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USING THE STATE DRINKING WATER REVOLVING FUND TO FACILITATE LEAD SERVICE LINE REPLACEMENT IN MICHIGAN

State Case Studies & Recommendations

Issues Addressed:	Public LSL replacement, Private LSL replacement, Funding and Financing, Legal & Legislative Considerations, Impact on low-income residents
Most Applicable Community Types:	All community types

Executive Summary:

In 2018, Michigan adopted a revised Lead and Copper Rule to protect public health in the state by reducing lead exposure through drinking water. The updated Rule reduces the "lead action level", revises water sampling protocols, and requires the replacement of all lead service lines (LSLs) within 20 years[1]. This memo explores how other states have expanded and adapted their Drinking Water Revolving Fund (DWRF) programs to facilitate LSL replacement.

Based on the findings on other state actions to replace LSLs, this memo outlines several policy options that could be utilized to achieve full replacement of LSLs in Michigan through the DWRF program. In addition to the policy options, it is recommended that significant additional funding should be allocated to the DWRF to achieve full replacement of LSLs within 20 years without negatively impacting vulnerable residents.

The Federal-State Drinking Water Revolving Fund Program

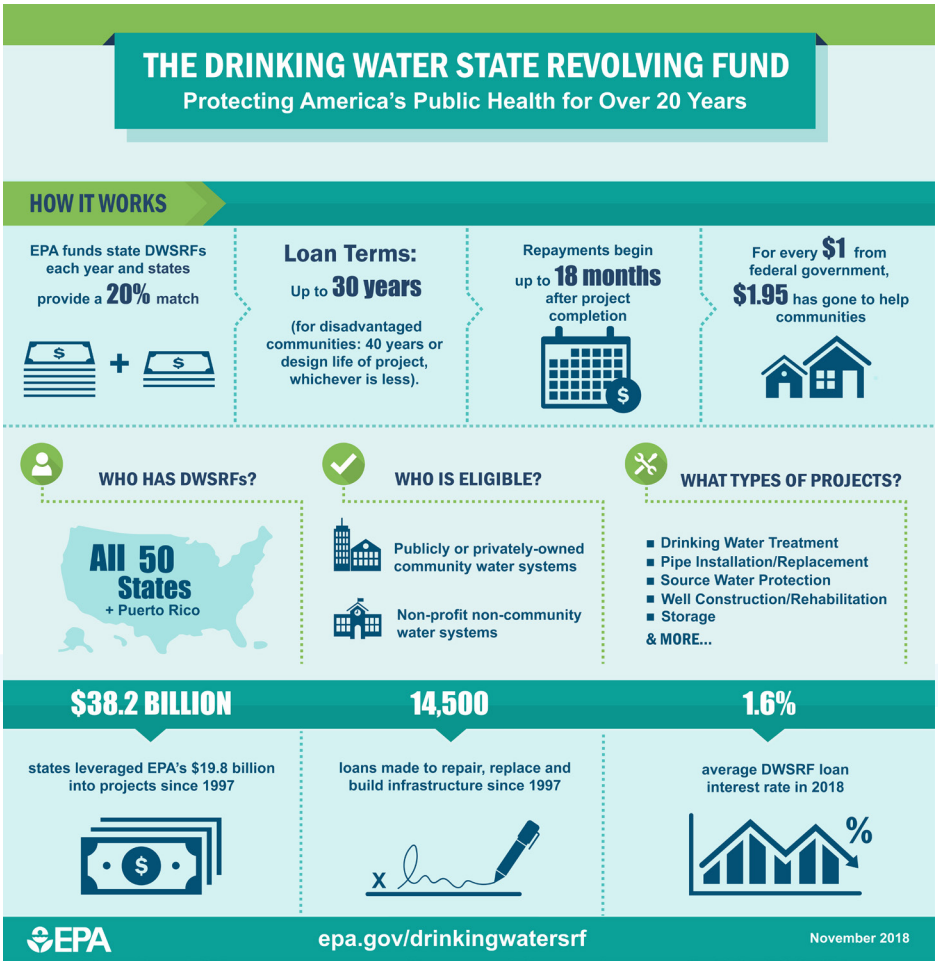
The DWRF is a financial assistance program created in 1996 and administered by the Environmental Protection Agency (EPA) to help water systems and states achieve the health protection objectives of the Safe Drinking Water Act. Congress annually appropriates funding for the DWRF. EPA then awards capitalization grants to all 50 states and Puerto Rico for their DWRF programs based upon the results of the most recent Drinking Water Infrastructure Needs Survey and Assessment. The states contribute an additional 20 percent to match the federal grants.

[1] Local water suppliers may apply to the state for approval of an alternate schedule specified in an asset management plan.

State DWRF programs function like infrastructure banks by providing low-interest loans to eligible recipients for drinking water infrastructure projects. Over time, as loans are paid back into a state's DWRF, the state "revolves" the funds and uses them to make new loans to other recipients. Eligible projects typically include drinking water source, treatment, and distribution infrastructure improvements and updates needed to protect public health.

The DWRF program gives states flexibility in administering their programs to meet their unique needs. It allows states to provide various kinds of assistance in addition to loans, including grants, principal forgiveness, and negative interest rate loans. It also allows states flexibility to prioritize project lists according to their own needs as long as they meet the requirements of the Safe Drinking Water Act. States may also provide additional incentives or favorable terms for projects in small or disadvantaged communities or certain types of high-priority projects.

For more information about the DWRF program, see: https://www.epa.gov/drinkingwatersrf



THE DRINKING WATER STATE REVOLVING FUND Protecting America's Public Health for Over 20 Years
Infographic from EPA

Michigan's Drinking Water Revolving Fund Program

The Michigan Department of Environment, Great Lakes, and Energy (EGLE, formerly the Department of Environmental Quality) administers Michigan's DWRF program. Projects eligible for financing and other assistance include both new construction and upgrades of existing systems, including LSL replacement. Other projects may include improvements to wells, well or intake structures, water treatment plants, storage tanks, pump stations, transmission and distribution lines, security systems, and other related system improvements.

Each year, EGLE solicits applications from water suppliers and creates a Project Priority List, which ranks the projects expected to receive financial assistance through the DWRF (PA 451 of 1994, Part 54). Federal law requires that the fund give priority to projects that: address the most serious risks to human health, are necessary to ensure compliance with the requirements of the federal Safe Drinking Water Act, and that assist systems most in need according to the state's affordability requirements. The Project Priority List uses a point system to award priority points based on federally-mandated criteria, as well as the state's additional criteria.

Under Michigan law, a maximum of 1,000 Priority Points are awarded for:[2]

- **Drinking Water Quality:** Up to 450 points are assigned for projects that will maintain compliance with or eliminate acute violations of drinking water quality standards.
- **Drinking Water Infrastructure Improvements:** Up to 350 points are assigned for upgrades to source water protection, treatment facilities, transmission or distribution water mains, water storage facilities, and/or pumping stations.
- **Population Points:** Up to 50 points are assigned based on the existing population served by the water system, with more points awarded for systems that serve larger populations.
- **Disadvantaged Community:** Up to 50 points are assigned to any municipal water supplier qualifying as a "disadvantaged community" based on median household income, poverty rate, and other criteria. (For the amended FY19 Intended Use Plan, Detroit, Bay City, Hamtramck, and Muskegon qualify as "disadvantaged communities.")
- **Consolidation:** Up to 100 points are assigned for projects that accomplish consolidation of smaller, separate systems.
- **Wellhead or Source Water Protection Plans:** Up to 100 points are assigned for communities that have completed approved wellhead protection or source water protection programs.

[2] MCL 324.5406 http://legislature.mi.gov/doc.aspx?mcl-324-5406

The Project Priority List (PPL) is then used to create an Intended Use Plan[3], which must be submitted to the EPA to request the allotted capitalization grant for the year. Eligible projects that are not funded in a given year are automatically prioritized according to the same criteria in the subsequent year.

- **Recent Program Activity:**
  - In 2016, President Obama approved an emergency declaration for the City of Flint, MI and signed legislation[4] to provide $100 million in supplemental DWRF capitalization grants to replace LSLs (both public and private side) and other critical water infrastructure in Flint. Adding the $20 million state match, the EGLE plans to use the entire $120 million as a loan with 100 percent principal forgiveness. These supplemental funds are administered separately, have separate eligibility criteria, and do not have any impact on the base DWRF program.
  - Recently, EGLE provided $9.5 million to 18 communities for a Pilot Drinking Water Community Water Supply Grant program. The grant program is funded by a state appropriation and provides funds to help communities update their asset management programs, update inventories of the types of service lines present in the distribution system, and support full LSL replacement. For example, Grand Rapids used a $1 million pilot grant to replace 200 of its approximately 24,000 LSLs. The pilot will provide guidance and lessons for LSL replacement and asset management on a broader scale in the state.
  - For FY 2019, the DWRF provides municipal borrowers 20 and 30 year loans at 2.0% interest.
  - Michigan's total 2018 capitalization grant is $27,266,000 ($21,812,800 from the federal government with a 20% state match of $5,453,200). Congress mandates that at least 20 percent of this amount be provided as "additional subsidy to borrowers," which Michigan will fulfill by providing principal forgiveness to "disadvantaged communities" . After set-asides for certain programs and administrative expenses, the amount of the capitalization grant available for loans is $18,813,540.
  - After subtracting the amount needed to service existing loans, DWRF resources could support $169 million in new binding loan commitments in FY 2019. The final Project Priority List has 19 projects, totaling $248 million. Six projects, totaling $53 million, would like to proceed with construction as noted on the PPL in FY 2019. The thirteen remaining projects, totaling $195 million, are eligible for funding in the future.
  - Due to the underutilization of DWRF capacity for FY 2019, and in response to increasing public concerns about drinking water contamination, in December, EGLE issued a "second call" for DWRF applications. In May, EGLE issued a draft amended Intended Use Plan to reflect additional projects in Bay City, Hamtramck, Kalamazoo, and Muskegon.

[3] https://www.michigan.gov/documents/deq/deq-dwmad-mfs-DWRF-DWfunded-Final_632607_7.pdf

[4] https://www.epa.gov/newsreleases/epa-awards-100-million-michigan-flint-water-infrastructure-upgrades

Photo by Anderson Rian on Unsplash

- **Challenges with current structure:**
  - The fund currently has some excess capacity to finance eligible projects and provide principal forgiveness for disadvantaged communities, but would likely need significant additional capacity (funding) to support LSL replacement projects on a broader statewide scale, especially if the state offered more direct grants and favorable incentives for LSL replacement.
  - There are concerns that the DWRF is underutilized for several reasons:
    - The application process is onerous and costly.
    - Market interest rates are currently quite low, so there is little relative advantage of DWRF loans versus other sources of capital.
    - Smaller communities (population 10,000 or less) often obtain more favorable financing terms from other federal sources such as the USDA Rural Development program.

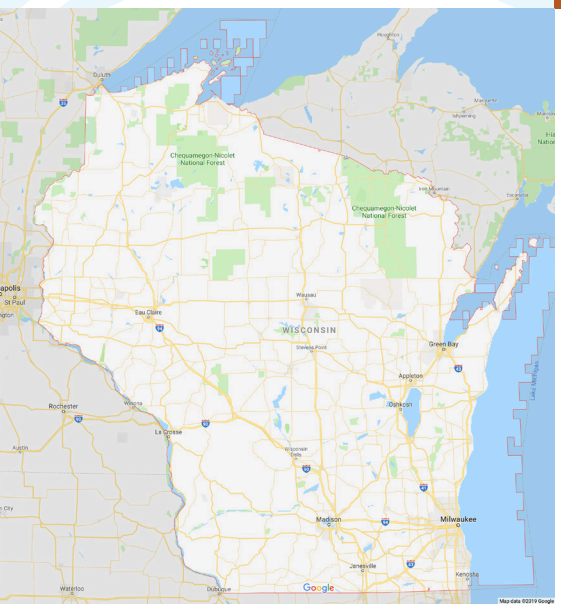
For more information about Michigan's DWRF program, see: https://www.michigan.gov/deq/0,4561,7-135-3307_3515_3517---,00.html

Redesigning the State's Drinking Water Revolving Fund

Federal law gives states considerable flexibility in designing their DWRF programs to meet their unique needs and priorities. Within the DWRF program, there are several policy variables that may be adjusted to encourage greater use of the DWRF for LSL replacement. Options include:

- **Priority Points:** States have some discretion on how they assign priority points beyond meeting the requirements of the federal Safe Water Drinking Act. A state could assign priority points particularly for LSL replacement projects.
- **Interest Rates:** States set the interest rates they offer for DWRF loans, and many states, including Michigan, offer a single flat rate to all projects in a given year. However, they have the ability to offer a wider variety of options, including tiered rate structures, deferred interest, or different rates for different kinds of projects.
- **"Additional subsidization:"** States can expand the use of "additional subsidization" options in addition to direct loans, including:
    - Principal forgiveness
    - Grants
    - Negative interest loans
- **Repayment terms:** States can create flexible or customized repayment schedules such as:
    - Bullet/balloon or ascending debt service structures
    - Extended amortization periods (>30 years) for certain communities
- **Eligibility requirements:** States can condition eligibility for DWRF funds on utilities taking certain actions on LSL inventories and replacement.

The following case studies provide examples of how other states have adjusted their DWRF programs to facilitate LSL replacement in their communities.



Map of Wisconsin. *Map data ©2019 Google*

Case Studies - State Uses of DWRFs to Facilitate LSL Replacement:

WISCONSIN

The Wisconsin State Legislature has taken action to make statutory changes to allow communities to use water rates to pay for full LSL replacement (private and public) and to earmark federal funding to support private LSL replacement in high-need communities. As described above, federal law requires that at least 20 percent of the DWRF capitalization grant be used for "additional subsidization." Wisconsin is using the majority of these "additional subsidization" dollars for principal forgiveness for LSL replacement in disadvantaged municipalities, and the Wisconsin Department of Natural Resources (WDNR) has established the Private LSL Replacement Funding Program. Wisconsin's original DWRF program, WI Safe Drinking Water Loan Program, continues to be available to make low-interest loans to Wisconsin communities for LSL replacement and other water infrastructure projects.

Key Program Components:

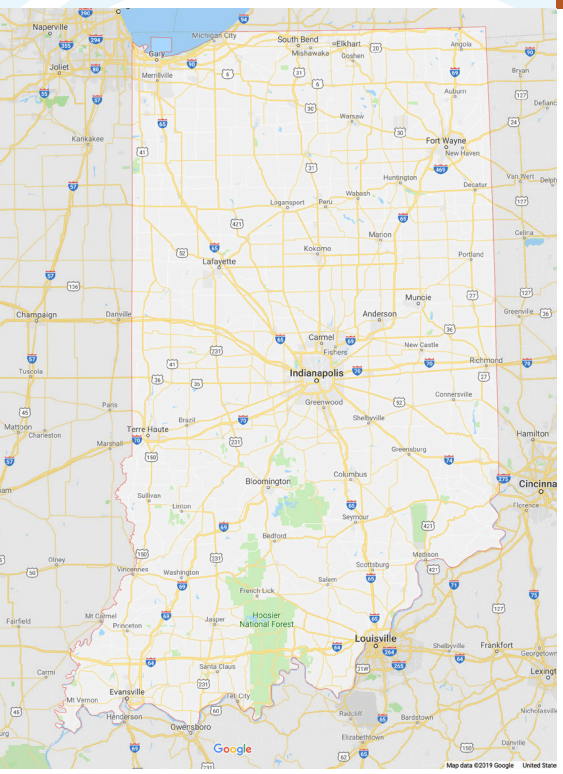
- The WDNR established the two-year, $26.8 million grant program to help disadvantaged municipalities pay for the private portion of full LSL replacement projects. $13.8 million was awarded in FY17 and $13.0 million was awarded in FY18.
- Communities may request up to $5,000 per line and may offer residents full or partial coverage of the cost of replacing the private portion of the LSL. Funds may be used for LSLs connected to private homes, pre-K-12 schools, and licensed/certified day care centers, but not business or commercial properties.
- The Wisconsin legislature passed separate legislation to authorize communities to use water system funds to pay for the private portion of LSL replacement and to increase water rates to pay for full replacement. The Public Service Commission of Wisconsin regulates municipal water utilities, overseeing and approving water rates.

Funding Sources:

- Private LSL Replacement Funding Program
- WI Safe Drinking Water Loan Program (SDWLP)
- Slight water fee increases at water system level

Impact on Water Rates:

It is expected water rates will increase slightly, but no number has been estimated. (Water systems are currently assessing rate changes.) Unlike Michigan, which has no central authority that reviews local water rates, the Public Service Commission monitors and approves rates for local utilities.



Map of Indiana. *Map data ©2019 Google*

Results:

Based on WDNR's $3,000 per private replacement estimate, the base $26.8 million in funding currently allocated by the State will cover just under 9,000 homeowner-side LSL replacements. In 2016, the American Water Works Association estimated that there were 240,000 LSLs in Wisconsin (including lead goosenecks). It is unclear whether additional assistance will be made available for the remaining LSLs.

While some communities are already planning and budgeting for LSL replacement, replacement of all LSLs, both public and private side, could cost more than a billion dollars, according to the WDNR.

INDIANA

In 2017, the Indiana Legislature passed legislation allowing the Indiana Utility Regulatory Commission to approve a request from water utilities to fold the cost of LSL replacement into rates paid by customers. To qualify, a utility must submit a detailed plan and demonstrate the proposal is reasonable and in the public's interest. The Indiana Finance Authority, which manages the State's Drinking Water State Revolving Fund (SRF), also launched a "Lead Line Replacement Incentive" to support full replacement of LSLs and galvanized service lines. Eligible communities receive improved ranking on the DWSRF priority list and interest rates as low as 0%. Indiana was also selected by EPA for funding under the Water Infrastructure Finance Innovation Act (WIFIA) program for a $436 million loan to provide additional support for the SRF.

Key Program Components:

- Indiana offers communities a sliding scale interest rate based on the community's household income and the post-project monthly user rate charged. Rates currently range from 2.63% to 2.0% with lower rates offered to lower-income communities and communities offering lower water rates to customers. Rates are further reduced as low as 0% for LSL replacement projects.
- LSLs are specifically identified as a "most serious risk to human health," thereby receiving additional priority points on the Project Priority List.
- The standard SRF loan period is 20 years. Up to 30 year loans may be given for eligible disadvantaged communities. In 2017, Indiana received approval from the EPA to offer extended term financing up to 35 years for updating aging infrastructure as long as the useful life of the asset matches or exceeds the financing period.

- In 2017, Indiana became the first state to be selected by the EPA to receive a $436 million loan under the Water Infrastructure Finance Innovation Act (WIFIA). WIFIA financing will supplement the Drinking Water SRF and the Clean Water SRF programs, providing additional reach and capacity for the programs and significantly expanding the number of projects that will receive financing.
- Indiana has also developed a model methodology for mapping LSLs in the state.

Funding Sources:

- Lead Line Replacement Incentive Program
- Indiana State Drinking Water State Revolving Fund (DWSRF) - (Fact Sheet)
- EPA Water Infrastructure Finance Innovation Act (WIFIA) program (funds to the Indiana DWSRF)
- Water fee increases at water system level

Impact on Water Rates:

Water rates are expected to increase, but no number has been estimated.

Results:

- An early success of Indiana's new legislation to allow utilities to fold the cost of LSL replacement into customer rates is the announcement from the Indiana-American Water Company, one of Indiana's largest private water utilities, to enact the largest voluntary LSL replacement program in the country. The plan will spread the cost of replacing 50,000 service lines across the system's 300,000 customers.
  - The plan showed that having a single contractor handle the entire line reduces the overall cost by 25 to 30%.
  - 50,000, (approx ¼) of Indiana's LSLs will be replaced in 10-24 years
  - Indiana-American Water Company has also applied to the SRF for a $31.7 million loan for LSL replacement.
- Indiana is expected to close soon on its WIFIA loan with the EPA.

OTHER STATE USES OF STATE DRINKING WATER REVOLVING FUNDS

Ohio allows use of the DWSRF for 0% rate planning loans to map LSLs. Ohio currently offers 0% rates for all planning loans, which can be used for mapping the location of LSLs, among other planning functions. For more detail, visit: https://epa.ohio.gov/Portals/29/documents/ofa/2018%20WSRLA%20PMP%20May%2012.pdf

New Jersey allows use of the DWRF for principal forgiveness loans to support replacement of LSLs. The Lead Service Line funding package provides eligible projects 90% principal forgiveness and covers the remaining 10% with interest-free loans up to 30 years. Applicants are limited to $1 million per year and must serve communities with a median household income that is less than that of the county in which they are located. For more detail, visit:

https://www.nj.gov/dep/dwq/pdf/NJEIFP_Funding_Booklet20170517.pdf

Virginia provides grants through the DWRF to support the replacement of LSLs. The Lead Service Line Replacement program, within Virginia's DWRF, provides up to $5,000 in grant funds for each service line replaced on the private side. For utilities that participate, the program rebates customers for the cost of replacing the private portion of their LSL. For more detail, visit:

http://www.vdh.virginia.gov/content/uploads/sites/14/2016/12/02-Funding-Announcement-letter.pdf

Connecticut and New Hampshire assign additional priority points for LSL replacement. Connecticut recently increased the number of priority points that can be awarded for LSL replacement projects in compiling the Project Priority List. New Hampshire provides a generous amount of priority points for LSL replacement projects. For more detail, visit:

- Connecticut Draft 2019 Drinking Water Revolving Fund Intended Use Plan: https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/drinking_water/pdf/2018_05_10_DR
- New Hampshire 2018 Drinking Water Revolving Fund Intended Use Plan: FT_SFY2019IUP.pdf (https://www.des.nh.gov/organization/commissioner/pip/publications/documents/r-wd-18-12.pdf)

Connecticut requires that any LSLs that are known or encountered as part of a DWSRF-financed water main project must be fully replaced. The utility completing the project must obtain the consent of individual property owners before replacing LSLs, and full replacement costs are eligible for DWSRF funding. For more detail, visit:

https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/drinking_water/pdf/2018_05_10_DRAFT_SFY2019IUP.pdf

Recommendations for Michigan:

Michigan's policymakers should consider expansion of the DWRF program to facilitate the full replacement of LSLs in Michigan. As an infrastructure bank, the DWRF's structures and policies provide an existing framework that can accommodate LSL replacement projects throughout the state. In addition, use of the DWRF can help resolve legal ambiguity regarding private-side LSL replacement because DWRF funds have already been used in Michigan and many other states for full LSL replacement.

Along with an infusion of new capital, the State should consider the following options to amend the DWRF program to expedite LSL replacement:

1. **Increase principal forgiveness.** Increasing the availability of loan forgiveness and grants, especially for low-income communities, will help direct assistance where it is needed the most.
2. **Creation of tiered, lower, or 0% interest rates.** While current rates are only 2%, the DWRF remains underutilized. The creation of tiered, lower or 0% interest rates similar to what is being done in Ohio would increase utilization of funds. Tiered rates could be tied to community need or post-project water rates.
3. **Expanded use of affordability criteria to better target the most disadvantaged communities.** Under current definitions, "disadvantaged community" status is relatively narrow. The State could broaden the use of income- and need-based criteria in the awarding of project priority points, principal forgiveness, lower interest rates, or other financial incentives.
4. **Establishment incentives for water providers that replace LSLs at a faster rate.** Principal forgiveness or a reduced rate program could be offered to water providers that replace LSLs at a faster rate than the current 20 year requirement. For example, a water system that receives a $1 Million loan with a 2% interest rate could be given a 1% interest rate if the replacement of all LSLs is completed within 15 years instead of 20.
5. **Establish incentives for reducing LSL replacement costs.** Principal forgiveness or 0% rates could be offered for LSL replacement up to a certain threshold (e.g. $1,000 per LSL), with any remaining costs eligible for standard 2% financing. Implementing a threshold will reward communities that can find ways to reduce the costs of LSL replacement.
6. **Establishment of incentive program for communities that take ownership of and maintain private LSLs.** Additional priority points, principal forgiveness, or lower rates could be offered to communities that take ownership of private LSLs. Water providers that own the private portion of LSLs will be able to ensure better maintenance and more seamless replacement of service lines.

PROCESS-RELATED RESOURCES:

- Additional Information Regarding Michigan Clean Water Revolving Fund
- More information regarding the Wisconsin WDNR funding programs
- Detailed Intended use plan WDNR used to direct Federal funds to Private Lead Service Line Replacement Program
- Guidance on how Wisconsin made changes to State policy to allow for replacement of private portion of LSLs
- Legislative summary memo outlining legislation that changed LSL regulations in Wisconsin
- Strategies to obtain customer acceptance of complete LSL replacement

7. **Revise DWRF eligibility criteria to encourage LSL replacement.** Following the example of Connecticut, Michigan could require that DWRF-funded projects include replacement of any LSLs that are encountered during the project.
8. **Significant additional funding should be allocated to the DWRF -- the level of funding significantly impacts how expeditiously LSLs would be anticipated to be replaced.** An expanded number of LSL replacement projects, as well as increased reliance on principal loan forgiveness, grants, and zero and low-rate loans will increase the capitalization needs of the DWRF program. Significant additional funding will be needed to ensure the DWRF's long-term solvency. The state could consider direct appropriations, and it should also consider applying for a WIFIA loan, similar to Indiana.

Appendix

For further recommendations and implementation suggestions, please see page 16 of the following memo outlining recommendations from the Environmental Financial Advisory Board.

Additional Information Regarding State Actions to Replace LSLs is available from:

- Environmental Defense Fund
- Lead Service Line Replacement Collaborative (LSLC)
- Great Lakes Environmental Infrastructure Center