



Legislative Fiscal Bureau

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Joint Committee on Finance

Paper #290

Lead Service Line Replacement (Environmental Improvement Fund)

[LFB 2021-23 Budget Summary: Page 183, #1]

CURRENT LAW

The Department of Natural Resources (DNR) and the Department of Administration (DOA) administer a safe drinking water loan program (SDWLP) to provide assistance primarily to local governments for eligible projects to plan, design, construct, or modify public water systems. The United States Environmental Protection Agency (EPA) awards federal capitalization grants to states for the program, and states are required to provide a 20% match in state funds to receive the federal grant. The state provides the required 20% match by issuing revenue obligation bonds with debt service costs paid by loan repayments.

The program provides assistance primarily in the form of below-market interest rates on loans. EPA authorizes uses of a portion of the federal capitalization grant for principal forgiveness (PF) for communities that meet disadvantaged community criteria for lower income and lower population areas. PF "loans" are, essentially, grants in that the principal loan amount does not need to be repaid if certain conditions are met. Local governments generally repay the loan by using property tax revenues, proceeds of general obligation bonds, or water utility user fees.

Safe drinking water loans to local governments are for projects owned by the municipality for the 20-year life of the loan. In general, the state loans cannot be used for projects on private property because of federal prohibitions and state constitutional prohibitions about using general obligation bonding proceeds, which provide the state match for the federal grant, for projects that benefit private property owners rather than providing a public benefit.

DISCUSSION POINTS

Lead Service Lines

1. Exposure to lead can cause significant and persistent problems in children. Lead interferes with the normal development of a child's brain, and can lead to conditions such as reduced intellectual abilities, developmental disabilities, and behavioral problems. Young children are more affected by lead exposure than older children and adults because of their smaller body size and weight. According to a 2010 report by the Wisconsin Childhood Lead Poisoning Elimination Plan Implementation and Oversight Committee, the average lifetime cost of lead poisoning is estimated to be approximately \$46,000 per child.

2. Recognizing the deleterious effect of lead on child development and public health, the state and federal governments have taken steps to reduce lead poisoning, including from sources such as lead paint and leaded gasoline. These lead regulations have had a measurable effect on blood lead concentrations. According to the Brookings Institution, between 1980 and 2014, the median blood lead concentration in children in the U.S. aged one to five dropped from 15 µg/dL (micrograms per deciliter, or 0.15 ppm) to 0.7 µg/dL (0.007 ppm). However, there is no safe blood lead concentration and legacy lead, including residual lead paint and lead water infrastructure continue to be sources of lead poisoning in children. Lead poisoning is heavily concentrated in areas with older construction residences in Wisconsin's older cities. A 2016 DHS study found that 5.0% of children under the age of six in Wisconsin had blood lead levels above 5 µg/dL and 8.8% of children in Milwaukee County had blood lead concentrations that exceed this ratio. A 2020 study conducted by UW-Milwaukee researchers concluded that average blood lead concentration among children in the City of Milwaukee was 4.33 µg/dL.

3. According to the EPA, lead is seldom found naturally in drinking water sources. The source of lead in drinking water is generally: (a) lead water main pipes that run down the street to distribute water from the drinking water facility to neighborhoods; (b) water service lines which connect a building to a water main in the street; (c) lead solder used in plumbing fixtures or lead pipes in a building; or (d) lead in connecting fixtures (sometimes known as "goosenecks") which connect laterals to the water main. A 2008 study estimated that between 50% and 75% of lead in drinking water comes from lead water service lines.

4. Water service lines, also known as laterals, connect a building to the water mains in the street, and carry drinking water from the public water system to the individual building. Water services lines were often constructed with lead as late as the 1980s in some areas. As of 2019, water utility reporting to the Public Service Commission (PSC) indicates there are at least 148,500 lead-containing service lines in the state. In addition to these, there are 70,800 that are possible or likely to contain lead, a total of 219,300 service lines that may have deleterious health impacts.

5. Lead in water service lines can leach into drinking water and damage the health of people drinking the water. In general, maintenance or replacement of the portion of the lateral that extends from the water main to the curb stop is the responsibility of the public water system, and the remaining portion of the lateral that extends from the curb stop to the building is the responsibility of the property owner.

6. There is no safe lead level in drinking water. The lead and copper rule (LCR) of 1991 established an "action level" of 15 parts per billion (ppb) for lead in samples of tap drinking water, as well as standards and procedures for sampling drinking water lead levels. In Wisconsin, DNR is delegated enforcement of federal drinking water regulations. DNR requires that water utilities collect water samples from the water taps of homes in their service area to test for lead.

7. The LCR requires that communities take certain action if the action level is exceeded in 10% or more of samples taken by a municipality during a required monitoring period. These actions include corrosion control to mitigate lead leaching into water from service lines, public education on reducing the risk of lead ingestion, and removal of lead service lines (LSLs) under the water system's control. The LCR does not require replacement of the portion of the lead service lateral on private property.

8. When corrosion control treatment is implemented, it involves adding phosphate chemicals to the drinking water that is piped from the drinking water facility to individual water user homes and businesses. The phosphates reduce the leaching of lead particles from lead pipes into drinking water at the tap of the home or business. A consequence of using this technology is that when the treated drinking water reaches the wastewater treatment plant, it contains increased levels of phosphorus, which need to be removed before treated wastewater is discharged back into the environment.

9. A report of the Science Advisory Board, a body that advises EPA, indicates that partial LSL replacements of only the portion of a LSL on public property can be associated with short-term elevated drinking water lead levels, and have not been shown to reliably reduce drinking water lead levels in the short term or longer term.

10. EPA is in the process of revising the LCR to require proactive planning and corrosion control measures when 10% or more of samples taken by a municipality in a reporting period exceed a lead "trigger level" of 10 ppb. The revised rule would also require that most communities that exceed the 15 ppb action levels replace 3% of LSLs per year. EPA estimates that due to lax replacement requirements under the LCR, only approximately 1% of utilities replaced LSLs as a result of exceeding the 15 ppb action level. The revised rule would push for more proactive replacement schedules. DNR officials indicate the Department is encouraging municipalities to go beyond the requirements of the LCR to complete full rather than partial LSL replacement.

Financing for Removal of Lead Service Lines

11. The safe drinking water loan program provides assistance primarily in the form of loans with an interest rate of 55% of the market interest rate for local governments that do not meet financial need criteria, or 33% of the market interest rate for local governments with a population of less than 10,000 and a median household income of 80% or less of the statewide median. EPA authorizes uses of a portion of the federal capitalization grant for principal forgiveness for communities that meet disadvantaged community criteria for lower income and lower population areas.

12. Recently, EPA has authorized states to use a portion of federal capitalization grants for replacing private LSLs. In 2016-17, DNR awarded \$13.8 million in principal forgiveness for LSL

replacements. In 2017-18, DNR awarded \$13.1 million in principal forgiveness for LSL replacements. This combined \$26.9 million in financial assistance helped 42 municipalities replace approximately 6,500 LSLs.

13. The Water Infrastructure Financing Transfer Act (WIFTA) authorizes the state to transfer up to \$63.8 million from the clean water fund to the safe drinking water loan program to provide principal forgiveness for projects to replace private LSLs beginning in 2021- 22. In addition to this amount, approximately \$4 million that had been awarded under the prior two-year LSL replacement program may be released and added to the amounts transferred under WIFTA.

14. DNR is continuing to accept applications for the program; communities may apply until June 30, 2021, for funding in the current calendar year. As of March, 2021, DNR has received applications from 53 communities. These applicants requested approximately \$40 million in principal forgiveness to replace approximately 7,800 LSLs.

15. Communities have generally pursued one of two approaches to LSL replacement: (a) directly contracting for LSL replacement projects; or (b) contracting with pre-qualified plumbers whom property owners can hire to replace private LSLs. Communities that contract with pre-qualified plumbers either directly pay the plumbers for the entire cost of LSL replacement or provide a share of costs, with the remainder paid by the property owner.

16. Assembly Bill 68/Senate Bill 111 (AB 68/SB 111) would provide one-time funding of \$40 million GPR in 2021-22 in a continuing appropriation in the Environmental Improvement Fund (EIF) to provide forgivable loans to private users of public water systems for up to 50% of the cost of replacing LSLs. The bill would create a legislative finding that private LSL replacement serves a public purpose: to reduce the amount of lead in drinking water and to prevent lead poisoning.

17. The cost of LSL replacement varies based on the length and depth of the lateral, method of replacement, cost of material, and planning and engineering. In a 2019 economic analysis, EPA found that the cost of full LSL replacement (replacement of both the public and private side) cost between \$2,352 and \$7,056 per line. Some industry sources report costs as high as \$14,000, according to an analysis conducted by the American Water Works Association, an industry group representing community water systems. DNR assumes that LSL replacement costs an average of \$5,000 per line.

18. In addition to the costs of replacing the lead pipes, DNR has provided financial assistance for some planning and administrative activities. In the 2017 and 2018 LSL replacement program and in the current WIFTA-funded program, DNR has provided up to \$5,000 to communities developing a mandatory replacement ordinance, which is required to receive LSL replacement financial assistance. Additionally, DNR has provided up to \$5,000 for engineering and administrative costs in communities with populations below 3,300.

19. Based on these costs, DNR estimates that the program proposed in AB 68/SB 111 could replace between 8,000 and 16,000 LSLs, or between 4% and 7% of the known LSLs in the state. Based on an estimated cost of \$5,000 per LSL replacement, it would cost approximately \$1,096.6 million to replace all the known and possible lead-containing LSLs in the state.

20. The cost of LSL replacement can be onerous for private property owners. Wisconsin's median household income (MHI) in 2021 is \$59,209. The \$5,000 estimated average cost of LSL replacement is 8% of a median family's pre-tax annual income. Many communities with high numbers of LSLs have household incomes below the state median. Milwaukee, which has approximately 50% of the state's LSLs, has MHI of \$40,036, approximately 68% of the state MHI. Given the public health benefits of reducing lead exposure and the high cost of LSL replacement relative to household income, the Committee could consider authorizing DNR and DOA to award principal forgiveness for up to half the cost of replacing LSLs and providing \$40 million GPR as a continuing appropriation [Alternative A1].

21. The proposal in AB 68/SB 111 includes a legislative finding that LSL replacement constitutes a public purpose. A 2018 study from Pittsburgh, Pennsylvania found that sale prices of homes without LSLs were, on average, 5% greater than sale prices on similar homes with LSLs. While the public health benefits of reducing lead consumption are significant, benefits of the public investment may also accrue to private property owners. Recent LSL replacement programs administered by DNR have been funded exclusively with federal capitalization grants.

22. Wisconsin is expected to receive \$2.5 billion of the \$219.8 billion provided under the American Rescue Plan Act (ARPA). ARPA provides that funding may be used "to make necessary investments in water, sewer, or broadband infrastructure." Federal guidance provides that ARPA funding may be used for projects that are typically funded through safe drinking water revolving loans. 2021 SB 271 would have required the Governor to allocate \$40,000,000 to the safe drinking water loan program for principal forgiveness loans (grants) to municipalities for: (a) up to 50% of the cost of replacing LSLs on private property; or (b) grants to private users of public water systems for up to 50% of the cost of LSL replacement on private property. The bill was passed by the Legislature but vetoed by the Governor.

23. LSLs are an expansive problem. As noted above, as of 2019, it is estimated that there were approximately 219,000 service lines that may contain lead in over 200 communities throughout the state. In 2019, at least 50 communities had 500 or more suspected private LSLs. The EIF has been able to offer irregular funding for LSL replacement programs. DNR indicates that some communities may be reticent to begin a LSL replacement program without guaranteed sources of funding. Under the current irregular funding cycle, a community receiving principal forgiveness for LSL replacement may not be able to commit to a multi-year effort to replace LSLs. The irregular funding cycle may leave communities with a choice on whether or not to begin a LSL replacement program that is uncertain to be completed.

24. 2017 Wisconsin Act 137 authorizes public water utilities to provide grants and loans to customers for replacing the customer-owned portion of a lead service line. Under Act 137, a water utility may offer such financial assistance only if: (a) it has received approval from the PSC for its program; and (b) the municipality in which it operates requires property owners to replace lead service lines. The utility-side service line also either must not contain lead or, if it is a lead-containing line, must be replaced at the same time as the customer-side line. Act 137 allows utilities to assess water utility ratepayers an amount sufficient to fund the financial assistance program. Grants may be no more than 50% of the cost of replacement of the lead service line, but may also be paired with a loan

to fund the entire initial cost of the project. As of May, 2021, the cities of Kenosha, Manitowoc, Menasha, Fond du Lac, Sun Prairie, Green Bay, Kaukauna, and Sheboygan have programs approved by PSC. No municipalities have applied to PSC for LSL replacement programs since November of 2019.

25. Rather than provide one-time funds for the program, the Committee could consider providing regular funding for private LSL replacements. The Committee could consider providing a continuing appropriation with \$20 million GPR each year for LSL replacements [Alternative A2], or \$20 million GPR beginning in 2022-23 [Alternative A3]. Either amount would provide more regular support for LSL replacement, which could prompt more communities to seek funding. At an average cost of \$5,000 per LSL, this sum would support the replacement of 3,000 LSLs each year, slightly more than 1% of the estimated number of LSLs in the state.

26. Under the Wisconsin Constitution, general obligation bond proceeds may only be used for a public purpose. Supreme Court and Attorney General opinions do not give clear indications as to whether the state incurring debt for private LSL replacement would be a constitutional public purpose or an invalid work of private improvement. Some Wisconsin cities have found that the benefits to public health and the prevention of contaminating the public water supply make private LSL replacement a public purpose that is eligible to be bond-funded, by virtue of LSL replacement removing or reducing the risk of lead poisoning from drinking water systems. The City of Milwaukee, for example, authorized \$4 million in new borrowing authority in its 2021 budget for private LSL replacement. AB 68/SB 111 also would find LSL replacement fulfills a public purpose of avoiding additional treatment expense of phosphorus-containing wastewater, in addition to serving public health. If the Committee were to specify such a public purpose, it would carry the presumption of constitutionality in any pursuant court review.

27. The Committee could consider specifying the replacement of LSLs serves a public purpose, for reducing public health risks and reducing wastewater treatment processes, and provide the EIF \$40 million in general obligation bonding authority to fund private LSL replacement [Alternative A4]. Debt service on general obligation bonds is paid from the general fund. Although debt service costs may vary with bond maturity dates and interest rates, the state could be expected to pay \$2.7 million annually in debt service on the \$40 million private LSL replacement program, assuming the state issues 20-year bonds with an interest rate of 3%. Total debt service costs over the 20-year life of the bonds would be approximately \$53.8 million.

28. Alternatively, the Committee could take no action. [Alternative A5] While DNR would award principal forgiveness to municipalities, benefits of the program would accrue to private property owners. DNR could fund private lead service line replacement programs through federal grants, when available. Additionally, the administration could allot funding under ARPA for private lead service line replacement without legislative direction. Water utilities could also use current authority to get PSC approval for a utility-run LSL replacement program.

Program Administration

29. The 2017 and 2018 LSL replacement program and the WIFTA LSL replacement program followed SDWLP application procedures. Prior to submitting an application for either the

SDWLP or the CWF, a municipality must notify DNR of its intent to apply for financial assistance by no later than October 31 in the fiscal year prior to the year in which the municipality will seek financial assistance. While providing DNR with an estimate of the program demand, the intent to apply requirement adds compliance costs for municipalities and may lengthen the planning process for environmental loans.

30. If state LSL funding were appropriated in the 2021-23 budget, communities will not be eligible to receive funding until 2022-23. Communities seeking state LSL replacement funding for the 2023 construction season would be required to notify DNR of their intent to apply by October 31, 2021, and awards made in 2022 would fund projects undertaken the following year. Municipalities may struggle to develop a LSL replacement program between the effective date of the 2021-23 budget and the intent to apply notification deadline, delaying potential LSL replacement projects until the 2024 construction season.

31. The SDWLP operates on a statutorily defined annual application cycle. Applicants must apply by June 30 in the fiscal year preceding the year in which the applicant is requesting aid. For the 2021 construction season, for instance, which typically runs from April through November, when the ground is soft enough for water infrastructure work, applicants were required to apply by June 30, 2020. To receive funds during the 2023 construction season, communities would be required to apply for LSL replacement principal forgiveness by June 30, 2022, at least eight months before the construction season for which those funds would be awarded. Applicants who apply after that date would not be eligible for funding until the 2024 construction season.

32. AB 68/SB 111 would have made application changes that would expedite DNR's ability to award LSL replacement funds, including deleting the intent-to-apply deadline, and amending the SDWLP application deadline, allowing DNR to accept applications continuously. Previous Committee action to date removed these from consideration. As DNR will be unable to award private LSL replacement funding before 2022-23, providing \$20 million GPR beginning in 2022-23 could reduce the fiscal effect of the provision in the biennium while adapting to procedures under current law that would dictate the timing of fund availability.

33. Many state grant programs require recipients to provide a cost-share. It can be argued that requiring project partners to provide some funding allows state funds to accomplish more than if they were the only source of project financing; a 50% cost share allows state funding to fund twice as much as if the state were to pay the full amount. Additionally, requiring grant recipients to be financially invested encourages recipients to manage a project for considerations of both cost and quality. Therefore the Committee could consider allowing DNR to use state funds to provide principal forgiveness for up to 50% of the cost of LSL replacement projects. [Alternative B1]

34. However, cost share requirements may reduce the scope of a project relative to a project completed entirely with state funds. Typically, communities that receive EIF financial assistance repay that financial assistance in one of three ways: (a) tax levy; (b) water system user charges; or (c) proceeds from special assessments levied for the project. Due to levy limits, constraints on a community's general obligation bonding authority, or limits on rates that the water utility may charge, communities may struggle to raise the funds required and may need to reduce the scale of a project. It could be argued that a cost-share requirement may limit the amount of LSLs that can be replaced

in lower income communities.

35. While the Governor's budget proposal would authorize DNR to award principal forgiveness for up to half the cost of LSL replacement projects on private property, recent LSL replacement programs have provided principal forgiveness for the full cost of replacement. Under both the 2017-18 private LSL replacement program and the WIFTA program, DNR provided principal forgiveness for up to 100% of the cost of LSL replacement.

36. DNR indicates that the Department would aim to administer WIFTA funding and state LSL replacement funding under the same programmatic structure. The Department would pool funds and award principal forgiveness through the same application process, if possible. If the Committee authorizes DNR to award state funds as principal forgiveness for up to 50% of the cost of LSL replacement projects, DNR would likely seek to fund the remaining 50% from alternate sources, such as federal funding.

37. If additional funds were unavailable, DNR would likely need to develop a different application process for federally-funded 100% principal forgiveness and state-funded 50% principal forgiveness private LSL replacement programs. This could impede the Department's ability to award funds in the 2021-23 biennium. To align state funding with current program operations, the Committee could consider authorizing DNR to award principal forgiveness for up to 100% of the cost of private LSL replacement. [Alternative B2]

38. AB 68/SB 111 is silent on the provision of funding under the bill as it may be awarded to municipalities that have established LSL replacement programs approved by the PSC. It would be possible for a utility program to award grants for 50% of a project under a PSC-approved program as well as 50% of project costs under DNR financial assistance. The Committee could specify that any municipality or water utility receiving financial assistance from DNR may not apply state funds to lead service line replacement at a property for which a recipient has received or will receive financial assistance from a water utility or municipality. [Alternative B3]

ALTERNATIVES

A. Private Lead Service Line Replacement Funding

1. Create a legislative finding that private lead service line replacement constitutes a public purpose. Create a continuing appropriation in the EIF for principal forgiveness for projects to replace private lead service lines. Provide \$40 million GPR as one-time funding in 2022-23.

ALT A1	Change to Base
GPR	\$40,000,000

2. Create a legislative finding that private lead service line replacement constitutes a public purpose. Create a continuing appropriation in the EIF for principal forgiveness for projects to replace private lead service lines. Provide \$20 million GPR each year.

ALT A2	Change to Base
GPR	\$40,000,000

3. Create a legislative finding that private lead service line replacement constitutes a public purpose. Create a continuing appropriation in the EIF for principal forgiveness for projects to replace private lead service lines. Provide \$20 million GPR each year beginning in 2022-23.

ALT A3	Change to Base
GPR	\$20,000,000

4. Create a legislative finding that private lead service line replacement constitutes a public purpose. Provide the EIF a \$40 million bonding authorization to provide principal forgiveness for projects to replace private lead service lines.

ALT 4	Change to Base
BR	\$40,000,000

5. Take no action.

B. Program Administration

In addition to either A1, A2, or A3,

1. Authorize DNR to award principal forgiveness for up to 50% of the cost of private lead service line replacement projects.
2. Authorize DNR to award principal forgiveness for up to 100% of the cost of private lead service line replacement projects.
3. Specify that any municipality or water utility receiving financial assistance from DNR may not apply state funds to lead service line replacement at a property for which a recipient has received or will receive financial assistance from a water utility or municipality.

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