,028
Small	19	28,710	250	361,743
Medium	24	151,052	97	552,860
Large	39	1,234,513	41	811,308
Very Large	5	1,467,192	0	0
TOTAL	94	2,882,876 (62%)	426	1,738,939 (38%)

2.12 Average annual operating costs are lower for IURC-regulated utilities

The IURC-regulated utilities report average annual operating costs 30 percent less than the non-regulated utilities. *Figure 7* compares the average customer retail unit cost (CRUC) of water, and the average annual operating cost per capita for IURC regulated and non-regulated utilities. The customer retail unit costs are similar, but average annual operating costs per capita are notably lower for the IURC-regulated utilities.

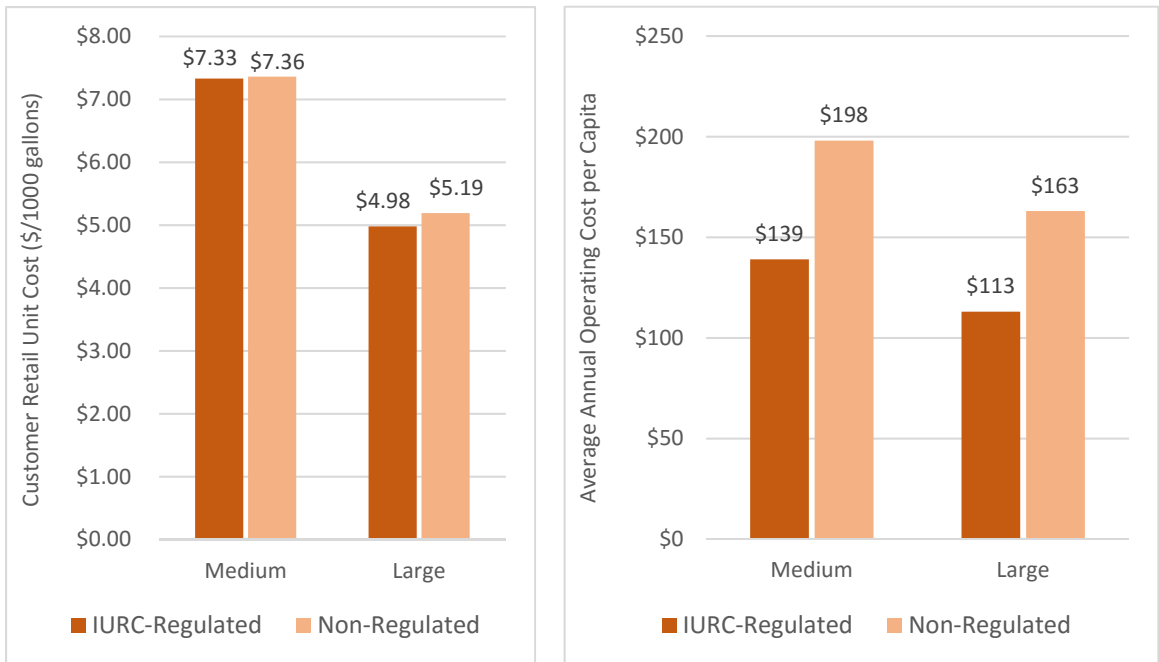


Figure 7. Customer retail unit cost and average annual operating cost per capita for IURC and non-IURC regulated utilities.

2.13 Non-revenue water per capita is less for medium-size IURC-regulated utilities

One question that we considered was the difference in non-revenue water between utilities that managed their systems independently and those regulated by the IURC. For most of the size classes of utilities there were not enough systems in each category. However, in medium and large systems there were similar numbers in each to consider the difference.

Average annual non-revenue water per capita is compared in *Figure 8*. For large utilities, the values are comparable; for medium-sized utilities, the average non-revenue water for IURC regulated utilities is half that of the non-regulated utilities. While it is not clear how this difference can be interpreted, it is worth noting as an outcome of this survey.

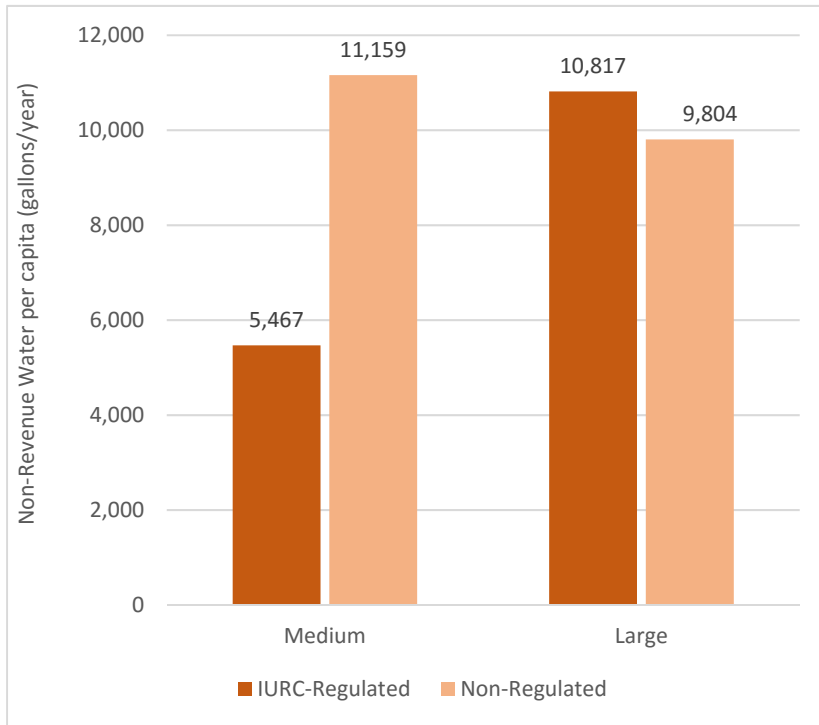


Figure 8. Average annual non-revenue water per capita for IURC and non-IURC regulated utilities.

2.14 Mapping illustrates utility distribution

When the State is subdivided into three regions, north to south, the distribution of utilities simply reflects the distribution of communities. Each region, however, has different characteristics that may be reflected in the responses of the utilities to the Survey and Audit. The Northern region, for example, is an area that has abundant aquifers and many older industrial communities. The Central region has many communities that surround the metropolitan area of Indianapolis. The Southern region includes smaller more rural communities that are serving water over longer distances. The distribution of utility sizes and population served for the North, Central, and South regions of the State are presented in *Figure 9*.

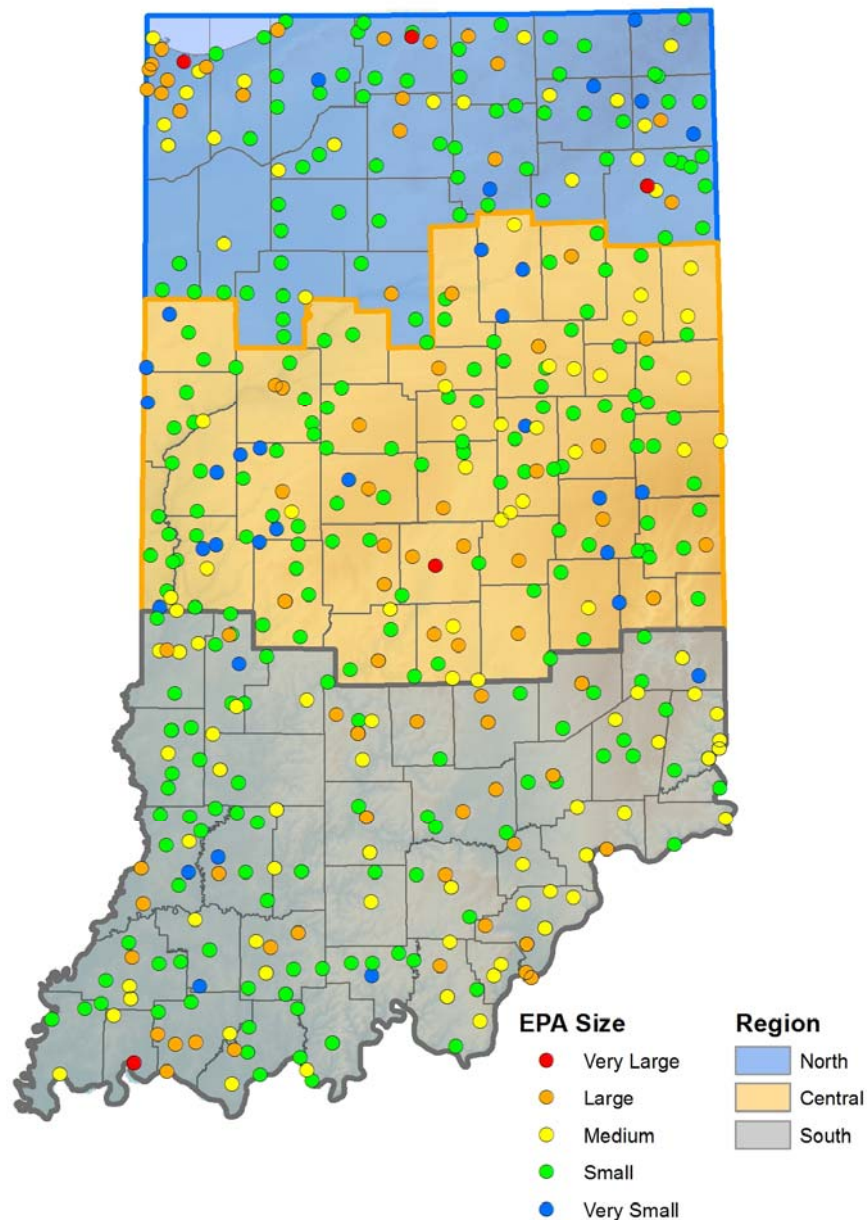


Figure 9. Distribution of utilities in the regions of the State.

2.15 Each region of the State has a similar distribution of utility sizes

The distribution of utility sizes in each region are comparable (*Table 4*). Of the more than 4.76 million people in the State served by a Community Water System, the North region includes 109 utilities serving 27 percent of that population; the Central region includes 205 utilities, serving 44 percent; and, the South region includes 206 utilities, serving 29 percent. Even though there are different numbers of utilities in each part of the State, the similar distribution of utility sizes among regions allows for a valid comparison of other characteristics.

Table 4. Utility count and population served by region of the State.

Utility Size	North		Central		South	
	Utility Count	Population Served	Utility Count	Population Served	Utility Count	Population Served
Very Small	10	2,788	23	8,066	12	3,583
Small	57	83,653	119	165,955	93	140,845
Medium	19	113,922	32	182,822	70	407,168
Large	20	534,223	30	899,250	30	612,348
Very Large	3	517,783	1	787,409	1	162,000
TOTAL	109	1,252,369 (27%)	205	2,043,502 (44%)	206	1,325,944 (29%)

2.16 Utility size, not region, determines average annual operating costs per capita

For any utility size, there is relatively little variation in annual operating costs among regions of the State (*Figure 10*). The utility size, more than the region, determines the operating expenses. While the average operating costs per capita for all utilities vary among regions (North \$264, Central \$206, South \$207) the distribution of operating costs for different utility sizes within each region remains consistent.

This indicates that regional differences are minor relative to the economies of scale that determine costs. While the average operating costs vary among regions (the North averages about \$55/capita higher than the rest of the State) the distribution of operating costs for different utility sizes within each region remains relatively consistent.

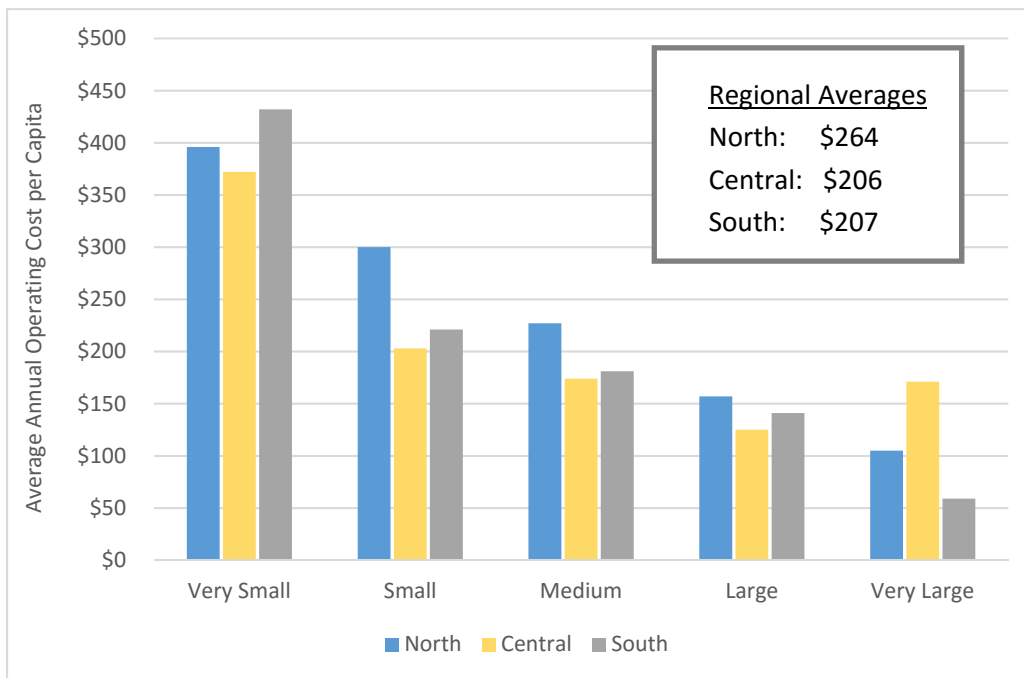


Figure 10. Average annual operating cost per capita by utility size and region.

2.17 Non-revenue water per capita is similar in each region

Non-revenue water loss varies among utilities but not among regions. The average non-revenue water loss per capita among utilities varies from 2,500 gallons per year to over 25,000 gallons per year by utility, but when averaged over the State and the regions, it is clear that the losses are independent of the region of the State (*Figure 11*). Non-revenue water losses vary for all the reasons that are expected, including metering problems, variable pressure in water mains, pipe breaks, etc. These problems happen evenly across the State and are only understandable at the local scale.

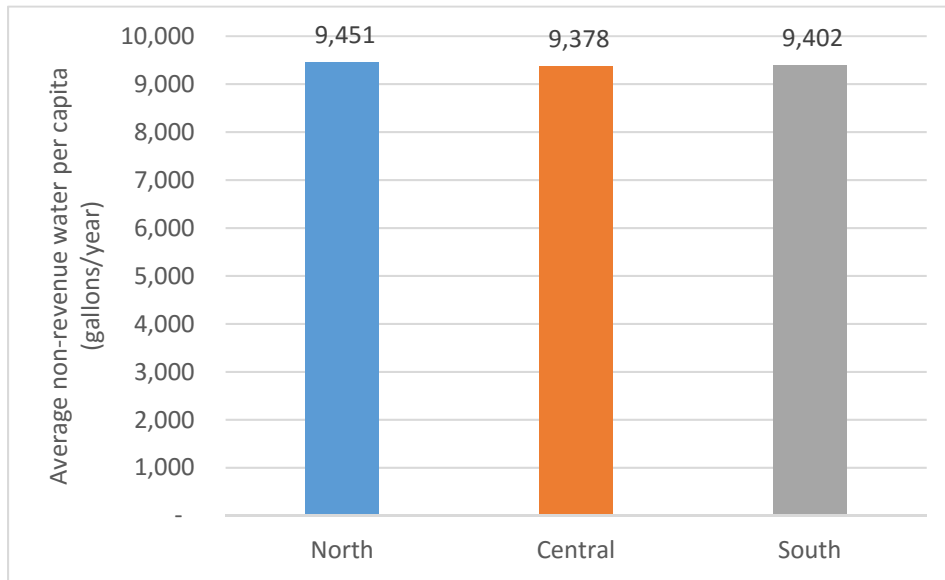


Figure 11. Regional average non-revenue water per capita.

2.18 Average customer retail unit costs are higher in southern Indiana

The average customer retail unit costs (CRUC) of water in the Southern region are higher than the rest of the State for each utility size (Figure 12). The average price per gallon is highest in the South, lowest in Central Indiana, and second highest in the Northern part of the State.

As seen elsewhere in this report, average CRUC decreases as the utility size increases. The only exception to this trend is in the very large utilities that have somewhat higher average costs than the large systems. This difference is partly explained by the local factors faced by each system and the fact that there are only a handful of very large communities in the State.

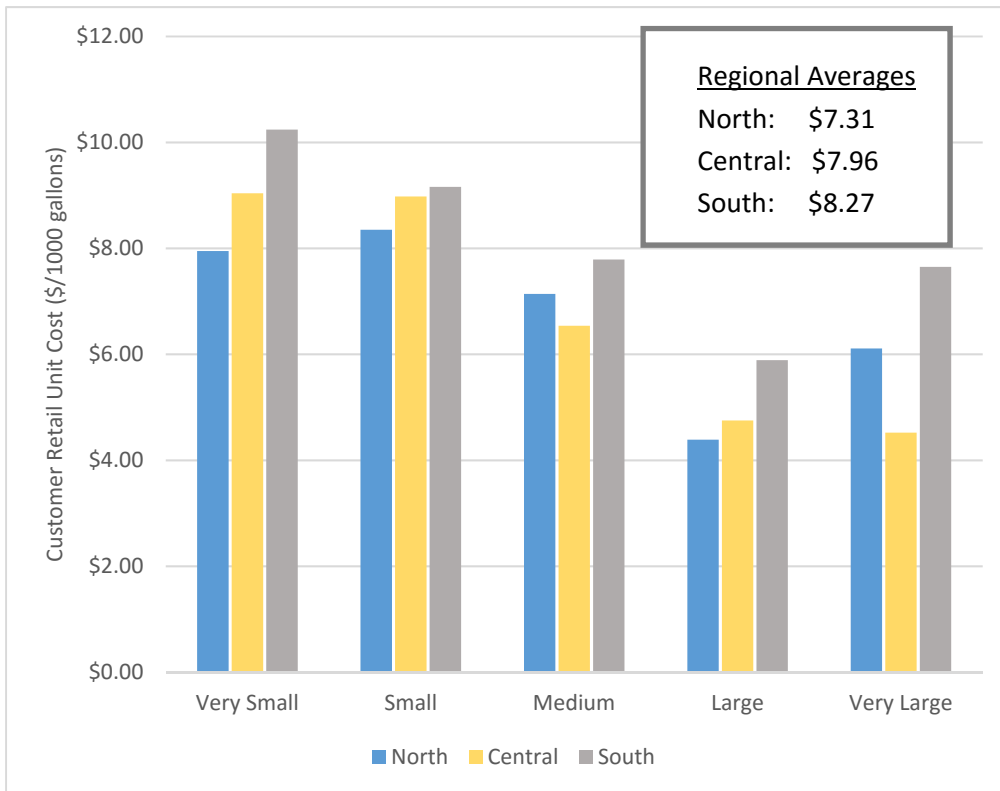


Figure 12. Average customer retail unit cost by utility size and region.

2.19 Infrastructure cost estimates are based on standard best practices

The infrastructure costs are based on the utility responses to the Survey and modeled replacement costs. The IFA used standard best practices to construct an idealized infrastructure replacement plan model (Appendix D). The IFA cost estimate assumes that utilities have not been able to maintain infrastructure to the standards defined by the National Association of Regulatory Utility Commissioners (NARUC) and the AWWA. Some of these costs may already be included in the utility’s rate structure. However, the purpose was to provide a cost associated with the improvements recommended to be completed in the next twenty years. *Table 5* itemizes the cost assumptions used in the estimate.

Table 5. Assumptions used in the IFA infrastructure costs estimate.

Type	Infrastructure Cost Assumption	Initial Cost	Annual Cost
Wells	Wells older than 60 years old are replaced	X	
	Wells 20-60 years old are rehabilitated	X	
Treatment Plants	Water treatment plants with filtration are upgraded every 20 years	X	X
	Chemical feed treatment plants upgraded every 10 years	X	X
Mains	All 4" mains are replaced for fire protection	X	X
	Each main size replaced at 10% annually	X	X
Valves	All 4" valves are replaced for fire protection	X	X
	All valves are replaced at 10% annually	X	X
Meters	New AMR systems for 75% of the utilities with less than 3,500 customers each	X	
	All meters are replaced at 10% of annually with AMR systems	X	X
Hydrants	All hydrants older than 60 years old are replaced	X	
	Replace hydrants every 40 years	X	X
Storage Tanks	Storage tanks older than 60 years old are replaced	X	
	Storage tanks are rehabilitated every 15 years	X	X
Booster Stations	Replace booster stations every 20 years	X	X

2.20 Infrastructure costs vary widely across the State

To determine estimated costs, each utility was asked to describe their immediate and future infrastructure needs. Approximately 140 utilities responded with specific projects, upgrades, or utility additions needed. These costs, along with the immediate infrastructure costs calculated by the IFA, are estimated to be \$2.3 billion dollars (*Figure 13*). This immediate cost for needed upgrades reflects the needs for new wells and intakes, treatment plants, water mains (pipe), new meters, fire hydrants, valves, storage tanks and booster stations throughout the State.

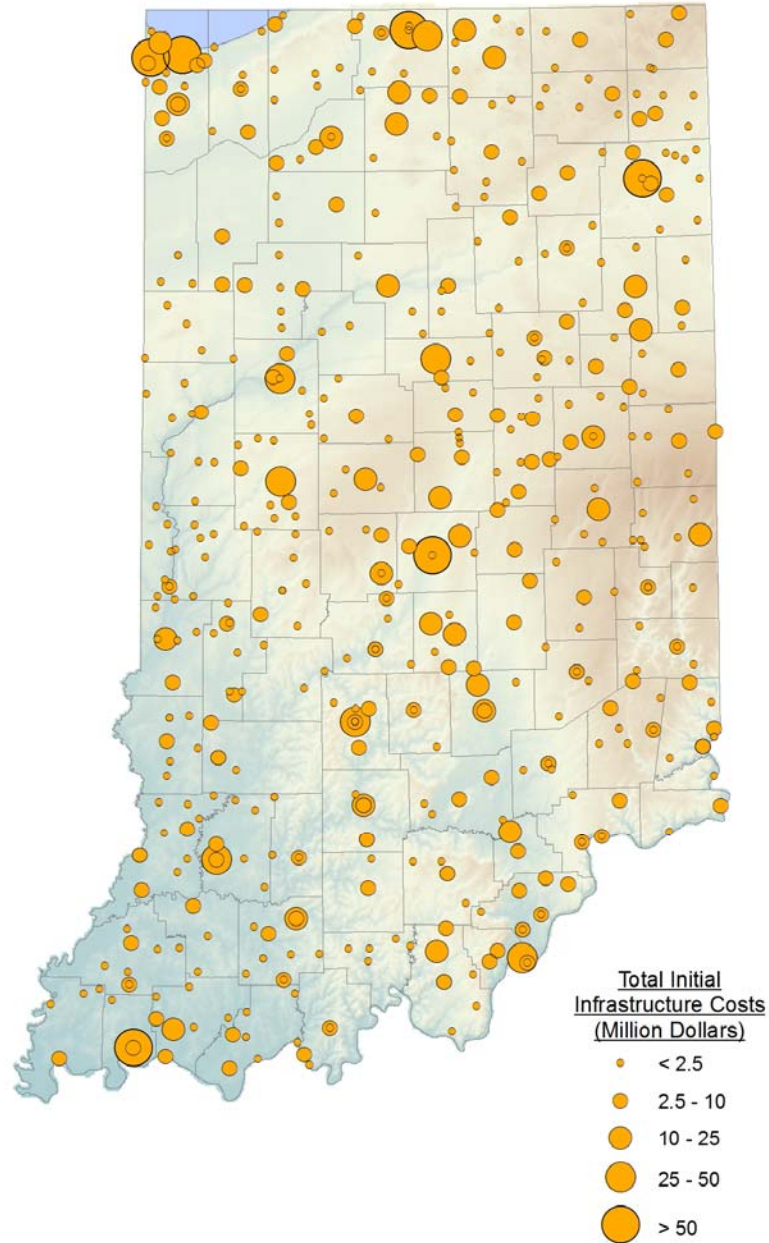


Figure 13. Initial infrastructure costs based on the Survey conducted in 2016 - \$2.3 billion.

2.21 Initial infrastructure costs are \$2.3 billion

The initial infrastructure costs of \$2.3 billion, when considered across the State, is less than \$500/person served by these systems. The primary needs for new infrastructure are in hydrants, meters, treatment plants, and water mains, which together make up over \$1.5 billion of the \$2.3 billion cost (Figure 14).

The assumptions and standard best practices that defined the cost estimate model determined how many wells and meters, etc. needed to be replaced. The model did not include growth in the community or other changes that will increase cost.

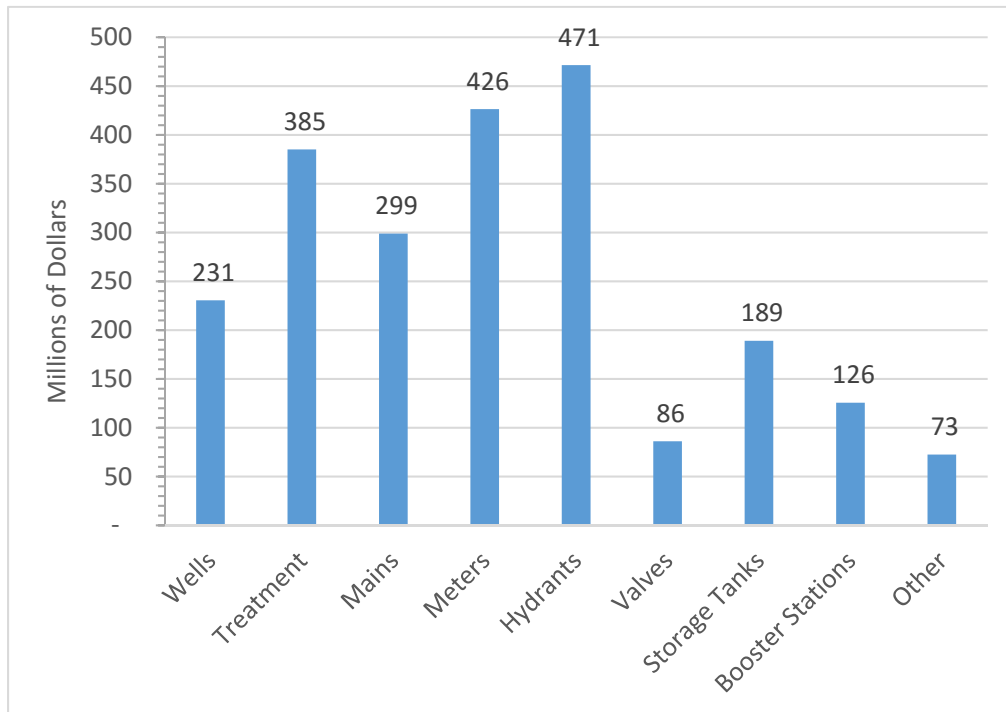


Figure 14. Initial infrastructure costs by type - \$2.3 billion.

2.22 Long-term infrastructure costs are \$815 million per year

After the initial infrastructure upgrade, to maintain the utilities into the future, approximately \$815 million is needed annually. The costs are broken down by infrastructure type in *Figure 15*. The model used to estimate long-term sustainable infrastructure costs weighs the need for treatment and water mains but does include additional costs for wells and intakes. Seventy percent of the long-term annual infrastructure costs is for treatment and water mains, with the remainder spread across the other elements of the system.

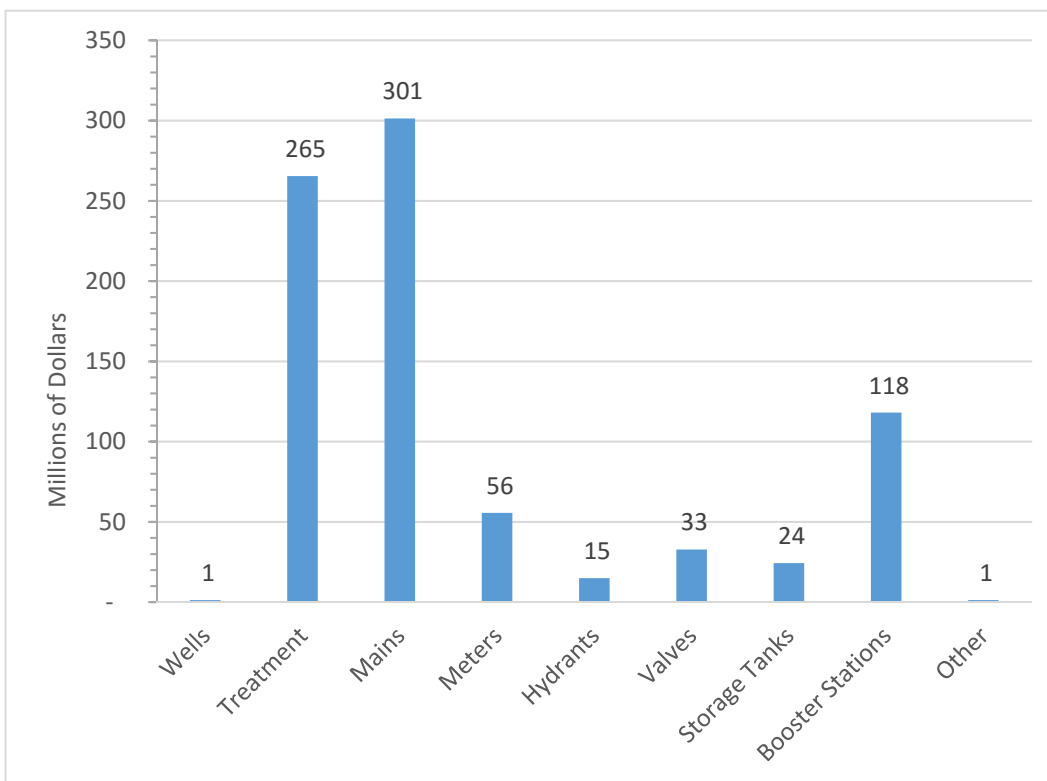


Figure 15. Annual long-term infrastructure costs by type - \$815 million.

3.0 RECOMMENDATIONS

This 2016 IFA Utility Evaluation Report outlines the results of a detailed survey of utilities and offers new insights into the dimensions of a latent problem here in Indiana. While the costs reflected in these estimates are large, the problem of sustainable infrastructure is national in scope. New solutions are needed. The following recommendations describe how the needs could be organized into a State response.

3.1 Fund a new infrastructure program

The needs identified in the Water Audit and Infrastructure Survey are much larger than previous estimates. Those estimates do not include all the items that will need to be replaced. For example, U.S. EPA's estimates did not include fire hydrants.

If progress is going to be made to improve the state of our infrastructure, more financial support will be needed. Currently, there are limited federal funds available to help pay for this growing infrastructure expense. Existing rate payers are the only source of funds for utilities to add water lines or replace old wells and pumps. The 2015 IFA Water Utility Planning Report (IFA, 2015) found that the fastest replacement rate among the largest utilities was more than 140 years (0.7 percent main replacement), illustrating the gap between current best practice and sustainability.

Water utilities are doing their best to balance the growing need for infrastructure repair against the need to provide safe and affordable water to their customers. In the past several decades the federal government has had a historically minor role in financing many construction projects (CBO, 2015). While the federal role could expand, it would take broad changes in the political will of the U.S. Congress and our improvement in economic position. Recent work by the CBO and the Congressional Research Service (CRS, 2010) on this topic indicates that current trends and conditions make it more likely that the states need to be the primary support for utilities on this topic.

Indiana has not appropriated funds to address utility infrastructure needs. Kentucky, Michigan, Minnesota, Ohio, and Wisconsin all contribute substantially to drinking water and wastewater infrastructure. Over the last 3 years, Ohio and Michigan have invested \$100 million and \$75 million, respectively, in funding their state's utility needs. Indiana's relationship with drinking water systems will need to evolve if the utilities are going to move beyond this critical funding deficit.

3.2 Prioritize replacement of old water service lines

This 2016 IFA Utility Evaluation Report shows that many utilities across the State have drinking water mains that are very old. These mains need to be the focus of a special financing program that could support their replacement and address the unquestionably vulnerable components of the system. Older storage and treatment systems should also be evaluated and considered for replacement in an effort to reduce non-revenue water. Old water service lines that currently deliver water and may not be an issue today, are a latent water supply and public health problem. One way to change the long-term condition and create a sustainable utility is to convert these old pipes into new mains that are embedded in a system that is mapped, inventoried, and managed.

3.3 Cultivate and standardize asset management

This 2016 IFA Utility Evaluation Report indicates that, when a comparison was made between medium utilities that are either regulated or unregulated (where “regulation” refers to rates being reviewed and approved by the IURC), those regulated by the IURC had a lower cost for water than the other systems. The State has an opportunity to call for more careful attention to longer-termed thinking and analysis. The idea of evaluation and assessment of critical assets and long-term funding plans can only help a utility maintain infrastructure.

The recommended approach to managing large public assets is to develop a schedule of asset planning that organizes the construction needed to maintain and extend the life of the system (GAO, 2013). This means that life-cycle cost becomes the basis for equipment replacement and maintenance is done prior to failure on a schedule that avoids increased risks. Asset management is important to develop a baseline. That is, the baseline is used to measure progress and eventually evolves into an inventory of equipment and the system. This is a starting point for a more comprehensive assessment of the data to map and locate the features of the system, such as age and condition of the pipes, valves, etc. This approach to managing assets is the modern way to maintain system value and financial integrity. Asset management needs to become the primary way that utilities operate. Over time, there should be less guess-work and more engineering analysis behind system improvements and calculations of water rates as well as increasing the sustainability of utility operations.

While the existing regulatory framework has mechanisms that help organize a case for a rate increase or change, the IURC could become a more vocal advocate of asset management systems in the process of utility planning and operation. Such a change could raise the bar on all utilities and address the water resource needs of basins and the utility, including the consumer.

3.4 Name a leader to coordinate the water financing program

Another finding of the 2015 IFA Water Utility Planning Report (IFA, 2015) was that the State has many programs that involve water resources, water supply and the public health issues of water development, but there is no single group responsible for planning and/or coordination. The problem of sustainable development can only be done at a regional level. The responsibility could be given to a water institute that can act as a coordinating and management board for each region. Data and tools can be developed by the State, but regional priorities need to be determined by local water users.

3.5 The IFA could evaluate regionalizing utilities to improve efficiency

Given the observable economies of scale in water utilities, the State of Indiana may want to consider system regionalization. Collaborative planning has already begun among neighboring utilities in some areas of the State. The data from this 2016 IFA Utility Evaluation Report suggests that larger systems improve the economic performance for customers. In spite of this, new small systems continue to be formed instead of combining assets with existing utilities where value could be added. Regionalization could take many forms and any healthy approach requires willing and capable partners.

With larger size and capacity, regional utilities add efficiencies while being more reliable and sustainable than individual community water systems. In order to understand the economic and practical challenges of regional systems, the Indiana Finance Authority could evaluate the technical and regulatory hurdles that may exist to regional water utility development and planning. Multiple utilities could share the costs of production and treatment in addition to some regulatory and operational functions. Regional management may lead to a more optimized operation with less risk of conflict for a lower overall cost.

4.0 NEXT STEPS

Over the past 5 years, there have been several reports that collected information from utilities to improve our knowledge about water systems in the State and consider alternative approaches for managing water utilities and ultimately, water use (IURC, 2013 and 2014, IFA, 2015). This 2016 IFA Utility Evaluation Report describes the results of a new assessment of the pressing problem of aging water infrastructure and water loss. After assembling the utility responses, we modeled the costs of our drinking water infrastructure needs. There are several conclusions that can be drawn:

- To avoid a more urgent problem in the future, substantial investment is needed now. The State should not depend upon federal financial support to relieve all long-term infrastructure needs.
- Other states have already developed sensible methods to pay for the long-term needs of water supply planning, including utility infrastructure improvement and replacement.

4.1 Suggested actions

In order to manage the resource and protect the public, the State will need to alter the way we fund infrastructure to arrest decay in one of the foundations of our communities. To make sure that any change addresses a need and is sustainable, we must collect data on the resource and the utility. This will enable the State to manage the system rather than react to unanticipated consequences. A program or agency should be designated to coordinate and focus the various parts of the State dedicated to water management and financing to support the water users that are anxious to begin the work. The actions outlined in this 2016 IFA Utility Evaluation Report reflect the consensus conclusions that have been reached in earlier studies and are confirmed in this Report. The goal is for the State to begin working to support the assets that improve everyone's life and the health of the natural environment. The gaps in funding for infrastructure improvements and water loss reduction described in this Report can be closed with the following actions:

New Water Infrastructure Funding Program - Devote new general fund appropriation to begin fixing the problem.

Agency Coordination - Centralized management and additional Full-Time Equivalents are needed in water agencies. This work needs to be coordinated to direct attention to the most pressing problems and move towards solutions.

Commission Water Availability and Demand Investigations in Priority Basins - Previous studies have confirmed the uncertainty of water resource limits on water supply (IFA, 2015). The State needs to forecast future demand for water and map availability of supply to avoid conflict and promote sustainable infrastructure.

State Data / Regional Authorities / Local Management - Educate the public, collect data, and create regional authorities that use a common water resource. The State needs to support the framework for local planning and management.

4.2 Consider new funding sources using ideas from other states

There are various mechanisms used by states to pay for infrastructure, provide incentives for conservation, and actively coordinate the agencies that manage water (Texas, 2011). Some states have put the issue before the voters and have added a small increase to their sales tax (not considered here), while others have simply charged for water use by the gallon. The following are alternative sources of revenue used by other states to create base funding for their water infrastructure and resource programs:

Bottled Water Fee

Currently bottled water is exempt from the standard 7 percent sales tax in Indiana. In other states and in some larger cities, a bottled water fee is used to pay for water – related programs. The city of Chicago generates \$8M/year with a \$0.05/bottle fee. Conservatively, Indiana could generate approximately \$2M/year for conservation and management programs.

ADVANTAGE – clear policy signal: bottled water for conservation

DISADVANTAGE – difficult to estimate, volatile revenue stream

Management Fee for Water Use

Some states generate millions of dollars with an annual fee for all high capacity users. This fee is usually one of the ways that agencies are funded to protect water resources. Indiana already charges \$33/million gallons for withdrawal of water in the newest Army Corps of Engineers reservoirs in southern Indiana. A similar fee could be applied to groundwater and to surface water users with minor statutory changes to generate anywhere from \$10M to \$40M/year.

ADVANTAGES – 1) direct connection between water use and management, 2) it is currently authorized by Indiana law for water use from State reservoirs, 3) stable source of funding (groundwater use is increasing), 4) simple to estimate State revenue for alternative fee models.

DISADVANTAGE – an equitable revenue model is a challenge

Federal Funds

Relative to many of our neighbors, Indiana receives less money from the federal government for water-related programs and projects. This gap is most apparent when comparing the funds allocated for water planning studies and other funds appropriated through the Water Resources Reform and Development Act (WRRDA), where Indiana has historically been less willing to provide the State match for the projects.

The U.S. Army Corps of Engineers does not know the water use priorities of the State. Federal funds are currently unapplied for. A new statewide coordinator can ensure that federal funds are identified, applied for, and utilized. Indiana has lost potential funding for investigations that could have helped the State better understand the availability of water in some of our larger rivers. Once we have made this decision, the State should develop an aggressive and integrated approach to identifying new federal funding for water projects that include sources that require a State match.

ADVANTAGE – Indiana needs to do what it can to become engaged with the U.S. Army Corps of Engineers and their planning programs

DISADVANTAGE – make the case to develop a coordinated strategy to inform congressional delegation

Impact Fees

Some states require an up-front impact fee for all new groundwater or surface water users. This fee could be annual for all high capacity water users or it could be a “new user” fee that is simply the incremental cost associated with additional consumers of the aquifers, streams and water resources of the State. This fee could generate several million dollars per year.

ADVANTAGE – impact fees connect the new users to the problem of management and water conservation

DISADVANTAGE – questions of equity when only “new” users pay the costs for a service that benefits all existing users

Gasoline Fee

Some states (Maine) use a fraction of the gasoline fee to pay for source water protection and groundwater programs. This may be the legislative session where the fee is reconsidered so an additional \$0.05/gallon fee would generate several tens of millions of dollars in Indiana.

ADVANTAGE – the gasoline fee is being revised in the Winter 2016 Legislative Session and this fee could generate substantial revenue for infrastructure

DISADVANTAGE – lack of support in the transportation sector and indirect connection between the fee and water resources

Sales Fee on Retail Water

Currently, there is no fee on retail water delivered to homes. Iowa is considering a water utility delivery fee that would replace their excise fee for the utility property. This approach can be modified to add a fee to retail water that would be designed to collect funds for replacing old water mains, manage the resource and protect the quantity and quality of future supplies. A sales fee of several percent would generate tens of millions of dollars for the State from one sector of water users. Depending on the rate, Indiana could generate approximately \$40M/year for infrastructure replacement programs.

ADVANTAGE – direct policy signal of funds to water use for water conservation

DISADVANTAGE – lack of utility support if no fee for other users

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ACRONYMS

AMR – Automatic Meter Reading
ASCE – American Society of Civil Engineers
AWWA – American Water Works Association
CBO – Congressional Budget Office
CRS – Congressional Research Service
CRUC – Customer Unit Retail Cost
DWINSA – Drinking Water Infrastructure Needs Survey and Assessment
FTE – Full Time Equivalent
GAO – U.S. Government Accountability Office
IDEM – Indiana Department of Environmental Management
IFA – Indiana Finance Authority
IGS – Indiana Geological Survey
IURC – Indiana Utility Regulatory Commission
NARUC – National Association of Regulatory Commissioners
NRW – Non-Revenue Water
O&M – Operation and Management
PWSID – Public Water Supply Identification
RCAP – Rural Community Assistance Program
SDWIS – Safe Drinking Water Information System
SEA 347 – Senate Enrolled Act 347
SRF – State Revolving Fund Loan Program
U.S. EPA (EPA) – United States Environmental Protection Agency
VPC – Variable Production Cost
WHO – World Health Organization

APPENDICES

Appendix A. Senate Enrolled Act 347

Appendix B. AWWA Water Audit

Appendix C. Infrastructure Survey

Appendix D. Details of Future Infrastructure Cost Model

Appendix A. Senate Enrolled Act 347

PRINTING CODE. Amendments: Whenever an existing statute (or a section of the Indiana Constitution) is being amended, the text of the existing provision will appear in this style type, additions will appear in **this style type**, and deletions will appear in ~~this style type~~.

Additions: Whenever a new statutory provision is being enacted (or a new constitutional provision adopted), the text of the new provision will appear in **this style type**. Also, the word **NEW** will appear in that style type in the introductory clause of each SECTION that adds a new provision to the Indiana Code or the Indiana Constitution.

Conflict reconciliation: Text in a statute in *this style type* or ~~this style type~~ reconciles conflicts between statutes enacted by the 2015 Regular Session of the General Assembly.

SENATE ENROLLED ACT No. 347

AN ACT to amend the Indiana Code concerning utilities.

Be it enacted by the General Assembly of the State of Indiana:

SECTION 1. IC 8-1-30.5 IS REPEALED [EFFECTIVE JANUARY 1, 2016 (RETROACTIVE)]. (Water Utility Resource Data).

SECTION 2. IC 8-1-30.7 IS ADDED TO THE INDIANA CODE AS A **NEW** CHAPTER TO READ AS FOLLOWS [EFFECTIVE UPON PASSAGE]:

Chapter 30.7. Non-Revenue Water Auditing

Sec. 1. The general assembly makes the following findings:

- (1) Safe and affordable drinking water is essential to public health and economic development throughout Indiana.**
- (2) The cost of providing reliable drinking water is increasing due to factors such as aging infrastructure, increased energy costs, and complex and costly changes in the regulatory requirements for safe drinking water.**
- (3) Water main breaks are visible and disruptive manifestations of the more widespread phenomenon of leakage from water systems.**
- (4) Leakage of drinking water from water distribution systems adds to the cost of service to customers and may lead to increased raw water demands that harm the natural environment.**
- (5) The failure of water utilities to recover revenue from some of the water delivered to users due to:**

SEA 347



- (A) metering and billing inaccuracies; and
- (B) theft;

increases the cost per unit of water that is billed to customers.

(6) Best management practices suggest that drinking water utilities should conduct an annual water audit in accordance with the American Water Works Association (AWWA) Manual of Water Supply Practices M-36: Water Audits and Loss Control Programs.

(7) The AWWA has published software for use in categorizing and reporting water losses and has made the software available without charge.

(8) AWWA M-36 water audit protocol classifies water volumes entering water distribution systems into revenue water and non-revenue water, with:

- (A) revenue water representing billed water consumption; and
- (B) non-revenue water consisting of the difference between the volume entering the distribution system and revenue water.

(9) Regular auditing of water volumes is a necessary foundation for the adoption of cost effective strategies to reduce the level of non-revenue water to economically reasonable levels.

Sec. 2. As used in this chapter, "authority" refers to the Indiana finance authority established by IC 4-4-11-4.

Sec. 3. As used in this chapter, "commission" refers to the Indiana utility regulatory commission created by IC 8-1-1-2.

Sec. 4. As used in this chapter, "non-revenue water" means the difference between the annual volume of water entering a water distribution system and revenue water of the system.

Sec. 5. As used in this chapter, "revenue water" means the annual amount of water consumption billed to customers.

Sec. 6. As used in this chapter, "water audit" means an audit performed in accordance with the AWWA Manual of Water Supply Practices M-36: Water Audits and Loss Control Programs.

Sec. 7. As used in this chapter, "water related state agency" means any of the following:

- (1) The Indiana finance authority established by IC 4-4-11.
- (2) The department of administration created by IC 4-13-1-2.
- (3) The commission.
- (4) The office of utility consumer counselor created by IC 8-1-1.1-2.



(5) The department of environmental management established by IC 13-13-1-1.

(6) The department of natural resources created by IC 14-9-1-1.

(7) The state department of health established by IC 16-19-1-1.

(8) The Indiana geological survey established as a part of Indiana University by IC 21-47-2.

(9) The Indiana Water Resource Research Center of Purdue University.

(10) The state department of agriculture established by IC 15-11-2-1.

Sec. 8. As used in this chapter, "water utility" means:

- (1) a public utility (as defined in IC 8-1-2-1(a));
- (2) a municipally owned utility (as defined in IC 8-1-2-1(h));
- (3) a not-for-profit utility (as defined in IC 8-1-2-125(a));
- (4) a cooperatively owned corporation;
- (5) a conservancy district established under IC 14-33; or
- (6) a regional water district established under IC 13-26;

that provides water service to the public in Indiana for a fee.

Sec. 9. (a) For purposes of the report required by section 10 of this chapter, each water utility shall provide to the authority a water audit:

- (1) according to requirements established by the authority; and
- (2) not later than a date set by the authority so that the report prepared by the authority under section 10 of this chapter can reflect the results of the water audits of all water utilities.

(b) The authority shall summarize the results of the water audits provided under subsection (a) in the report prepared under section 10 of this chapter.

Sec. 10. Before November 1, 2017, the authority, in consultation with:

- (1) the commission and any other water related state agencies;
- (2) any political subdivisions (as defined in IC 36-1-2-13);
- (3) any water utilities or organizations of water utilities; and
- (4) any other interested parties;

that the authority chooses to consult with, shall prepare and submit in an electronic format under IC 5-14-6 to the executive director of the legislative services agency a report on non-revenue water and water loss in Indiana.

Sec. 11. This chapter expires July 1, 2018.



SECTION 3. IC 14-25-7-18 IS ADDED TO THE INDIANA CODE AS A NEW SECTION TO READ AS FOLLOWS [EFFECTIVE JULY 1, 2016]: **Sec. 18. (a) As used in this section, "authority" refers to the Indiana finance authority established by IC 4-4-11-4.**

(b) As used in this section, "quality assurance review" means a process of reviewing and verifying water resources data with the goal of assuring the reliability of the data. The term includes the application of certain objectives, principles, and policies already in use at the Indiana geological survey in maintaining consistency in water resources data and accountability to the scientific community and general public.

(c) The authority shall perform a quality assurance review of the water resources data compiled from the reports submitted by owners of significant water withdrawal facilities under:

- (1) section 15 of this chapter; and**
- (2) IC 13-2-6.1-1 and IC 13-2-6.1-7 (before their repeal);**

beginning with the reports submitted for the 1985 calendar year.

(d) The authority may enter into contracts with one (1) or more professionals or state educational institutions under which the professionals or state educational institutions will perform some or all of the duties imposed on the authority by this section. The authority may compensate the professionals or state educational institutions for work performed under this section with:

- (1) money from the drinking water revolving loan fund established by IC 13-18-21-2; or**
- (2) any other funds appropriated to the authority.**

(e) In performing the quality assurance review required by this section, the authority shall use the water resources data in a manner that:

- (1) protects the confidential information of owners of significant water withdrawal facilities; and**
- (2) is consistent with IC 5-14-3-4.**

(f) The authority shall present the results of the quality assurance review performed under this section, as those results become available, to the water rights and use section of the department's division of water. The water rights and use section shall maintain the results in the data base of data extracted from reports submitted by owners of significant water withdrawal facilities under section 15 of this chapter (and IC 13-2-6.1-1 and IC 13-2-6.1-7 before their repeal).

SECTION 4. [EFFECTIVE UPON PASSAGE] **(a) The following definitions apply throughout this SECTION:**

SEA 347



- (1) "Authority" refers to the Indiana finance authority created by IC 4-4-11-4.
- (2) "Commission" refers to the Indiana utility regulatory commission created by IC 8-1-1-2.
- (3) "State educational institution" has the meaning set forth in IC 21-7-13-32.
- (4) "Water utility" means any of the following:
- (A) A public utility, as defined in IC 8-1-2-1(a), that furnishes water to its customers.
 - (B) A municipally owned utility, as defined in IC 8-1-2-1(h), that furnishes water to its customers.
 - (C) A not-for-profit utility, as defined in IC 8-1-2-125(a), that furnishes water to its customers.
 - (D) A utility that:
 - (i) is owned cooperatively by its customers; and
 - (ii) furnishes water to its customers.
 - (E) A conservancy district established under IC 14-33 that furnishes water to its customers.
 - (F) A regional district established under IC 13-26 that furnishes water to its customers.
- (b) The authority shall:
- (1) study; and
 - (2) prepare an analysis of;

the infrastructure needs of the water utilities of Indiana. The authority shall submit a report on its study and analysis in an electronic format under IC 5-14-6 to the executive director of the legislative services agency not later than November 1, 2016.
- (c) In preparing the analysis required by this SECTION, the authority:
- (1) shall consult with:
 - (A) water utilities; and
 - (B) the commission; and
 - (2) may consult with any other entity or individual having information the authority considers relevant to the infrastructure needs of water utilities.
- (d) The authority may hold public meetings to gather information for the purposes of preparing the analysis required by this SECTION.
- (e) The authority may enter into contracts with one (1) or more professionals or state educational institutions under which the professionals or state educational institutions will perform some or all of the duties imposed on the authority by this SECTION. The



authority may compensate the professionals or state educational institutions for work performed under this SECTION with:

(1) money from the drinking water revolving loan fund established by IC 13-18-21-2; or

(2) any other funds appropriated to the authority.

(f) In conducting the study and preparing the analysis required by this SECTION, the authority shall use any data it acquires in a manner that:

(1) protects the confidential information of individual water utilities; and

(2) is consistent with IC 5-14-3-4.

(g) This SECTION expires January 1, 2017.

SECTION 5. An emergency is declared for this act.



President of the Senate

President Pro Tempore

Speaker of the House of Representatives

Governor of the State of Indiana

Date: _____ Time: _____

SEA 347



Appendix B. AWWA Water Audit

AWWA Free Water Audit Software v5.0

American Water Works Association Copyright © 2014, All Rights Reserved.

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format, and is not meant to take the place of a full-scale, comprehensive water audit format.

Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targeting loss reduction levels

The spreadsheet contains several separate worksheets. Sheets can be accessed using the tabs towards the bottom of the screen, or by clicking the buttons below.

Please begin by providing the following information

Name of Contact Person:

Email Address:

Telephone | Ext.:

Name of City / Utility:

City/Town/Municipality:

State / Province: Select a state / province from the list

Country:

Year: Select Type...

Start Date: Enter MM/YYYY numeric format

End Date: Enter MM/YYYY numeric format

Audit Preparation Date:

Volume Reporting Units:

PWSID / Other ID:

The following guidance will help you complete the Audit

All audit data are entered on the [Reporting Worksheet](#)

Value can be entered by user

Value calculated based on input data

These cells contain recommended default values

Use of Option (Radio) Buttons: 0.25% Value:

Select the default percentage by choosing the option button on the left

To enter a value, choose this button and enter a value in the cell to the right

The following worksheets are available by clicking the buttons below or selecting the tabs along the bottom of the page

Instructions

The current sheet. Enter contact information and basic audit details (year, units etc)

Reporting Worksheet

Enter the required data on this worksheet to calculate the water balance and data grading

Comments

Enter comments to explain how values were calculated or to document data sources

Performance Indicators

Review the performance indicators to evaluate the results of the audit

Water Balance

The values entered in the Reporting Worksheet are used to populate the Water Balance

Dashboard

A graphical summary of the water balance and Non-Revenue Water components

Grading Matrix

Presents the possible grading options for each input component of the audit

Service Connection Diagram

Diagrams depicting possible customer service connection line configurations

Definitions

Use this sheet to understand the terms used in the audit process

Loss Control Planning

Use this sheet to interpret the results of the audit validity score and performance indicators

Example Audits

Reporting Worksheet and Performance Indicators examples are shown for two validated audits

Acknowledgements

Acknowledgements for the AWWA Free Water Audit Software v5.0

If you have questions or comments regarding the software please contact us via email at: wlc@awwa.org



AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0
American Water Works Association
Copyright © 2014, All Rights Reserved.

?	Click to access definition
+	Click to add a comment

Water Audit Report for: << Please enter system details and contact information on the Instructions tab >>
Reporting Year:

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

PLEASE CHOOSE REPORTING UNITS FROM THE INSTRUCTIONS SHEET BEFORE ENTERING DATA

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

<----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	+	?	<input type="text"/>	<input type="text"/>
Water imported:	+	?	<input type="text"/>	<input type="text"/>
Water exported:	+	?	<input type="text"/>	<input type="text"/>

Master Meter and Supply Error Adjustments

Pcnt:	+	?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Value:	+	?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	+	?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: **0.000**

AUTHORIZED CONSUMPTION

Billed metered:	+	?	<input type="text"/>	<input type="text"/>
Billed unmetered:	+	?	<input type="text"/>	<input type="text"/>
Unbilled metered:	+	?	<input type="text"/>	<input type="text"/>
Unbilled unmetered:	+	?	<input type="text"/>	<input type="text"/> 0.000

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: **0.000**

Click here: ?
for help using option
buttons below

Pcnt:	+	?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Value:	+	?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

1.25%

Use buttons to select
percentage of water supplied
OR
value

WATER LOSSES (Water Supplied - Authorized Consumption)

0.000

Apparent Losses

Unauthorized consumption: **0.000**

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+	?	<input type="text"/>	<input type="text"/> 0.000
Systematic data handling errors:	+	?	<input type="text"/>	<input type="text"/> 0.000

Apparent Losses: **0.000**

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **0.000**

WATER LOSSES: **0.000**

NON-REVENUE WATER

NON-REVENUE WATER: **0.000**

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+	?	<input type="text"/>	<input type="text"/>
Number of <u>active</u> AND <u>inactive</u> service connections:	+	?	<input type="text"/>	<input type="text"/>
Service connection density:	-	?	<input type="text"/>	<input type="text"/>

Are customer meters typically located at the curbside or property line?
Average length of customer service line:

(length of service line, beyond the property boundary, that is the responsibility of the utility)

Average operating pressure:

COST DATA

Total annual cost of operating water system:	+	?	<input type="text"/>	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?	<input type="text"/>	
Variable production cost (applied to Real Losses):	+	?	<input type="text"/>	\$/ <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

Appendix C. Infrastructure Survey

Indiana Drinking Water Needs Survey

Welcome



Why-fi Water: Utility Infrastructure Needs Survey

This survey has been created by the Indiana Finance Authority to support the efforts mandated by [Senate Enrolled Act 347](#) (2016). Your feedback is critical to ensure that legislators in the State of Indiana understand the needs of our community water systems. Please report the most current information available.

The survey should take less than 1 hour to complete, but will depend on the complexity of your system and the number of water sources. All responses will remain confidential and results will only be reported in aggregate. If you have any questions or concerns, please contact Staci Orr (sorr@ifa.in.gov or 317-232-8623).

The report will be available for distribution beginning November 1, 2016. A copy of the final report will be emailed to all survey respondents, after this date.

System Information

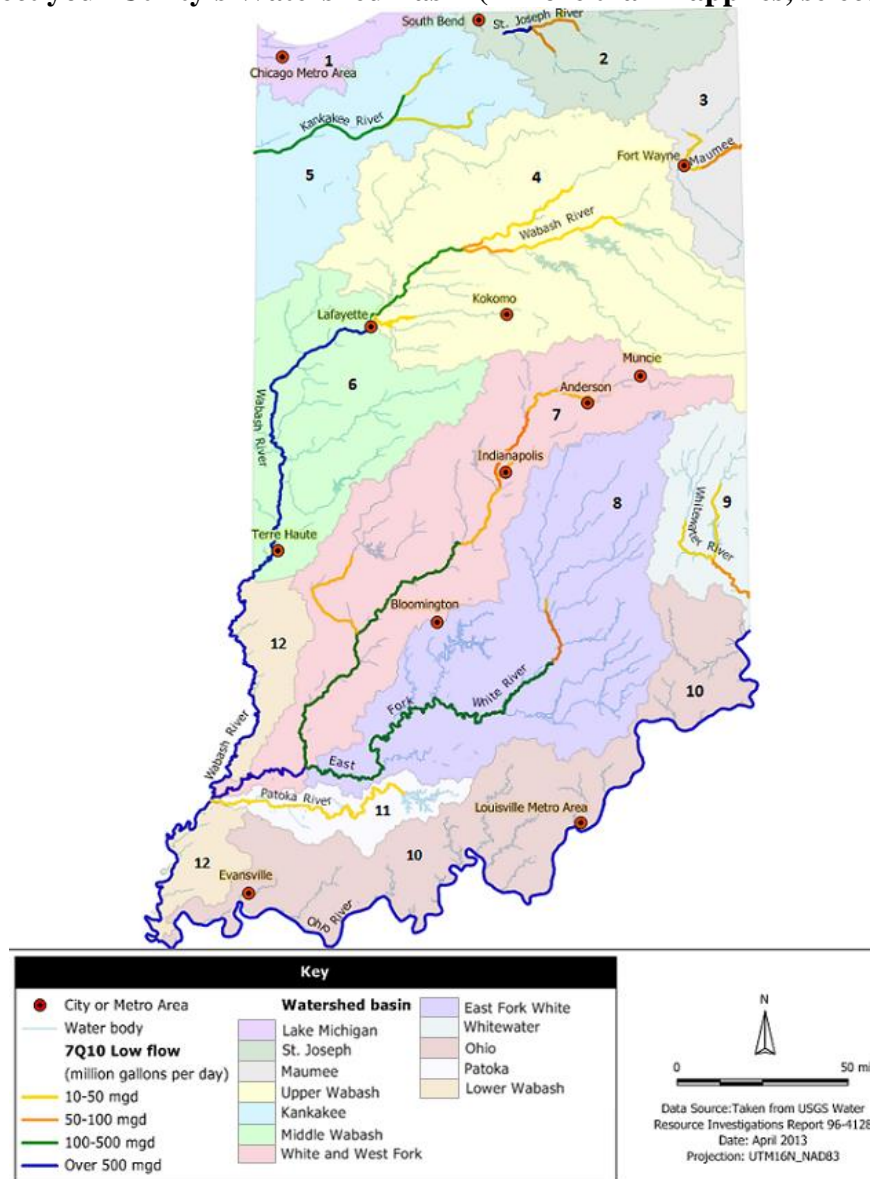
1) Utility name: _____

PWSID number (e.g. 5210101): _____

Population served: _____

Year Utility was formed: _____

Please select your Utility's Watershed Basin (if more than 1 applies, select multiple):



(Map Credit: IURC 2014 water utility resource report)

- | | | |
|---|---|---|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> 5. Kankakee | <input type="checkbox"/> 10. Ohio |
| <input type="checkbox"/> 1. Lake Michigan | <input type="checkbox"/> 6. Middle Wabash | <input type="checkbox"/> 11. Patoka |
| <input type="checkbox"/> 2. St. Joseph | <input type="checkbox"/> 7. White and West Fork | <input type="checkbox"/> 12. Lower Wabash |
| <input type="checkbox"/> 3. Maumee | <input type="checkbox"/> 8. East Fork White | |
| <input type="checkbox"/> 4. Upper Wabash | <input type="checkbox"/> 9. Whitewater | |

USGS Quad Map Name(s) (if known) _____

Service Counties

2) How many counties does your utility serve? _____

Which counties does your utility serve?

	County
Primary County:	_____

Utility Contact Information

3) Utility Contact Information

First Name: _____ Last Name: _____

Contact Role (Superintendent, Operator, etc.): _____

Street Address: _____

Apt/Suite/Office: _____

City: _____ Zip: _____

Email Address: _____ Phone: _____

Fax Number: _____ Mobile Phone: _____

Source of Water Supply

4) Source of Water Supply (Check all that apply):

- Surface Water
- Ground Water
- Purchased Surface Water
- Purchased Ground Water

Ground Water System

5) Ground Water System Specifications

Number of Wells: _____

Information about Wells:

6) Well 1 Details:

Capacity (GPM): _____

Year Installed: _____

Year of Last Inspection: _____

Additional Well Details (separate well information with a comma):

Capacity (GPM): _____

Year Installed: _____

Year of Last Inspection: _____

Surface Water System

7) How many sources of surface water does your utility use? _____

What are the sources of your utility's surface water supply? (e.g. White River, Old Lake, etc.)

	Source Name(s)
Surface Water Source(s):	_____

How many intakes does your utility use? _____

Intake Details

8) Intake 1 Details

What year was intake 1 constructed?: _____

How many low head pumps does intake 1 use? _____

Low Head Pump 1 Capacity (GPM): _____

Please provide the capacities for each additional pump, separated by a comma:

Purchased Ground Water

9) From how many providers do you purchase ground water? _____

Who are your utility's suppliers of ground water?

	Utility
Suppliers:	_____

According to the contract, what is the minimum purchased amount for each supplier? (in MGY or specify units)

	Amount in MGY
Supplier(s):	_____

Purchased Surface Water

10) From how many providers does your utility purchase surface water? _____

Who are your utility's providers of purchased surface water?

	Utility
Supplier(s):	_____

According to the contract, what is the minimum purchased amount for each supplier? (in MGY or specify units)

	Amount in MGY
Supplier(s):	_____

Emergency Power Source

11) Does your utility have an emergency power source?

- Yes Unknown
 No Other - Explain: _____

If yes, what is the capacity rating for your emergency power source? (in kW)

Water Treatment

12) Is your only treatment chemical feed?

- Yes Unsure
 No Other - Explain: _____

How many treatment plants does your utility have? _____

Treatment Plant 1:

13) What is the capacity of Treatment Plant 1? (In GPM or specify units): _____

In what year was Treatment Plant 1 constructed? _____

How many High Service Pumps does Treatment Plant 1 have? _____

What is the capacity for each of the High Service Pumps in Treatment Plant 1?

	Capacity (GPM):
High Service Pump(s):	_____

Distribution System

14) Which of the following main sizes are found in your system?

4" and smaller

6" to 12"

14" to 24"

26" to 42"

Greater than 48"

Other - Write In: _____

Unknown

Please describe the mains for your distribution system.

	Approximate Average Age of Pipe (years):	Majority Pipe Type (Ductile Iron, PVC, Cast Iron, Asbestos Cement, etc.):	Approximate Total Length of Pipe (miles):	Length of Pipe Installed Prior to 1975 (miles):	Length of Pipe Installed After 1975 (miles):
4" and smaller:	_____	_____	_____	_____	_____
6" to 12":	_____	_____	_____	_____	_____
14" to 24":	_____	_____	_____	_____	_____
26" to 42":	_____	_____	_____	_____	_____
Greater than 48":	_____	_____	_____	_____	_____
Other:	_____	_____	_____	_____	_____

Meters

15) Which of the following sizes of meters are present in your system?

- | | |
|-------------------------------|--|
| <input type="checkbox"/> 5/8" | <input type="checkbox"/> 8" |
| <input type="checkbox"/> 3/4" | <input type="checkbox"/> 10" |
| <input type="checkbox"/> 1" | <input type="checkbox"/> 12" |
| <input type="checkbox"/> 2" | <input type="checkbox"/> Larger than 12" |
| <input type="checkbox"/> 3" | <input type="checkbox"/> Other - Write In: _____ |
| <input type="checkbox"/> 4" | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> 6" | |

How many of each of the following sizes of meters does your utility have in the distribution system?

5/8": _____	6": _____
3/4": _____	8": _____
1": _____	10": _____
2": _____	12": _____
3": _____	Larger than 12": _____
4": _____	Other: _____

Hydrants

16) How many hydrants are connected to your distribution system?

Fire: _____

Flushing: _____

Hydrant Installation Information

Number installed before 1975: _____

Number installed in or after 1975: _____

Valves

17) Which of the following valve sizes are present in your utility's distribution system?

- | | |
|---|--|
| <input type="checkbox"/> 4" or smaller: | <input type="checkbox"/> 18" |
| <input type="checkbox"/> 6" | <input type="checkbox"/> 20" |
| <input type="checkbox"/> 8" | <input type="checkbox"/> Larger than 20" |
| <input type="checkbox"/> 10" | <input type="checkbox"/> Other - Write In: _____ |
| <input type="checkbox"/> 12" | |
| <input type="checkbox"/> 14" | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> 16" | |

How many of each of the following sizes of valves does your utility have in the distribution system?

4": _____

16": _____

6": _____

18": _____

8": _____

20": _____

10": _____

Larger than 20": _____

12": _____

Other: _____

14": _____

Pressure

18) What is your average operating pressure? (psi): _____

Do you have areas of low pressure?

Yes

No

Unsure

Storage

19) Does your system have at least 24 hours of storage?

Yes

No

Unsure

How many elevated storage tanks does your utility have available?: _____

Elevated Storage Tank Details

	Size (MG):	Year Installed:	Year Last Painted:
Elevated Storage Tank(s)	_____	_____	_____

How many ground storage tanks does your utility have available?: _____

Ground Storage Tank Details

	Size (MG):	Year Installed:	Year Last Painted:
Elevated Storage Tank(s)	_____	_____	_____

Booster Stations

20) How many booster stations does your utility use?: _____

Booster Stations

	Number of Pumps	Rated Capacity of Station (GPM):	Year Installed:
Elevated Storage Tank(s)	_____	_____	_____

Line Replacement Needs

21) How many lead service lines does your utility have in the distribution system?

22) How many dead end lines does your system have?

Main Breaks

23) How many main breaks did your utility experience last year (2015)? _____

Electronic Resources

24) Does your utility use SCADA (Supervisory Control and Data Acquisition)?

- Yes
- No
- Unsure

Which system components are connected to SCADA (Check all that apply)?

- Wells
- Booster Stations
- Tanks
- Treatment
- Automatic Meter Reader
- Other - Please specify: _____

25) Does your utility use billing software?

- Yes - Please specify: _____
- No
- Unsure

Do you think that your current billing system is adequate to meet the needs of your system?

- Yes
 - No
 - Unsure
-

Mapping

26) Do you have an adequate map of your system?

- Yes
- No
- Unsure

27) Does your system have access to a GIS-based mapping program?

- Yes
- No
- Other - Explain

Future Needs and Plans

28) Do you anticipate a need to serve additional customers in the next 5 years?

- Yes
- No
- Unsure

29) How many of each of the following types of customers do you anticipate needing to serve in the future?

Residential: _____

Commercial: _____

Industrial: _____

30) Does your system have a need for a new or replacement truck, excavator, backhoe, or other similar equipment?

- Yes - Describe: _____
- No
- Unsure

31) What infrastructure needs has your utility identified for the next 3 years? Please provide item and estimated cost if known.

32) What are your utility's future plans? Please include specific information (price, type of upgrade/construction) whenever possible.

33) Has your utility begun discussions with an engineer for future planning purposes?

Yes

No

Unsure

Other - Explain: _____

34) Other comments:

Thank you for taking our survey. Your response is very important to us.



Appendix D. Details of Future Infrastructure Cost Model

Infrastructure Funding and Replacement Model

Many of the respondents did not respond to the future needs question with specific projects and associated costs. Therefore, the Indiana Finance Authority (IFA) used standard best practices to construct an idealized infrastructure replacement plan model. This model uses AWWA and IDEM guidelines as well as engineering best practices to develop useful life estimates. *Note:* Any costs associated with the age of infrastructure (i.e. storage tanks equal to or greater than 60 years old) ONLY takes into consideration the average age **at the time of the survey (2016)**. Infrastructure that exceeds the useful life parameters that are set in the model AFTER year 1 are not included in the cost estimates that are provided. It is important to note that this model applies to utilities differently depending on their response to the question regarding future needs.

Model costs were created based on bid tabulations reviewed by staff for State Revolving Fund (SRF) funded projects. The bid tabulations for each modeled facility description for the 3 years ending December 31, 2015 were averaged to determine a cost per unit. This cost was applied to each utility regardless of utility size.

It should be noted that the model does not necessarily indicate unfunded infrastructure improvement needs. Many of the modeled costs should already be included in the utility's rate structure. Instead, the purpose of the model was to provide a cost to the improvements that are recommended to be completed in the next 20 years.

Model Assumptions

Wells: NARUC estimates average well useful life of 25-35 years. Utah Administrative Code estimates 25 years.

- **Wells older than 60 years old** need to be replaced. This model uses average age, as reported by the utility. Thus, some wells may fall into this category that are not over 60, while others that may be over 60 are not included.

(IFA average used \$404.20 per gpm, where capacity is the average of all wells operated by a single utility. Cost applied to year 1)

Example: Utility Z has 2 wells with an average age of 65, and an average capacity of 500 gpm. According to the model both wells will be replaced, for a total cost of \$404,200.00).

- All wells **between 20 and 59 years old** should be rehabbed once in the next 20 years. This formula uses average age information. Thus some wells may be included/excluded.

(IFA average used \$209.49 per gpm, per year, where capacity is the average of all wells operated by a single utility. Cost applied to year 1)

Example: Utility Y has 3 wells with an average age of 32, and an average capacity of 350 gpm. According to the model, all three wells will be rehabbed in

the next 20 years, for a total cost of \$212,614.50.

Sources:

National Association of Regulatory Utility Commissioners (NARUC), 1979. "Depreciation Practices for Small Water Utilities." Washington, D.C. Page 11, Figure 1.

Utah Division of Administrative Rules, 2016. Utah Administrative Code: R746-332.1.

Accessed [September 2016] at URL

<http://www.rules.utah.gov/publicat/code/r746/r746-332.htm>.

Water Treatment Plant: NARUC estimates average useful life of 20-40 years. Utah Administrative Code estimates 20 years.

- Water Treatment plants (distinguished from chemical feed on the basis of filtration) should be upgraded every 20 years
(IFA average used \$4,528.52 per gpm. This cost has been annualized, at a rate of \$226.43 per year over 20 years.)

Example: Utility X has 2 Water Treatment Plants with an average age of 35 and average capacity of 1500 gpm. Thus, Utility D need is calculated at \$6,792,780.00, or \$339,639.00 per year.

- Systems that treat water using solely chemical feed should undergo rehabilitation every 10 years.
(IFA average used of \$375.05 per gpm over 10 years, or \$37.05 per gpm annually, for 10 years.)

Note: The number/type of chemical feed processes was not collected. Thus, systems either have a solely chemical feed system, or they do not.

"...treatment plants are often initially planned with a first-phase design of 10 to 25 years, with a plan to allow for future increments of expansion to accommodate the full life of the project. Equipment such as pumps and chemical feed systems may have an expected life of 10 to 15 years" (McGraw Hill, 2.3).

Distribution Lines/Pipes: NARUC estimates and average of 50-75 year useful life of mains. Utah Administrative Code estimates 50 years.

- 4" and smaller mains should **ALL be replaced over the next 20 years** to support fire protection. Cost applied annually.
(IFA average used of \$300,587 per mile of main in this range over 20 years, or \$15,029 per mile per year.)

Example: Utility W has 45 miles of main in this size range. 45 miles need to be replaced over the next 20 years, for a total cost of \$13,526,415, or \$676,320.75 per (mile/20) per year).

- 6"-12" mains should be replaced at a rate of **10% over 20 years**. (This number is very conservative, but utilized by EPA Drinking Water Needs Survey.) Cost applied annually.
(IFA average used \$500,313 per mile of main in this range over 20 years, or \$25,016 per (mile/10) per year.)

Example: Utility V has 330 miles of main in this size range. 33 miles should be replaced over the next 20 years, for a total cost of \$825,528, or \$41,276.40 per year).

- 14"-24" mains should be replaced at a rate of **10% over 20 years**. (This number is very conservative, but utilized by EPA Drinking Water Needs Survey.) Cost applied annually.
(IFA average used \$1,214,400 per mile of main in this range over 20 years, or \$60,720 per (mile/10) per year.)

Example: Utility U has 25 miles of main in this size range. 2.5 miles should be replaced over the next 20 years, for a total cost of \$3,036,000.00, or \$151,800 per year).

- 26"-42" mains should be replaced at a rate of **10% over 20 years**. (This number is very conservative, but utilized by EPA Drinking Water Needs Survey.) Cost applied annually.
(IFA average used of \$1,372,800 per mile of main in this range over 20 years, or \$68,640 per (mile/10) per year.)

Example: Utility S has 9 miles of main in this size range. About 1 mile should be replaced over the next 20 years, for a total cost of \$1,372,800.00, or \$68,640.00 per year).

- > 42" mains should be replaced at a rate of **10% over 20 years**. (This number is very conservative, but utilized by EPA Drinking Water Needs Survey.)

(Estimate used of \$1,600,000 per (mile/10) of main in this range over 20 years, or \$80,000 per (mile/10) per year.)

Example: Utility R has 1 mile of main in this size range. Depending on age and condition, about 1 mile should be replaced over the next 20 years, for a total cost of \$1,600,000.00 or \$68,640.00 per year).

Meters: AWWA M6 – Water Meters – selection, Installation, Testing and Maintenance recommends meter replacement program of replacing 10% of meters every 10 years.

Assumption: 75% of systems serving fewer than 3,500 customers do NOT have AMR meters.

- 75% of all small systems need new AMR meters/system (IFA average of \$1,430 per meter, all costs applied to year 1)
- Replace 10% of existing meters per year. Assumption: System currently uses AMR (IFA average of \$30 per meter per year)

Example: Utility Q has 6,000 meters. 10% of the meters should be replaced each year, for a cost of \$180,000.00 annually, or \$3,600,000 total for the next 20 years.

Hydrants: NARUC estimates average hydrant useful life of 40-60 years. Utah Administrative Code estimates 40 years.

- Replace hydrants installed before 1975 (Estimate of \$5,255 per hydrant, cost applied to year 1.

Example: Utility P has 545 hydrants installed before 1975. All should be replaced for a total cost of \$2,863,975.00.

- Replace hydrants installed after 1975 at a rate of once every 40 years. (Estimate of \$131 per year, per hydrant)

Example: Utility O has 2000 hydrants installed after 1975. They should be replaced once over the next 40 years. Thus, in 20 years, 50% of hydrants should be replaced for a cost of \$5,255,000.00 total, or \$262,750.00, annually.

Valves:

- 4" and smaller: Replace all valves of this size to be compatible with the replaced 4" water main and support fire protection over the next 20 years.
(IFA average of \$31.50 per valve per year)

Example: Utility N has 400 valves in this size range. According to the model, all 400 would need to be replaced in the next 20 years, for a total cost of \$252,000.00, or \$12,600 per year.

- 6" – 12": Replace 10% over 20 years (The valves will be replaced on the same schedule as the corresponding water main.)
(IFA average of \$1,380 per valve, applied annually to 10% of the total valves in this size)

Example: Utility M has 370 valves in this size range. 37 would need to be replaced in the next 20 years, for a total cost of \$51,060

- 14" – 20": Replace 10% over 20 years (The valves will be replaced on the same schedule as the corresponding water main.)
(Estimate of \$6,000 per valve, applied annually to 10% of the total valves in this size)

Example: Utility L has 10 valves in this size range. 1 would need to be replaced in the next 20 years, for a total cost of \$6,000, or \$300 per year.

- >20": Replace 10% over 20 years (The valves will be replaced on the same schedule as the corresponding water main.)
(Estimate of \$12,000 per valve, applied annually to 10% of the total valves in this size)

Example: Utility K has 30 valves in this size range. 3 would need to be replaced in the next 20 years, for a total cost of \$36,000, or \$1,800 per year.

Elevated and Ground Storage Tanks: NARUC estimates an average useful life of 30-60 years. Utah Administrative Code estimates 30 years.

- If 60 years old or older, tank needs replaced
(IFA average of \$3,101,101 per million gallons for elevated storage tanks and \$1,418,400 per million gallons for ground storage tanks, costs applied to year 1)

Example: Utility J has 2 elevated storage tanks with an average age of 65 and average size of 0.5 million gallons and 1 ground storage tank with an age of 75 and size of 1 million gallons. According to the model, the 3 tanks would all need to be replaced in the next 20 years, for a total cost of \$4,519,101.00 or \$225,955.10 per year.

- Tanks less than 60 years old should be rehabbed once every 15 years
(IFA average of \$876,700 total per million gallons, or \$58,447 per million gallons, applied annually over 15 years.)

Example: Utility I has 3 tanks with an average age of 37 years and average size of 0.225 million gallons. According to the model, the 3 tanks should be rehabbed once in the next 15 years, for a total cost of \$591,772.50, or \$29,599.63 per year.

Booster Stations: NARUC estimates an average useful life of 20 years. Utah Administrative Code estimates 20 years.

- Replace every 20 years
(IFA average of \$79.47 per year, or \$1,589.31 total, cost applied annually)

Example: Utility H has 2 booster stations with an average rated capacity of 650 gpm. Both stations will need replaced in the next 20 years, for a total cost of \$2,066,103.00, or \$103,311.00 per year.

Data Quality Control

In order to ensure that utilities provided data that was accurate, the Indiana Rural Water Association (IRWA) assisted the IFA in planning and executing a series of 8 live workshops to go through both assessments. IFA Engineers, professionals from the field of Water Resource Management and technical support were available to answer questions and walk systems through both the Audit and the Survey on an individual basis. 237 people attended, representing 162 utilities throughout the State of Indiana.

In addition to workshops, the IFA and several state water organizations including Alliance of Indiana Rural Water (The Alliance), Indiana Department Environmental Management (IDEM), Indiana Rural Community Assistance Program (RCAP), and IRWA visited utilities to review the assessments and ensure that questions were answered using the best available information.

Once all data was collected, the dataset was checked against IDEM Sanitary Survey records, H.J. Umbaugh & Associates 2016 rate study, and the Indiana Drinking Water Needs Survey responses for accuracy. Any values that did not match reported values were investigated to determine the correct response for each system.

Every AWWA Water Loss Audit was reviewed for accuracy by a member of the data collection team as they were submitted by utilities. This review consisted of simple screening methods to identify potential errors. Any values that did not make sense or follow general trends were verified with utilities. The IFA discovered many mistakes that would have resulted in a lower estimate of infrastructure needs than truly exists. Although the IFA did not verify all responses for each of the 552 utilities, they looked at the extreme values for each question to cut down the amount of incorrect information in the dataset. Preparing the data for analysis required IFA staff to check responses for consistency. This process included removing any extraneous units that were reported, ensuring that data was entered in a systematic manner, and identifying outliers. All unusually large or small values were verified with IDEM and/or utility personnel to ensure quality of the dataset.

IFA Infrastructure Survey responses were verified on a macro scale, after the data collection process came to an end. All values were sorted to identify all values reported in the wrong order of magnitude. These values were verified and changed. The most common source of error in the survey was in the question that read, "Is your only treatment chemical feed." Many utilities answered this question incorrectly, either as a result of confusion or associating chemical feed with adding chemicals of any kind. Thus, the number of treatment plants was largely underreported. To rectify this problem and properly account for future costs associated with treatment plants, multiple years of IDEM Sanitary Surveys were used to account for all plants.

Cost discrepancies between EPA Drinking Water Needs Survey and Why-fi Water

The Drinking Water Infrastructure Needs Survey and Assessment (DWINSA) was developed by the U.S. EPA to provide an assessment of the number and type of projects eligible for Drinking Water State Revolving Fund (DWSRF) monies. This survey captures information on both large and medium-sized systems. However, small systems have not been surveyed in the past decade. As a result, there are many gaps in the dataset.

There are many items that were included as approved costs for future infrastructure needs in the Why-fi Water study that are not approved projects for SRF funding. See the following table for a list of projects that are allowable and unallowable under the DWINSA (EPA 2013, p. 46). Projects in bold were included in infrastructure costs.

DWINSA Allowable Projects	DWINSA Unallowable Projects
<p>Criteria:</p> <ul style="list-style-type: none"> • Eligible for DWSRF Funding • Capital improvement needs • In furtherance of the public health goals of the Safe Drinking Water Act • Adequate documentation <p>Project Types:</p> <ul style="list-style-type: none"> • New or expanded/upgraded infrastructure to meet the needs of existing customers • Replacement or rehabilitation of existing undersized or deteriorated infrastructure 	<ul style="list-style-type: none"> • Raw water reservoir – or – dam-related needs • Projects needed primarily to serve future population growth • Projects solely for fire protection • Non-capital needs (including studies, operation and maintenance tools including vehicles, computers, etc.) • Needs not related to furthering the SDWA’s public health objectives • Acquisition of existing infrastructure • Projects not the responsibility of the water system • Needs associated with compliance with proposed or recently promulgated regulations (Derived instead from EPA’s economic analyses and added to the national total) • Projects or portions of projects started prior to January 1, 2011 • Projects or portions of projects needed after December 31, 2030

In addition to the stringent requirements regarding the type of projects that are acceptable for inclusion in the DWINSA, the level of documentation required for submission is much greater than the 2016 IFA Utility Evaluation Report required. The information reported on the Survey by utilities was accepted at face value. Any future projects that did not have a cost reported, were assigned costs using SRF bid tab history and engineering experience.

Finally, the EPA recognizes that the total cost identified in the DWINSA is conservative, because many systems have not undertaken the long-term planning necessary to identify future infrastructure needs,” (EPA, 2013).

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McGraw-Hill Handbooks – Water Treatment Plant Design Fourth Edition.

National Association of Regulatory Utility Commissioners (NARUC), 1979. "Depreciation Practices for Small Water Utilities." Washington, D.C., The Association.

U.S. Environmental Protection Agency (EPA), 2011. "Control and Mitigation of Drinking Water Losses in Distribution Systems." EPA. Environmental Protection Agency. Accessed [September 2016] at URL <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P1009VCZ.txt>.

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Sources for guidelines used in the report

Unaccounted-for Water standard for Indiana: 10 – 20% (EPA, 2011. Indiana Department of Environmental Management)