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Lead Service Lines (LSLs) Replacement: Funding Developments

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SUMMARY

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Lead Service Lines (LSLs) Replacement: Funding Developments

Lead's adverse health effects, particularly on children's development, have continued to generate interest in reducing exposures to lead through drinking water. Various efforts, such as the regulation of lead in tap water and lead content in any "pipe, or any pipe or plumbing fitting or fixture," combined with the phaseout of leaded gasoline and lead-based paint, and other actions, have reduced exposures to lead in the United States. Since the late 1970s, overall U.S. blood lead levels have declined an estimated 94%.

Unlike other drinking water contaminants, lead primarily enters drinking water after treated water leaves a treatment plant. When water is corrosive, lead can leach into the water from certain pipes and plumbing materials. One study estimated that, under laboratory conditions, lead pipes, known as lead service lines (LSLs), contributed an average of 50%-75% of the lead measured in water. Removing LSLs may help reduce potential exposures to lead from tap water.

Over time, detections of elevated lead levels in tap water in some older cities have continued to draw attention to LSLs, leading to efforts to facilitate LSL replacement. The Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58), Division J, provides five fiscal years of emergency supplemental appropriations, beginning in FY2022, for the primary federal financial assistance program for drinking water infrastructure, the Drinking Water State Revolving Fund (DWSRF). Authorized in 1996, the DWSRF is the primary federal program to help water systems finance improvements needed to comply with the Safe Drinking Water Act (42 U.S.C. §300j-12 added by P.L. 104-182). EPA makes grants to states to capitalize revolving loan funds, and states (including Puerto Rico) are authorized to use their DWSRFs to provide primarily low-interest loans to eligible public water systems. The Safe Drinking Water Act directs EPA to distribute DWSRF funds among the states based on the results of the most recent quadrennial needs survey, with no state receiving less than 1% of available funds. DWSRF financial assistance is available for statutorily specified expenditures and those that EPA has determined, through guidance, will facilitate compliance with the Safe Drinking Water Act or significantly further the act's health protection objectives. LSL replacement projects are eligible for DWSRF financial assistance.

IIJA provides $3.0 billion for each of FY2022 through FY2026 (totaling $15.0 billion) through the DWSRF specifically for "lead service line replacement projects and associated activities directly connected to the identification, planning, design, and replacement of lead service lines." IIJA was silent on the specific approach that EPA should take when allotting the supplemental appropriations for the DWSRF. EPA used different formulas to distribute the FY2022 IIJA DWSRF LSL replacement appropriation and the FY2023 appropriation.

In December 2021, EPA published state allotments of the IIJA FY2022 DWSRF LSL replacement appropriation, using the latest, at the time (i.e., the sixth), drinking water infrastructure needs survey and assessment (DWINSA) to determine the allotments. EPA's sixth DWINSA estimated overall drinking water capital infrastructure costs, which may have included some estimates of LSL replacement costs, but EPA did not specifically request that states include such costs. Accordingly, EPA calculated state allotments of the FY2022 IIJA DWSRF LSL replacement appropriation based on each state's share of overall drinking water infrastructure need. Prior to allotting the FY2023 IIJA DWSRF LSL appropriation, EPA published data from the seventh DWINSA, which included estimates of LSLs by state. For FY2023, EPA used those LSL estimates to calculate a new allotment formula for the IIJA LSL replacement appropriation based on each state's proportional share of LSLs, with no state receiving less than 1% of available funds.

The difference between the FY2022 and FY2023 state allotments of the IIJA DWSRF LSL replacement appropriations has raised questions. In particular, certain stakeholders and Members have questioned how well the distribution of FY2022 LSL replacement funding aligns with potential LSL replacement projects in each state. Other questions may involve the robustness of the LSL data and estimates used to determine state allotments of these funds. Given the distribution of LSLs among states, questions involve whether some states are able to identify enough eligible projects to use their entire allotments or whether the overall number of LSL replacement projects in each state would outpace each state's allotment of funds.

Congressional interest in and oversight of state use of the IIJA DWSRF LSL replacement allotments is likely to continue. Further, the LSL replacement appropriations also highlight several tradeoffs that policymakers may consider during future deliberations on how to or whether to address specific objectives, such as LSL replacement, independently via appropriations.

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Introduction

Lead's adverse health effects, particularly on children's development, continue to generate interest in reducing exposures to lead through drinking water. Drinking water may be a source of exposure to lead, though lead-based paint, dust from deteriorated lead-based paint, and soil contaminated by lead continue to be the primary sources of lead exposure overall for children in most places.[1] Various efforts, such as the regulation of lead in tap water and lead content in any "pipe, or any pipe or plumbing fitting or fixture,"[2] the phaseout of leaded gasoline and lead-based paint, and other actions, have reduced exposures to lead in the United States. Since the late 1970s, overall U.S. blood lead levels have declined nearly 94%.[3]

Unlike other drinking water contaminants, lead primarily enters drinking water after treated water leaves a treatment plant. When water is corrosive, lead can leach into the water from certain pipes and plumbing materials. One study estimated that, under laboratory conditions, lead pipes, known as lead service lines (LSLs), contributed an average of 50%-75% of the lead measured in water.[4] Given this finding, removing LSLs may help reduce potential exposures to lead in tap water.

Over time, detections of elevated lead levels in tap water in some older cities have drawn attention to LSLs, leading to efforts to facilitate LSL replacement. In 2021, the Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) provided supplemental appropriations to fund LSL replacement. IIJA provides $3.0 billion for each of FY2022 through FY2026, for the Drinking Water State Revolving Fund (DWSRF) specifically dedicated to LSL replacement projects and related activities.

The U.S. Environmental Protection Agency's (EPA's) allotment formulas for distributing the first two fiscal years of the IIJA DWSRF LSL replacement appropriations have garnered attention. IIJA was silent on a specific approach for allotting the DWSRF LSL replacement supplemental appropriations among the states. For FY2022 and FY2023, EPA used two different allotment formulas. EPA allotted the FY2022 LSL replacement appropriation to states based on each state's share of overall drinking water infrastructure need. For the FY2023 LSL replacement appropriation, EPA allotted the funds among the states based on each state's proportional share of

[1] Agency for Toxic Substances and Disease Registry, *Draft Toxicological Profile for Lead*, Atlanta, GA, May 2019, pp. 2 and 330, at https://www.atsdr.cdc.gov/toxprofiles/tp13.pdf. Lead in the environment is particularly accessible to children due to their hand-to-mouth behavior and the proximity of their breathing zone to leaded dust. Other sources of lead exposure may include lead smelting and battery recycling.

[2] In 1986 and several times since, Congress amended the Safe Drinking Water Act (SDWA) to address lead exposures through drinking water. These included (1) limiting lead in plumbing materials and fixtures (SDWA §1417; 42 U.S.C. §300g-6) and (2) authorizing the U.S. Environmental Protection Agency (EPA) to regulate contaminants, such as lead, in public water systems through national primary drinking water regulations (SDWA §1412; 42 U.S.C. §300g-1). Further, Congress amended SDWA to address lead in child care programs and schools and establish a program to remove lead-lined drinking water coolers (SDWA Part F; 42 U.S.C. §300j-21 et seq.). For more information about the national primary drinking water regulation for lead (and copper), see CRS Report R46794, *Addressing Lead in Drinking Water: The Lead and Copper Rule Revisions (LCRR)*.

[3] Centers for Disease Control and Prevention (CDC), "National Health and Nutrition Examination Survey (NHANES): Blood Lead Levels in the U.S. Population," at https://www.cdc.gov/nceh/lead/data/nhanes.htm. The CDC reports that, from the late 1970s through 2018, the overall estimated geometric mean blood lead level (BLL) of the U.S. population aged 1 to 74 years decreased from 12.8 to 0.855 ug/dL, representing a decline of 93.6%.

[4] American Water Works Association (AWWA) Research Foundation and EPA, *Contribution of Service Line and Plumbing Fixtures to Lead and Copper Rule Compliance Issues*, July 2008, at https://archive.epa.gov/region03/dclead/web/pdf/91229.pdf.

estimated LSLs, estimates that EPA developed and released in April 2023 as part of a subsequent needs survey.[5]

EPA's allotment formulas for the FY2022 and FY2023 IIJA DWSRF LSL replacement appropriations have raised questions. In particular, certain stakeholders and Members have questioned how well the distribution of FY2022 LSL replacement funding aligns with potential LSL replacement projects in each state.[6] Other questions might involve the robustness of the LSL estimates that EPA used to determine FY2023 state allotments of these funds. Given the concentration of LSLs in a subset of states, questions might involve whether some states are able to identify enough eligible projects to use their entire allotments or whether the overall number of LSL replacement projects in each state might outpace each state's allotment of LSL replacement funds.

To assess the effect of the different formulas, this report analyzes how using EPA's FY2023 LSL-specific formula, as opposed to the FY2022 formula based on overall drinking water infrastructure needs, changes state' allotments of IIJA DWSRF LSL replacement appropriations. It also calculates theoretical cost to replace LSLs by state based on EPA's estimates to compare to state allotments of IIJA DWSRF LSL replacement appropriations.

This report first provides an overview of service lines, the DWSRF program, and the IIJA DWSRF supplemental appropriations dedicated to LSL replacement projects. In addition, this report discusses the various other factors that may contribute to the cost to replace LSLs. This report does not discuss EPA's drinking water regulation to control lead in tap water. See CRS Report R46794, *Addressing Lead in Drinking Water: The Lead and Copper Rule Revisions (LCRR)*, for information about that drinking water regulation.

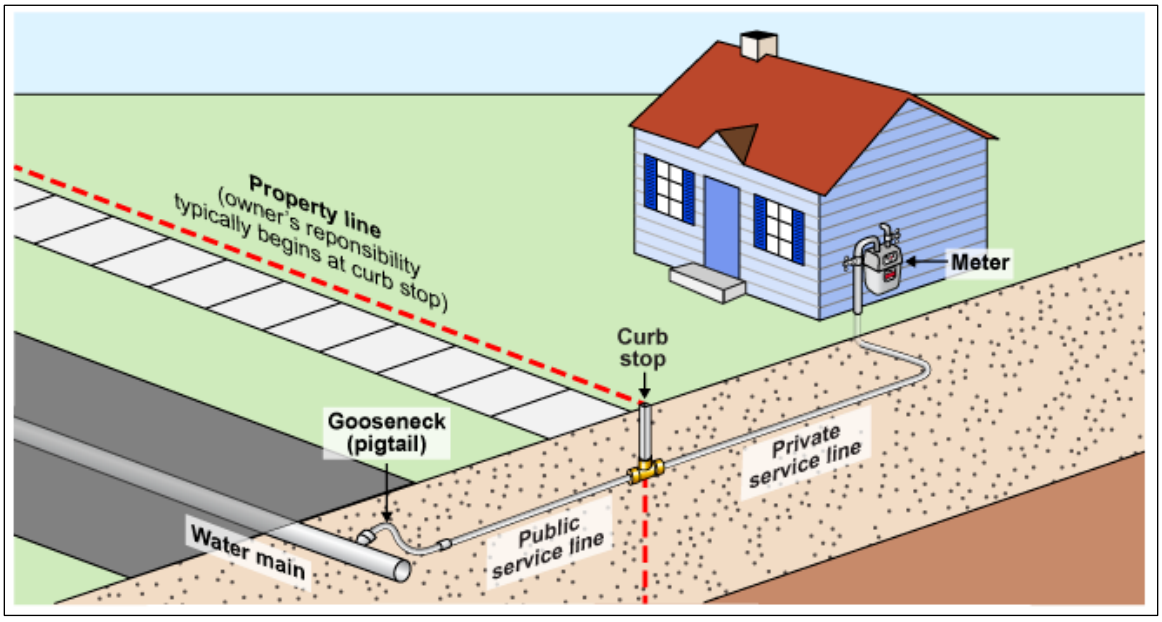
Identifying Service Line Material

Identifying which service lines, or portion thereof, are lead is a necessary step to replacing them. A service line connects the water main, under the street, to a residence or a building. As shown in **Figure 1**, ownership of service lines is generally divided between the water system and the property owner. Typically, the water system owns the segment from the water main to the property line, and the property owner owns the segment from the property line to the inlet to the residence or building. In circumstances where the LSL is partially owned by a property owner, a water system cannot compel the owner to replace the owner's portion of the LSL. Therefore, if the property owner is unable or unwilling to pay for their portion of the LSL replacement, then a portion of the service line would remain lead until the property owner replaced it.

[5] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Frequently Asked Questions*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_FAQ_DWINSA_4.4.23.v1.pdf.

[6] EPA, *Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law*, March 8, 2022, at https://www.epa.gov/system/files/documents/2022-03/combined_srf-implementation-memo_final_03.2022.pdf.

Figure 1. Typical Municipal Water Infrastructure



Source: U.S. Government Accountability Office, *Drinking Water: EPA Could Use Available Data to Better Identify Neighborhoods at Risk of Lead Exposure*, 21-78, December 18, 2020, at https://www.gao.gov/products/gao-21-78.

As service lines are buried underground, challenges exist for water systems when attempting to identify which, if any, or which side (i.e., public or private) of lines are made from lead.[7] Identifying service line material (e.g., lead, galvanized steel, copper, or plastic) may be particularly challenging for systems that lack detailed maps and records from the time of their construction. The distribution of LSLs among the states depends in part on water system age, as well as state initiatives to replace LSLs.[8]

For systems constructed before 1930, LSLs were commonly used in water systems; from about 1930 to about 1950, fewer LSLs were installed due to growing concerns about lead's health effects, though certain localities still used LSLs.[9] In 1986, Congress prohibited the use of any pipe or plumbing fitting or fixture that was not "lead-free."[10] Accordingly, LSLs are likely to be concentrated in localities with housing and buildings constructed primarily pre-1930s to 1950s rather than in localities with newer housing.[11]

[7] See the EPA website "EPA Researchers Share Approaches to Identify Lead Service Lines" at https://www.epa.gov/sciencematters/epa-researchers-share-approaches-identify-lead-service-lines.

[8] For example, Michigan's 2018 Lead and Copper Rule requires Michigan communities to replace an average of 5% of their total LSLs each year, resulting in 100% replacement in 20 years. More information at Michigan Department of Environment, Great Lakes, and Energy, "Lead Service Line Replacement," at https://www.michigan.gov/egle/about/featured/benton-harbor/lsl-replacement.

[9] David A. Cornwall, Richard A. Brown, and Steve H. Via, "National Survey of Lead Service Line Occurrence," *Journal AWWA*, vol. 108, no. 4 (April 1, 2016), p. E190.

[10] P.L. 99-339 amended the Safe Drinking Water Act and defined *lead-free* as solder and flux with no more than 0.2% lead and pipes with no more than 8% lead. Congress expanded the lead prohibition to include fixtures in 1996 (P.L. 104-182) and reduced the allowable lead content in "lead-free" plumbing materials in 2011 (P.L. 111-380). *Lead-free* is now defined as no more than 0.25% lead across wetted surfaces of plumbing materials. Many communities and homes may still have pipes and plumbing that contains more lead than is allowed for newer materials.

[11] EPA, *Addressing Lead in Drinking Water with the Drinking Water State Revolving Fund*, EPA 816-F-18-005, June 2022, at https://www.epa.gov/system/files/documents/2021-09/addressing-lead-in-drinking-water-with-the-dwsrf-1.pdf.

In part due to these difficulties in identifying LSLs, estimates of the number of LSLs vary. In 2019, EPA estimated that the number of LSLs nationwide could range from 6.3 million to 9.3 million.[12] In 2023, EPA stated that the best available national data estimates that almost 9.2 million of the 99.9 million service lines in the nation's water systems are LSLs.[13]

Drinking Water State Revolving Fund (DWSRF)

Authorized in 1996, the DWSRF is the primary federal program helping water systems finance improvements needed to comply with the Safe Drinking Water Act (SDWA).[14] DWSRF financial assistance is available for statutorily specified expenditures and those that EPA has determined, through guidance, will facilitate SDWA compliance or significantly further the act's health protection objectives. LSL replacement projects are eligible for DWSRF financial assistance. Further, in 2016, EPA clarified that replacement of the privately owned portion of a service line is an eligible project under the DWSRF.[15]

Using DWSRF appropriations, EPA makes grants to states to capitalize revolving loan funds. Each state is required to provide a 20% match of its annual capitalization grant.[16] From these revolving funds, states make primarily low-interest-rate loans to publicly or privately owned community water systems.[17] To be awarded a capitalization grant, states are required to develop lists called Intended Use Plans (IUPs) that identify the projects that are to receive DWSRF assistance in that year.

SDWA either directs or authorizes EPA to set aside certain amounts of the DWSRF appropriation for various program purposes before allotting the remaining funds among the states. Among other set-asides, EPA reserves 2% of the appropriated amounts for grants to Indian tribes and Alaska Native villages for drinking water infrastructure projects.[18]

Using the remaining DWSRF appropriation, EPA makes grants to states to capitalize each state's revolving loan fund. All 50 states and Puerto Rico implement their own DWSRF programs.[19] SDWA directs EPA to distribute DWSRF funds among the states based on the results of the most recent quadrennial drinking water infrastructure needs survey and assessment, with each state

[12] EPA, "National Primary Drinking Water Regulations: Proposed Lead and Copper Rule Revisions," 84 *Federal Register* 61684-61774, November 13, 2019.

[13] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Frequently Asked Questions*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_FAQ_DWINSA_4.4.23.v1.pdf.

[14] SDWA §1452; 42 U.S.C. §300j-12, added by the Safe Drinking Water Act Amendments of 1996 (P.L. 104-182).

[15] Anita Maria Thompkins, Director of the Division of Drinking Water Protection, Memorandum on the Clarification of Drinking Water State Revolving Fund Eligibility of Service Line Replacement on Private Property, May 9, 2016.

[16] SDWA §1452(e); 42 U.S.C. §300j-12(e).

[17] The DWSRF also can provide financial assistance to nonprofit, nontransient noncommunity water systems. A *community water system* is a system that regularly serves 25 or more individuals year-round. *Nontransient noncommunity water systems*, such as those serving schools or factories, have their own water system and generally serve the same individuals for more than six months but not year-round. SDWA authorizes states to provide additional subsidization (including forgiveness of principal) to disadvantaged communities. 42 U.S.C. §300j-12(d) authorizes states to provide additional subsidization to disadvantaged communities. *Disadvantaged community* is defined as the service area of a public water system that meets affordability criteria developed by the state.

[18] Under SDWA Section 1452(i) [42 U.S.C. §300j-12(i)], EPA may use 1.5% of the amounts appropriated annually to make grants to Indian Tribes and Alaska Native villages. Since FY2010 (Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010 [P.L. 111-88]), Congress has authorized EPA to reserve up to 2.0% of the appropriated funds for Indian Tribes and Alaska Native villages. This authority was included in P.L. 112-74 and has continued through the terms and conditions of subsequent appropriations.

[19] SDWA Section 1401(13) defines the term *state* to include Puerto Rico for purposes of the act (42 U.S.C. §300f(14)).

receiving a minimum 1% of available funds.[20] Accordingly, EPA calculates state allotments of the DWSRF appropriations based on each state's proportional share of overall drinking water infrastructure need, with no state receiving less than 1%.

Drinking Water Infrastructure Needs Survey and Assessment

In addition to establishing the DWSRF, the SDWA Amendments of 1996 (P.L. 104-182) added a requirement for EPA to perform a survey every four years of drinking water system capital improvement needs.[21] SDWA requires EPA to use the results of this survey, called the Drinking Water Infrastructure Needs Survey and Assessment (DWINSA), to determine state allotments of DWSRF capitalization grants.[22] America's Water Infrastructure Act of 2018 (AWIA; P.L. 115-270) amended SDWA to require EPA to evaluate and include the cost to replace LSLs in the DWINSA. Prior to AWIA, EPA had finalized six surveys, none of which requested that water systems report the cost to replace these lines when conducting the needs survey. Some systems voluntarily included such costs in the sixth survey, estimating that approximately 1.4 million LSLs would need to be replaced over a 20-year period at a cost of $4.2 billion in 2015 dollars.[23]

In April 2023, EPA announced the results of the seventh DWINSA, which included, as required, state and national estimates of the number of LSLs.[24] EPA reported that the nation has roughly 9.2 million LSLs.[25] These 9.2 million LSL comprise roughly 9.2% of the total national number of service lines (i.e., 99.9 million).[26] In addition, EPA's seventh survey identifies that the cost to replace these LSLs ranges from $50 billion to $80 billion in 2021 dollars.[27]

Understanding how EPA developed state LSL estimates illustrates some potential uncertainties involved in using these data to distribute the IIJA DWSRF LSL replacement appropriations. To develop the seventh DWINSA, EPA solicited responses from 3,629 water systems and received responses from 3,526 systems—a response rate of 97%.[28] Roughly 75% of responding systems reported on service line materials, specifically whether the service lines were composed of lead, galvanized service lines, or unknown material.[29] As not all water systems have a completed service line material inventory, EPA extrapolated using existing service line material data to estimate the number of LSLs in water systems without service line material data.[30] Specifically, EPA calculated the ratio of LSLs to total service lines of all known material types, and then used

[20] SDWA §1452(a)(1)(D);42 U.S.C. §300j-12(a)(1)(D).

[21] SDWA §1452(h); 42 U.S.C. §300j-12(h). EPA must report each needs assessment to Congress. Concurrently, and in consultation with the Indian Health Service and Indian Tribes, EPA must assess needs for drinking water treatment facilities to serve Indian Tribes and Alaska Native villages (SDWA §1452(i); 42 U.S.C. §300j-12(i)).

[22] SDWA §1452(a)(1)(D); 42 U.S.C. §300j-12(a)(1)(D).

[23] EPA, *Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress*, March 2018, at https://www.epa.gov/sites/production/files/2018-10/documents/corrected_sixth_drinking_water_infrastructure_needs_survey_and_assessment.pdf.

[24] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Frequently Asked Questions*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_FAQ_DWINSA_4.4.23.v1.pdf.

[25] EPA, *Drinking Water Infrastructure Needs Survey and Assessment: 7th Report to Congress*, September 6, 2023, at https://www.epa.gov/system/files/documents/2023-09/Seventh%20DWINSA_September2023_Final.pdf.

[26] Ibid.

[27] Ibid.

[28] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Fact Sheet*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_DWINSA%20Public%20Factsheet%204.4.23.pdf.

[29] Ibid.

[30] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Frequently Asked Questions*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_FAQ_DWINSA_4.4.23.v1.pdf.

this ratio to estimate the number of LSLs in systems in which the service line materials are unknown.[31]

EPA's seventh survey estimates that LSLs are concentrated in a subset of states. For example, the seventh DWINSA estimates that nearly 24% (2.2 million) of the 9.2 million LSLs are found in Florida and Illinois.[32] The survey's findings raised questions over the robustness of EPA's LSL estimates. Some Members of Congress identified potential data reporting issues that may have affected EPA's projections of state LSL estimates.[33] Although, EPA reports that these LSL estimates are the best available data, and states that the agency intends to provide an opportunity for states to update LSL information.[34] The first column of **Table B-1** includes LSL estimates by state from the seventh DWINSA.

DWSRF LSL Replacement Appropriations

IIJA, Division J, includes three emergency supplemental appropriations for the DWSRF.[35] Among the three appropriations, IIJA provides $3.0 billion for each of FY2022 through FY2026, totaling $15.0 billion, for the DWSRF dedicated to "lead service line replacement projects and associated activities directly connected to the identification, planning, design, and replacement of lead service lines."[36] In addition, IIJA provides a total of $11.73 billion for FY2022 through FY2026 for the DWSRF for the full scope of eligible projects, which, as stated previously, includes LSL replacement projects.[37]

Allotting the IIJA DWSRF LSL Replacement Appropriations

The two different formulas by which EPA allotted the first two fiscal years of IIJA DWSRF LSL replacement appropriations have generated attention. After the agency announced the FY2022 state allotments based on overall infrastructure need, some Members of Congress questioned whether allotting the funds in this manner reflected the distribution of LSLs among the states.[38] For FY2023, EPA used LSL estimates that were generated in the latest needs survey and assessment to allot these funds. EPA used this LSL-specific allotment formula only for the IIJA DWSRF appropriation dedicated to LSL replacement activities. For the other IIJA DWSRF appropriations, EPA used each state's proportional share of overall drinking water infrastructure need to determine state allotments. The difference in the two formulas for the IIJA LSL

[31] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Frequently Asked Questions*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_FAQ_DWINSA_4.4.23.v1.pdf.

[32] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Fact Sheet*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_DWINSA%20Public%20Factsheet%204.4.23.pdf.

[33] See, for example, Rep. Pressley, "Letter to Michael Regan Regarding Reduction in Lead Service Line Funding," September 11, 2023, at https://pressley.house.gov/wp-content/uploads/2023/09/2023-09-11-Letter-to-EPA-re-Lead-Service-Line-Funding.pdf.

[34] EPA, *Drinking Water Infrastructure Needs Survey and Assessment: 7th Report to Congress*, September 6, 2023, at https://www.epa.gov/system/files/documents/2023-09/Seventh%20DWINSA_September2023_Final.pdf.

[35] See CRS Report R46892, *Infrastructure Investment and Jobs Act (IIJA): Drinking Water and Wastewater Infrastructure*, by Elena H. Humphreys and Jonathan L. Ramseur, for more details.

[36] P.L. 117-58, Division J.

[37] IIJA, Division J, provides $800 million for each of FY2022 through FY2026, totaling $4.0 billion for the DWSRF dedicated to grants for projects to address emerging contaminants.

[38] See, for example, Rep. Schneider, "Schneider Leads 50 Bipartisan Members in Letter to EPA Advocating for Fair Lead Service Line Replacement Funding," press release, August 22, 2022, at https://schneider.house.gov/media/press-releases/schneider-leads-50-bipartisan-members-letter-epa-advocating-fair-lead-service.

replacement appropriations generated interest in states' use of these funds for LSL replacement projects due to distributing the funds based on different criteria of "need."

IIJA was silent on the approach that EPA should take when allotting the supplemental appropriations for the DWSRF. The act provides $15.0 billion over five fiscal years "under section 1452 of the Safe Drinking Water Act" for LSL replacement projects and related activities. SDWA Section 1452(a)(2)(D) requires EPA to use the latest DWINSA to determine state allotments of the DWSRF appropriation. Both in FY2022 and FY2023, EPA used the latest DWINSA available at the time to calculate state allotments, though for FY2023, EPA used a subset of data (i.e., LSL estimates) generated from the seventh DWINSA to calculate state allotments. **Table A-1** compares state capitalization grants provided from the FY2022 and FY2023 IIJA DWSRF LSL replacement appropriations.

For FY2022, EPA used the latest DWINSA at the time (i.e., the sixth) to calculate state allotments of the LSL replacement appropriation.[39] EPA's sixth DWINSA estimated overall cost of drinking water capital infrastructure needs.[40] In accordance with SDWA, EPA then calculated state allotments based on each state's proportional share of overall drinking water capital infrastructure need with no state receiving less than 1% of available funds.

For FY2023, EPA used its LSL estimates generated as a part of the seventh DWINSA, released April 3, 2023, to calculate state allotments of the IIJA DWSRF LSL replacement appropriation based on each state's proportional share of LSLs.[41] EPA's LSL-specific state allotments for FY2023 maintained the statutory minimum percentage of no state receiving less than 1% of available funds. The state allotments of the remaining fiscal years of the IIJA DWSRF appropriations are likely to be calculated based on the seventh DWINSA, as needs surveys are required to be completed every four years.

While EPA stated that the agency would use the LSL-specific allotment formula for distributing the IIJA LSL replacement appropriations in future fiscal years,[42] state allotments may change based on revised information. In September 2023, EPA announced that the agency would provide an opportunity for states to adjust their reported service line data in fall 2023.[43] EPA states that it would use any updated information to inform the allotment formula of the remaining fiscal years of IIJA DWSRF LSL replacement appropriation.[44]

Effect of LSL-Specific Allotment Formula

Comments on EPA's allotment formulas for the IIJA DWSRF LSL replacement appropriations have generally involved whether the allotments align to the distribution of LSLs among the

[39] EPA, *Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law*, March 8, 2022, at https://www.epa.gov/system/files/documents/2022-03/combined_srf-implementation-memo_final_03.2022.pdf.

[40] EPA, *Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress*, March 2018, at https://www.epa.gov/sites/production/files/2018-10/documents/corrected_sixth_drinking_water_infrastructure_needs_survey_and_assessment.pdf.

[41] EPA, *7th Drinking Water Infrastructure Needs Survey and Assessment: Fact Sheet*, April 2023, at https://www.epa.gov/system/files/documents/2023-04/Final_DWINSA%20Public%20Factsheet%204.4.23.pdf.

[42] Ibid.

[43] EPA, *Drinking Water Infrastructure Needs Survey and Assessment: 7th Report to Congress*, September 6, 2023, at https://www.epa.gov/system/files/documents/2023-09/Seventh%20DWINSA_September2023_Final.pdf.

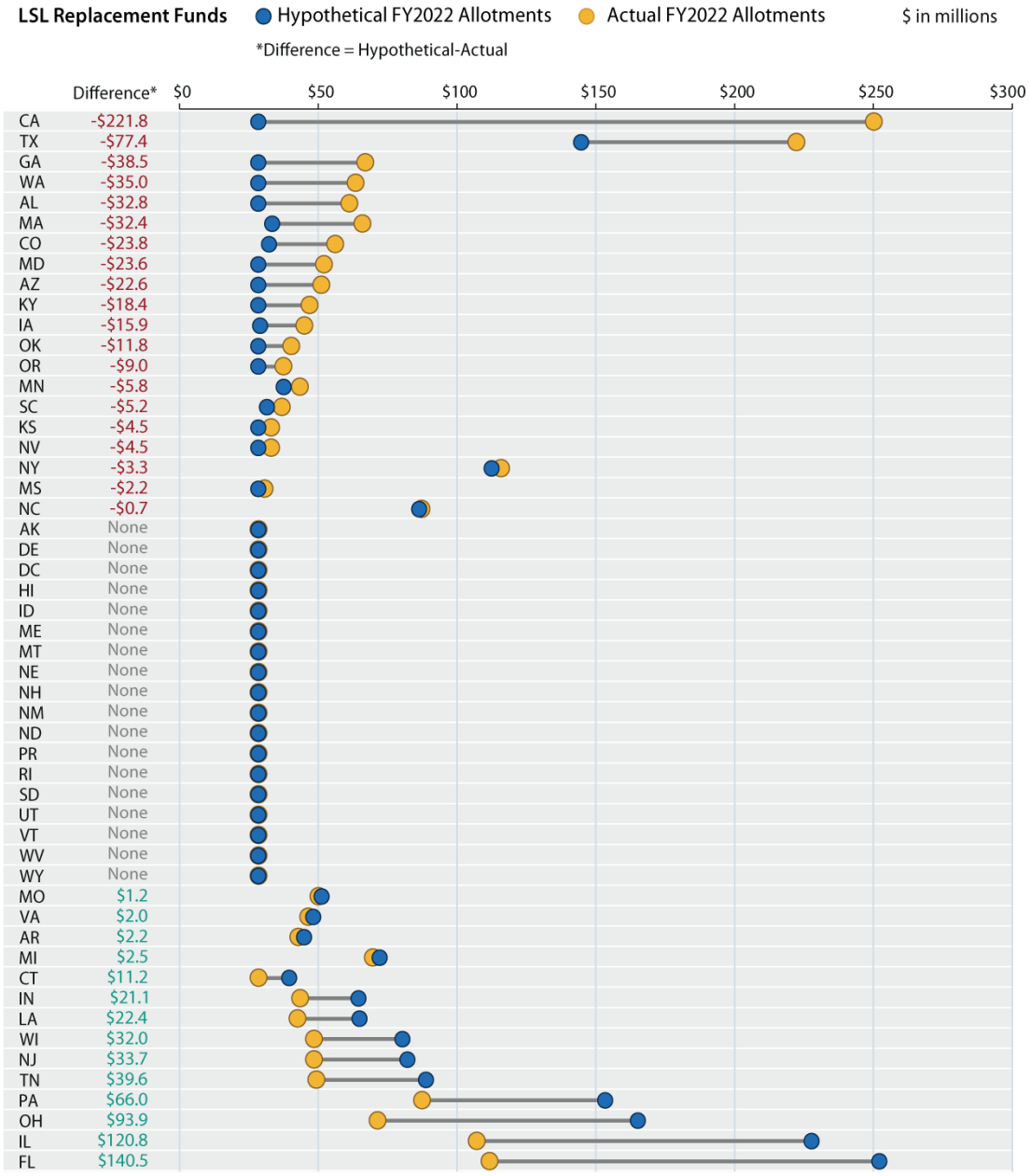
[44] Ibid.

states.[45] Comparing each state's proportional share of FY2022 and FY2023 LSL replacement appropriations is a way to evaluate how the FY2022 allotments relate to the distribution of LSLs among the states. This comparison demonstrates how using the full range of drinking water infrastructure needs as compared to a targeted subset—estimates of the number of LSLs—changes the distribution of funds among states. As discussed, EPA reserved less for administrative expenses in FY2023 compared to FY2022, meaning that EPA made $30 million more available for states in FY2023. Even with the change in amount available, the difference between states' FY2022 and FY2023 allotments provides information regarding the distribution among the state of overall infrastructure need compared to the distribution of LSLs among the states. **Table A-1** provides the FY2022 and FY2023 allotments of LSL replacement funds, as well as the difference between the two, by state.

Another way to quantify this effect is to calculate hypothetical FY2022 LSL replacement allotments using the FY2023 LSL-specific allotment formula, and compare these hypothetical allotments to the actual state allotments of the FY2022 IIJA DWSRF LSL replacement appropriation that EPA calculated before LSL estimates were available. The difference between the hypothetical and actual allotments of FY2022 LSL replacement funds shows how each state's proportional share of LSLs differs from each state's share of overall drinking water infrastructure needs. **Figure 2** shows the actual FY2022 allotments of LSL replacement funds as compared to hypothetical allotments of FY2022 LSL replacement funds using the LSL-specific allotment formula.

[45] See, for example, Rep. Schneider, "Schneider Leads 50 Bipartisan Members in Letter to EPA Advocating for Fair Lead Service Line Replacement Funding," press release, August 22, 2022, at https://schneider.house.gov/media/press-releases/schneider-leads-50-bipartisan-members-letter-epa-advocating-fair-lead-service.

Figure 2. Hypothetical Versus Actual Allotments



Source: CRS, from EPA, *Bipartisan Infrastructure Law: Environmental Protection Agency 2022 State Revolving Fund (SRF) Grants to States, Tribes and Territories by Program*, December 2021; EPA, *FY 2023 Allotments for the Drinking Water State Revolving Fund Based on the Seventh Drinking Water Infrastructure Needs Survey and Assessment*, April 2023.

Note: This graphic denotes the difference between hypothetical FY2022 state allotments of the Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) Drinking Water State Revolving Fund (DWSRF) lead service line (LSL) replacement appropriation calculated using the LSL-specific allotment formula as compared to actual state FY2022 allotments of IIJA DWSRF appropriation for LSL replacement.

Based on this analysis, 20 states received more in actual FY2022 funding for LSL replacement projects than those states would have received in the hypothetical situation allocating the funds based on the LSL-specific allotment formula used in FY2023. This result means that, according

to EPA's estimates, these 20 states have a relatively smaller share of LSLs as compared to those same states' share of overall drinking water infrastructure need. These 20 states collectively received nearly $590 million more in FY2022 LSL replacement funds (i.e., $2.84 billion total) than these states would have if the FY2023 LSL-specific allotment formula had been used.

Under the FY2022 hypothetical, this nearly $590 million in funding would have shifted to 14 states that have a greater share of LSLs as compared to their share of overall drinking water infrastructure need. These 14 states received less in FY2022 LSL replacement funding than if the funding were distributed using the LSL-specific allotment formula.

For states that have no difference in allotment, this appears to reflect that under both approaches the state received the minimum allotment of 1%.

Table 1 provides the average and median change for states that received more or less in actual FY2022 LSL replacement funding than a hypothetical where the FY2022 funding was distributed based on FY2023 LSL-specific allotment formula.[46] For context, the average FY2022 LSL replacement state capitalization grant amount was $53.5 million, and the median was $42.5 million.

Table 1. Difference Between Actual and Hypothetical FY2022 Funding for LSL Replacement Projects

Actual vs. Hypothetical (i.e., Distributed Using LSL-Specific Formula)	States	Average Change	Median Change
Received More in Actual Allotment: 20 States	California, Texas, Georgia, Washington, Alabama, Massachusetts, Colorado, Maryland, Arizona, Kentucky, Iowa, Oklahoma, Oregon, Minnesota, South Carolina, Kansas, Nevada, New York, Mississippi, North Carolina	+$29.5 million	+$17.1 million
Received Less in Actual Allotment: 14 States	Florida, Illinois, Ohio, Pennsylvania, Tennessee, New Jersey, Wisconsin, Louisiana, Indiana, Connecticut, Michigan, Arkansas, Virginia, Missouri	-$42.1 million	-$27.2 million

Source: Calculated by CRS from EPA, *Bipartisan Infrastructure Law: Environmental Protection Agency 2022 State Revolving Fund (SRF) Grants to States, Tribes and Territories by Program*, December 2021; EPA, *FY 2023 Allotments for the Drinking Water State Revolving Fund based on the Seventh Drinking Water Infrastructure Needs Survey and Assessment*, April 2023.

Notes: LSL denotes lead service line. The following states' capitalization grant amounts would not change using the FY2023 LSL-specific allotment percentages to distribute the FY2022 LSL replacement funding: Alaska, Delaware, Hawaii, Idaho, Maine, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Puerto Rico, Rhode Island, South Dakota, Utah, Vermont, West Virginia, and Wyoming. These states would receive the minimum percentage of available funds under both the actual and hypothetical scenarios.

Variability of LSL Replacement Costs

The cost of LSL replacement projects may affect a state's ability to fully use its allotment. When estimating the state-level costs of these projects, the number of LSLs is one of multiple cost

[46] **Table B-1** shows actual FY2022 funding for LSL replacement and counterfactual FY2022 funding for LSL replacement calculated using the FY2023 LSL-specific formula by state. It also includes LSL estimates from EPA's seventh drinking water infrastructure needs survey and assessment.

inputs. Some other LSL replacement cost inputs include the cost of labor, materials, hard-surface removal (e.g., excavation), as well as post-replacement repaving.

State estimates of the number of LSLs may not be the only relevant input for estimating LSL replacement project costs. These costs may vary depending where a replacement project takes place. One example of the regional variability of certain costs is construction labor. The Bureau of Labor Statistics reports that construction laborers in Texas earned roughly 42.7% (i.e., $13) less an hour, on average, than construction laborers in New Jersey in 2022.[47] The number of LSLs being replaced within a system also may affect the project cost. Generally, more LSLs in a system equates to higher overall costs for their replacement, but potential economies of scale may result in lower replacement costs per line.

EPA Estimates of LSL Replacement Costs

EPA's estimates of the cost to replace LSLs have varied. In 2020, EPA estimated that the per-line cost of full LSL replacement ranges from $2,352 to $7,056, with an average of $4,704.[48] If a water system planned an LSL replacement project in conjunction with other projects, EPA assumed that the project costs would reduce to $1,882 to $5,645 per line, with an average of $3,763 per line, due to ability to coordinate with other projects that require hard-surface removal, and other efficiencies.[49] In its analysis, EPA noted that the survey data available to the agency from which to estimate LSL replacement costs were "highly uncertain" due to the limited number of observations and lack of a standardized procedure for calculating costs.[50]

In September 2023, EPA provided updated per-line replacement costs that the agency states are, in part, based on data collected during the seventh DWINSA.[51] EPA's 2023 per-line replacement cost estimates appear to be an increase compared to EPA's 2020 cost estimates. EPA identifies a "low estimate" of $5,328 per line, noting that 25% of costs were below this value, and a "high estimate" of $9,015 per service line with 25% of costs above this value.[52] EPA did not provide additional details (e.g., planned versus unplanned per-line costs) regarding these cost estimates in the seventh survey. In addition, the agency did not provide state-specific estimates of LSL replacement projects.[53]

Estimated Sufficiency of IIJA DWSRF LSL Replacement Funding

Though the cost of such projects remains uncertain, EPA's estimates demonstrate the extent to which LSL replacement costs could vary. This variability creates challenges in making determinations regarding whether LSL replacement funding at the state level would cover or exceed the costs to carry out these projects. Further, given EPA's LSL estimates rely on projected

[47] Bureau of Labor Statistics, *Occupational Employment and Wage Statistics: 47-2061 Construction Laborers*, May 2022, at https://www.bls.gov/oes/current/oes472061.htm#st.

[48] EPA, *Derivation of LSLR Costs_Final Rule.xlsx*, December 2020, at https://www.regulations.gov/docket?D=EPA-HQ-OW-2017-0300.

[49] Ibid.

[50] EPA, National Primary Drinking Water Regulations: Lead and Copper Rule Revisions EPA-HQ-OW-2017-0300-0001, November 2019, at https://www.regulations.gov/document/EPA-HQ-OW-2017-0300-0001.

[51] EPA, *Drinking Water Infrastructure Needs Survey and Assessment: 7th Report to Congress*, September 6, 2023, at https://www.epa.gov/system/files/documents/2023-09/Seventh%20DWINSA_September2023_Final.pdf.

[52] Ibid.

[53] EPA, *Drinking Water Infrastructure Needs Survey and Assessment: 7th Report to Congress*, September 6, 2023, at https://www.epa.gov/system/files/documents/2023-09/Seventh%20DWINSA_September2023_Final.pdf.

data, determining the adequacy of IIJA DWSRF LSL replacement funding at the state level using these data involves a high level of uncertainty.

EPA's estimates of LSL replacement costs allow for consideration of the extent to which available funding meets estimated LSL replacement needs, provided remaining IIJA DWSRF LSL replacement funding remains constant through FY2026 using the FY2023 formula. One approach would be to estimate the sufficiency of funding using the EPA low estimated cost of $5,328 per line.[54] Using this value and the above allotments, 19 states appear to receive sufficient funds to replace the estimated LSLs within their state.[55]

EPA's higher cost estimate yields a smaller number of states appearing to receive sufficient funds to replace the estimated LSLs within their state. Using the EPA high estimated cost of $9,015 per line and the above allotments,[56] 14 states appear to receive sufficient funds to replace the estimated LSLs within their state.[57]

As noted above, the actual sufficiency of funds depends on multiple factors, including the accuracy of the estimates of LSLs by EPA and states, actual replacement costs, economies of scale, and reallotment of unused allotted funds among states. Accordingly, this rough assessment of the sufficiency of the IIJA LSL replacement funding to carry out these projects is illustrative and is unlikely to materialize as specifically outlined in this section.

Potential Outcomes

The difference between state allotments of FY2022 and FY2023 IIJA DWSRF LSL replacement appropriations may result in several potential outcomes for states. Certain states may be unable to use their entire allotted capitalization grant due to an insufficient number of eligible projects on the states' IUPs. Under this situation, SDWA authorizes EPA to reserve up to 10% for Indian Tribes, and then directs EPA to reallot the unspent capitalization grant to states that have spent their full capitalization grants.[58] Other states may be able to use their entire LSL replacement allotments for eligible projects, leaving no funds for reallotment, and still have eligible projects on their IUPs after using their allotments.

As discussed above, predicting whether a particular state will have sufficient eligible projects to fund from its grant is challenging, and depends on the number of eligible projects, the costs to complete those projects, and the number of projects that seek funding, among other factors. EPA's estimates of the number of LSLs, and the cost to replace them, provide some data that can be used for assessing which states are likely to have sufficient projects to fund from their LSL replacement allotments.

The number of LSL replacement projects is not the only determinant of whether a state may or may not be able to use its entire capitalization grant. For the LSL replacement appropriations, IIJA specifies that, in addition to LSL replacement projects, these funds can be used for activities "associated" with LSL replacement projects. EPA guidance lists other projects that would be

[54] EPA estimates that LSL replacement costs are higher than this value for 75% of such projects.

[55] These states would be Alaska, Arizona, California, Hawaii, Maine, Mississippi, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Vermont, Washington, West Virginia, and Wyoming. Calculations available upon request.

[56] EPA estimates that LSL replacement costs are higher than this value for 25% of such projects.

[57] These states would be Alaska, Arizona, California, Hawaii, Mississippi, Montana, Nevada, New Hampshire, New Mexico, Oregon, South Dakota, Utah, Vermont, and Wyoming. Calculations available upon request.

[58] SDWA §1452(a)(1)(C); 42 U.S.C. §300j-12(a)(1)(C).

eligible for funding from the IIJA DWSRF LSL replacement appropriation, including development or updating of LSL inventories.[59] While a state may have a smaller number of estimated LSLs to replace, that state may use its entire capitalization grant amount for those projects related to LSL replacement, such as inventorying lines, meaning that no amount would need reallotting.

Drinking Water State Revolving Fund (DWSRF) Capitalization Grants: Period of Availability and Reallotment

Under the Safe Drinking Water Act (SDWA), capitalization grants are available for the states' use in the fiscal year in which they were provided and the following fiscal year. EPA is authorized to reallot unspent capitalization grants to states that have obligated all of their own capitalization grant after this initial period of availability until the appropriation expires. The DWSRF regulations further define how EPA reallots DWSRF capitalization grants. EPA is authorized to reserve up to 10% of the amount of unspent capitalization grants for assistance to Indian Tribes before directing EPA to reallot the remaining amount to eligible states based on the formula originally used to allot these funds. Accordingly, under SDWA, EPA reallots unspent capitalization grants based on the drinking water infrastructure needs survey and assessment. For example, Wyoming declined its capitalization grant from DWSRF appropriations provided by the Consolidated Appropriations Act, 2019 (P.L. 116-6). In 2020, EPA announced that the agency would reallot Wyoming's capitalization grant amount of $11.1 million among other states after reserving 10% for tribal grants, and EPA gave states until September 30, 2021, to apply for their allotment.

Source: SDWA §1452(a)(1)(C); 42 U.S.C. §300j-12(a)(1)(C); 40 C.F.R. § 35.3515(3); Anita Maria Thompkins, Director of the Division of Drinking Water Protection, Memorandum on Reallotment of FY 2019 DWSRF Funds, December 9, 2020, at https://www.epa.gov/sites/default/files/2021-01/documents/reallotment_of_fy_2019_dwsrf_funds.pdf.

Under SDWA, the FY2022 LSL replacement appropriation's period of availability ends after FY2023. EPA states that, consistent with SDWA, unspent state capitalization grants from the IIJA DWSRF supplemental appropriations would be reallotted in instances when states are unable to obligate their grants within the period of availability.[60] In that case, EPA would have to determine how to reallot the funds among the states that have already expended their grants. EPA DWSRF regulations require that unspent capitalization grants be reallotted among the states using the formula initially used, meaning that EPA would use the FY2022 allotment percentages to reallocate unspent FY2022 capitalization grants.[61]

Concluding Observations

Congressional interest in and oversight of states' use of the allotments of the IIJA DWSRF LSL replacement appropriations is likely to continue. In terms of dollar value, the difference between the FY2022 and FY2023 LSL replacement funds for certain states is sizable, though whether states would be challenged to use these funds, or experience a shortfall against their LSL replacement needs, remains to be seen. Policymakers may be also interested in oversight of any future allotment formulas that EPA may use for these appropriations.

Further, policymakers may use this to inform future deliberations on how to or whether to address specific objectives, such as LSL replacement, in appropriations or authorizing legislation. EPA's allotment formulas for FY2022 and FY2023 IIJA DWSRF LSL replacement appropriations

[59] EPA, *Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law*, March 8, 2022, at https://www.epa.gov/system/files/documents/2022-03/combined_srf-implementation-memo_final_03.2022.pdf.

[60] EPA, *Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law*, March 8, 2022, at https://www.epa.gov/system/files/documents/2022-03/combined_srf-implementation-memo_final_03.2022.pdf.

[61] 40 C.F.R. § 35.3515(3).

highlight several tradeoffs for consideration when addressing specific infrastructure projects or issues.

One is the tradeoff between providing funding more quickly versus providing funding with greater specification. Waiting to provide appropriations until LSL estimates were available may have allowed for initial state allocations of IIJA LSL replacement funds to be aligned to the distribution of EPA's state-by-state LSL estimates, which were not initially available. Allotments aligned to the distribution of LSL estimates could reduce the potential that EPA would have to reallot unspent funds. Although, states may have sufficient eligible LSL replacement and/or related projects to use the available funds. Accordingly, waiting to provide appropriations until the LSL estimates were available would have delayed providing funds to states with defined needs that were able to use the funds immediately. EPA has fully awarded the FY2022 DWSRF LSL Replacement grants to 22 states as of August 2023.

Deliberations over providing funds more quickly versus with greater specification are complicated by other factors. In this case, these involve questions over the robustness of LSL estimates, as well as the variability of the costs of projects. As the actual number of LSLs is unknown and states' per-line replacement costs are likely to vary, states' ability to use their full allotments and the sufficiency of that funding remain unclear.

In addition, states' ability to use their full allotments depends in part on factors beyond specific LSL estimates or the cost of such projects. States may be able to identify eligible projects for this funding that are not specifically LSL replacement projects, such as projects to develop service line inventories. Conversely, states may be unable to identify sufficient eligible projects to fund from their capitalization grant, as communities may be challenged in applying for DWSRF assistance or may lack the capacity to do so. Whether or how these factors may affect any potential reallotments of the IIJA DWSRF LSL replacement appropriations remains to be seen.

Another tradeoff is between providing appropriations through an existing program for a narrower set of eligible projects versus establishing a new program dedicated to that narrower set of eligibilities. Providing funding for a narrower set of eligibilities through existing programs may be more efficient or timely and require additional agency direction or flexibility. This may involve providing agencies with additional direction in how to allot funds or discretion in how to reallot funds, to allow agencies to administer the funding to meet legislative objectives.

If the funding were to be delivered through a new program, Congress would face consideration of various aspects of establishing a new program, such as program structure, development time frames, rulemakings, or other related implementation considerations. As such, the development and implementation of a new program may not align with other legislative objectives, such as timeliness. How those tradeoffs are considered may inform congressional deliberations on whether or how to address LSL replacement or other issues.

Appendix A. Allotments of IIJA DWSRF LSL Replacement Appropriations

Table A-1. FY2022 and FY2023 Allotments of IIJA DWSRF LSL Replacement Appropriations

dollars in thousands

	FY2022 LSL Allotment	FY2023 LSL Allotment	Difference Between FY2023 and FY2022
Alabama	$61,114	$28,650	-$32,464
Alaska	$28,350	$28,650	$300
Arizona	$50,986	$28,650	-$22,336
Arkansas	$42,653	$45,299	$2,646
California	$250,107	$28,650	-$221,457
Colorado	$56,015	$32,600	-$23,415
Connecticut	$28,350	$39,954	$11,604
Delaware	$28,350	$28,650	$300
District of Columbia	$28,350	$28,650	$300
Florida	$111,601	$254,788	$143,187
Georgia	$66,808	$28,650	-$38,158
Hawaii	$28,350	$28,650	$300
Idaho	$28,350	$28,650	$300
Illinois	$106,964	$230,177	$123,213
Indiana	$43,334	$65,161	$21,827
Iowa	$44,913	$29,319	-$15,594
Kansas	$32,891	$28,650	-$4,241
Kentucky	$46,717	$28,650	-$18,067
Louisiana	$42,433	$65,497	$23,064
Maine	$28,350	$28,650	$300
Maryland	$51,934	$28,650	-$23,284
Massachusetts	$65,783	$33,700	-$32,083
Michigan	$69,593	$72,881	$3,288
Minnesota	$43,276	$37,896	-$5,380
Mississippi	$30,518	$28,650	-$1,868
Missouri	$49,980	$51,736	$1,756
Montana	$28,350	$28,650	$300
Nebraska	$28,350	$28,650	$300
Nevada	$32,864	$28,650	-$4,214

	FY2022 LSL Allotment	FY2023 LSL Allotment	Difference Between FY2023 and FY2022
New Hampshire	$28,350	$28,650	$300
New Jersey	$48,385	$82,971	$34,586
New Mexico	$28,350	$28,650	$300
New York	$115,781	$113,656	-$2,125
North Carolina	$87,062	$87,290	$228
North Dakota	$28,350	$28,650	$300
Ohio	$71,300	$166,913	$95,613
Oklahoma	$40,192	$28,650	-$11,542
Oregon	$37,300	$28,650	-$8,650
Pennsylvania	$87,296	$154,956	$67,660
Puerto Rico	$28,350	$28,650	$300
Rhode Island	$28,350	$28,650	$300
South Carolina	$36,716	$31,809	-$4,907
South Dakota	$28,350	$28,650	$300
Tennessee	$49,243	$89,756	$40,513
Territories	$42,525	$42,975	$450
Texas	$222,155	$146,246	-$75,909
Utah	$28,350	$28,650	$300
Vermont	$28,350	$28,650	$300
Virginia	$46,256	$48,717	$2,461
Washington	$63,336	$28,650	-$34,686
West Virginia	$28,350	$28,650	$300
Wisconsin	$48,319	$81,203	$32,884
Wyoming	$28,350	$28,650	$300
Total for States and Territories	$2,835,000	$2,865,000	$30,000
Indian Tribes	$60,000	$60,000	—
EPA Administration	$90,000	$60,000	-$30,000
Office of the Inspector General	$15,000	$15,000	—
Total LSL Appropriation	$3,000,000	$3,000,000	—

Source: EPA, *Bipartisan Infrastructure Law: Environmental Protection Agency 2022 State Revolving Fund (SRF) Grants to States, Tribes and Territories by Program*, December 2021; EPA, *FY 2023 Allotments for the Drinking Water State Revolving Fund based on the Seventh Drinking Water Infrastructure Needs Survey and Assessment*, April 2023.

Notes: IIJA denotes the Infrastructure Investment and Jobs Act (P.L. 117-58); LSL denotes lead service lines; and DWSRF denotes Drinking Water State Revolving Fund.

a. The Safe Drinking Water Act directs EPA to provide grants to the Virgin Islands, the Commonwealth of the Northern Mariana Islands, American Samoa, and Guam, using not more than 0.33% of the DWSRF

appropriation available for state capitalization grants (SDWA §1452(k); 42 U.S.C. §300j-12(j)). Congress has regularly increased this amount to 1.5% in appropriations acts.

Appendix B. LSLs, Actual FY2022 LSL Funding, and Hypothetical FY2022 LSL Allotments, by State

Table B-1. Actual and Hypothetical FY2022 LSL Capitalization Grant Allotments

	2023 LSL Estimates	% LSLs	Actual Allotment	Hypothetical Allotment Based on FY23 Allotment Formula	Difference Between Hypothetical & Actual
Alabama	91,544	1.00%	$61,114,000	$28,350,000	-$32,764,000
Alaska	1,454	0.02%	$28,350,000	$28,350,000	$0
Arizona	11,429	0.12%	$50,986,000	$28,350,000	-$22,636,000
Arkansas	171,771	1.87%	$42,653,000	$44,824,665	$2,171,665
California	13,476	0.15%	$250,107,000	$28,350,000	-$221,757,000
Colorado	111,907	1.22%	$56,015,000	$32,258,639	-$23,756,361
Connecticut	146,574	1.60%	$28,350,000	$39,535,634	$11,185,634
Delaware	42,479	0.46%	$28,350,000	$28,350,000	$0
District of Columbia	27,058	0.29%	$28,350,000	$28,350,000	$0
Florida	1,159,300	12.62%	$111,601,000	$252,120,063	$140,519,063
Georgia	45,985	0.50%	$66,808,000	$28,350,000	-$38,458,000
Hawaii	9,589	0.10%	$28,350,000	$28,350,000	$0
Idaho	49,434	0.54%	$28,350,000	$28,350,000	$0
Illinois	1,043,294	11.35%	$106,964,000	$227,766,770	$120,802,770
Indiana	265,400	2.89%	$43,334,000	$64,478,686	$21,144,686
Iowa	96,436	1.05%	$44,913,000	$29,011,995	-$15,901,005
Kansas	54,107	0.59%	$32,891,000	$28,350,000	-$4,541,000
Kentucky	40,207	0.44%	$46,717,000	$28,350,000	-$18,367,000
Louisiana	266,984	2.91%	$42,433,000	$64,811,168	$22,378,168
Maine	18,057	0.20%	$28,350,000	$28,350,000	$0
Maryland	71,166	0.77%	$51,934,000	$28,350,000	-$23,584,000
Massachusetts	117,090	1.27%	$65,783,000	$33,347,120	-$32,435,880
Michigan	301,790	3.28%	$69,593,000	$72,117,848	$2,524,848
Minnesota	136,873	1.49%	$43,276,000	$37,499,183	-$5,776,817
Mississippi	11,098	0.12%	$30,518,000	$28,350,000	-$2,168,000
Missouri	202,112	2.20%	$49,980,000	$51,194,262	$1,214,262
Montana	14,125	0.15%	$28,350,000	$28,350,000	$0
Nebraska	53,230	0.52%	$28,350,000	$28,350,000	$0
Nevada	9,048	0.10%	$32,864,000	$28,350,000	-$4,514,000
New Hampshire	14,819	0.16%	$28,350,000	$28,350,000	$0

	2023 LSL Estimates	% LSLs	Actual Allotment	Hypothetical Allotment Based on FY23 Allotment Formula	Difference Between Hypothetical & Actual
New Jersey	349,357	3.80%	$48,385,000	$82,102,194	$33,717,194
New Mexico	15,453	0.17%	$28,350,000	$28,350,000	$0
New York	494,007	5.38%	$115,781,000	$112,465,885	-$3,315,115
North Carolina	369,715	4.02%	$87,062,000	$86,375,969	-$686,031
North Dakota	26,443	0.29%	$28,350,000	$28,350,000	$0
Ohio	745,061	8.11%	$71,300,000	$165,165,220	$93,865,220
Oklahoma	28,679	0.31%	$40,192,000	$28,350,000	-$11,842,000
Oregon	3,530	0.04%	$37,300,000	$28,350,000	-$8,950,000
Pennsylvania	688,697	7.50%	$87,296,000	$153,333,424	$66,037,424
Puerto Rico	51,490	0.56%	$28,350,000	$28,350,000	$0
Rhode Island	75,749	0.82%	$28,350,000	$28,350,000	$0
South Carolina	108,177	1.18%	$36,716,000	$31,475,921	-$5,240,079
South Dakota	4,141	0.05%	$28,350,000	$28,350,000	$0
Tennessee	381,342	4.15%	$49,243,000	$88,816,147	$39,573,147
Texas	647,640	7.05%	$222,155,000	$144,714,628	-$77,440,372
Utah	14,293	0.16%	$28,350,000	$28,350,000	$0
Vermont	5,263	0.06%	$28,350,000	$28,350,000	$0
Virginia	187,883	2.04%	$46,256,000	$48,206,874	$1,950,874
Washington	22,030	0.24%	$63,336,000	$28,350,000	-$34,986,000
West Virginia	20,259	0.22%	$28,350,000	$28,350,000	$0
Wisconsin	341,023	3.71%	$48,319,000	$80,352,707	$32,033,707
Wyoming	10,477	0.11%	$28,350,000	$28,350,000	$0
Total for States	9,188,545	100.00%	$2,792,475,000	$2,792,475,000	—

Source: Calculated by CRS from EPA, *Bipartisan Infrastructure Law: Environmental Protection Agency 2022 State Revolving Fund (SRF) Grants to States, Tribes and Territories by Program*, December 2021; EPA, *FY 2023 Allotments for the Drinking Water State Revolving Fund based on the Seventh Drinking Water Infrastructure Needs Survey and Assessment*, April 2023.

Notes: LSL denotes lead service lines. The "Difference Between Hypothetical and Actual" column denotes the difference between hypothetical FY2022 state allotments of the Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) Drinking Water State Revolving Fund (DWSRF) lead service line (LSL) replacement appropriation calculated using the LSL-specific allotment formula presented in the fourth column as compared to actual state FY2022 allotments of IIJA DWSRF appropriation for LSL replacement, as presented in the third column.

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