Inadequate Execution of the 7th DWINSA Lead Service Line Questionnaire Led to Flawed Data Being Used to Allot Lead Service Line Replacement Funds

October 21, 2024 | Report No. 25-E-0002

Report Contributors

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Abbreviations

C.F.R.	Code of Federal Regulations
DWINSA	Drinking Water Infrastructure Needs Survey and Assessment
DWSRF	Drinking Water State Revolving Fund
EPA	U.S. Environmental Protection Agency
FY	Fiscal Year
IIJA	Infrastructure Investment and Jobs Act
LSL	Lead Service Line
OIG	Office of Inspector General
SDWA	Safe Drinking Water Act

Cover Image

Utility employees working on a lead service line. (EPA image)

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At a Glance

Inadequate Execution of the 7th DWINSA Lead Service Line Questionnaire Led to Flawed Data Being Used to Allot Lead Service Line Replacement Funds

Why We Did This Evaluation

To accomplish this objective:

The U.S. Environmental Protection Agency Office of Inspector General conducted this evaluation to determine whether the design and execution of the 7th Drinking Water Infrastructure Needs Survey and Assessment were appropriate to create accurate allotments of infrastructure funds based on the lead-service-line-replacement needs in each state.

As required by the Safe Drinking Water Act, the EPA administered the 7th Drinking Water Infrastructure Needs Survey and Assessment in 2021. This survey included a supplemental questionnaire that sought to estimate how many U.S. drinking water distribution pipes are made of lead. These pipes are referred to as *lead service lines*. Also in 2021, Congress passed the Infrastructure Investment and Jobs Act, which included $15 billion to be distributed from fiscal year 2022 through fiscal year 2026 to finance replacements of lead service lines and associated activities. The EPA is responsible for allotting these lead-service-line-replacement funds to the states.

To support this EPA mission-related effort:

- *Ensuring clean and safe water.*

To address this top EPA management challenge:

- *Overseeing, protecting, and investing in water and wastewater systems.*

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List of OIG reports.

What We Found

The design and execution of the 7th Drinking Water Infrastructure Needs Survey and Assessment did not result in allotments of lead service line, or LSL, funds that accurately reflected the LSL replacement needs in each state. The EPA used the responses to the survey's supplemental LSL questionnaire to project how many LSLs each state had, a number that it then used to determine how to allot the approximately $2.8 billion of LSL replacement funds provided by the Infrastructure Investment and Jobs Act, or IIJA, for fiscal year 2023. The LSL questionnaire, however, was originally designed to only estimate LSL replacement costs, not to allot billions of dollars of IIJA LSL funds. As such, it lacked the rigorous internal controls needed to ensure data quality and reliability, and the EPA did not implement the needed internal controls after the purpose of the LSL questionnaire expanded. For example, the Agency relied on the "best professional judgement" of the states to collect and submit their LSL data and did not require states to document support for their responses or explain their data collection methodologies. In addition, the EPA had a minimal data verification process for the LSL questionnaire responses.

The EPA's lack of internal controls over the LSL questionnaire responses resulted in significantly flawed data, which affected the Agency's LSL projections and ultimately the way the Agency allotted the fiscal year 2023 IIJA LSL funds. For the two states whose data we reviewed, the EPA's LSL projections were not accurate and resulted in $343.73 million of questionable allotments to those two states for fiscal year 2023. A data entry error in Texas's LSL questionnaire response caused the EPA to project that the state had about 95 percent more LSLs than if the data had been accurate. Additionally, although Florida developed a methodology to estimate the number of LSLs for its water systems, this methodology was not consistently applied. Further, the methodology itself inflated the number of LSLs for at least eight of Florida's water systems.

For the fiscal year 2024 IIJA LSL allotments, the EPA corrected Texas's data errors, but it based Florida's allotment on data that did not align with our findings, leading to an additional $200.03 million in questioned costs. Furthermore, if the EPA does not address these LSL data issues before it allots Florida's fiscal years 2025 and 2026 IIJA LSL funds, that would result in $400.06 million of funds that could be put to better use in states whose LSL replacement needs merit greater allotment percentages. All told, for the IIJA LSL replacement appropriation, we identified $943.82 million in questioned costs and funds that could be put to better use.

Flawed data and questioned allotments for Texas and Florida alone carry financial implications for the entire country, as an inflated projection for just one state means that fewer IIJA funds are available to other states.

Recommendations and Planned Agency Corrective Actions

We make three recommendations to the assistant administrator for Water: (1) develop a process to identify unreliable LSL data obtained from the Drinking Water Infrastructure Needs Survey and Assessment; (2) determine whether updates to the LSL data are needed to inform IIJA LSL allotments; and (3) if necessary, adjust the IIJA LSL allotments so that they are commensurate with the LSL replacement needs of each state. The Agency disagreed with all three recommendations, which are unresolved.

OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

October 21, 2024

MEMORANDUM

SUBJECT: Inadequate Execution of the 7th DWINSA Lead Service Line Questionnaire Led to Flawed Data Being Used to Allot Lead Service Line Replacement Funds
Report No. 25-E-0002

FROM: Sean W. O'Donnell, Inspector General

TO: Bruno Pigott, Principal Deputy Assistant Administrator
Office of Water

This is our report on the subject evaluation conducted by the U.S. Environmental Protection Agency Office of Inspector General. The project number for this evaluation was OSRE-FY24-0022. This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

In its response to our draft report, the Office of Water asserted that we did not take its input into consideration and that we did not present sufficient evidence to support our findings. It also characterized our findings and conclusions as "unreasonable." The Office of Water had no basis for these assertions or characterizations. Further, instead of addressing the merits of the issues we raised in our draft report and engaging with us in good faith to improve data reliability, the Office of Water responded with comments that may inappropriately undermine confidence in the quality of our work.

We remain steadfast in the quality of our evidence gathering and reporting. Regarding the Office of Water's input, we considered it at every stage of our work and incorporated it as necessary into this report. The exercise of our independent decision-making regarding the relevance and significance of the information the Office of Water provided should not be misconstrued as a lack of consideration. Regarding the sufficiency of the evidence that we used to support our findings, see the "Scope and Methodology" and "Agency Response and OIG Assessment" sections of this report.

Action Required

Recommendations 1, 2, and 3 are unresolved. EPA Manual 2750 requires that recommendations be resolved promptly. Therefore, we request that the EPA provide us within 60 days its responses concerning specific actions in process or alternative corrective actions proposed on the recommendations. Your response will be posted on the OIG's website, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility

requirements of section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal along with corresponding justification.

We will post this report to our website at www.epaoig.gov.

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Appendixes

Purpose

The U.S. Environmental Protection Agency Office of Inspector General initiated this evaluation to determine whether the design and execution of the 7th Drinking Water Infrastructure Needs Survey and Assessment, or DWINSA, were appropriate to create accurate allocations of infrastructure funds based on the lead-service-line-replacement needs in each state.

Top management challenge addressed

This evaluation addresses the following top management challenge for the Agency, as identified in OIG Report No. 24-N-0008, *The EPA's Fiscal Year 2024 Top Management Challenges*, issued November 15, 2023:

- Overseeing, protecting, and investing in water and wastewater systems.

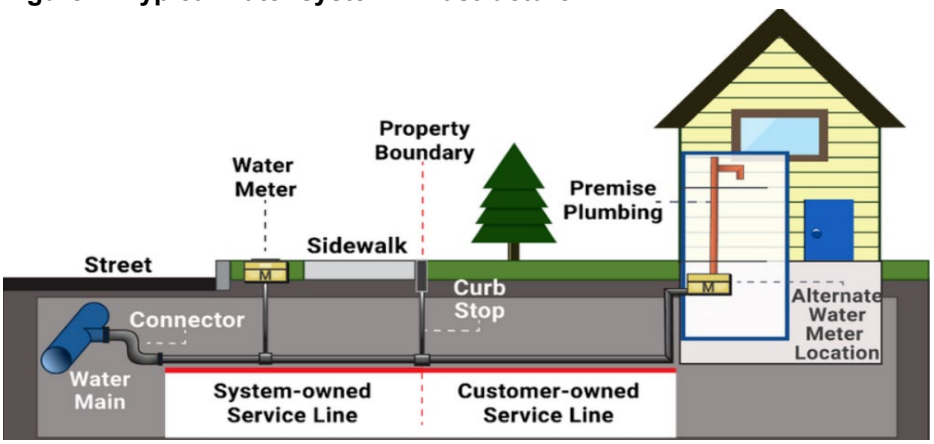
Background

The Safe Drinking Water Act, or SDWA, was enacted in 1974 and is the primary federal law that ensures the quality of America's drinking water. SDWA authorizes the EPA to set national standards for the highest allowable level of contaminants in drinking water. These standards are designed to protect the public against health effects from exposure to naturally occurring and man-made contaminants in drinking water. The EPA works with state and local governments and public water systems to implement these standards. According to the EPA, there are more than 150,000 public water systems across the United States, which provide drinking water to 90 percent of Americans.

Lead and Drinking Water Infrastructure

Water systems distribute treated drinking water through a network of water mains, pipes, storage facilities, and pumps. Under the ground, a water main connects the primary water source to the water pipes that serve each residence or building. These water pipes are referred to as service lines. As illustrated in Figure 1, the water system typically owns the portion of the service line from the water main to the border of a property, while the water system customer owns the portion from the border to the building.

Figure 1: Typical water system infrastructure



Note: In any given system, lead can be found anywhere from the water main to the premise plumbing.

Source: EPA, *Fact Sheet for Developing and Maintaining a Service Line Inventory*. (EPA image)

Historically, lead was a common component used in service lines. Lead was considered advantageous because it lasted longer and was more malleable than other materials used at the time, making it easier to connect service lines to a water main. However, according to the EPA, lead is highly toxic and can damage neurological, cardiovascular, immunological, and other major body systems. Studies suggest that the presence of lead service lines, or LSLs, has a large effect on lead concentrations in tap water. Table 1 shows that lead in drinking water can have significant health impacts for everyone, but especially children and those who are pregnant. According to the EPA and the U.S. Centers for Disease Control and Prevention, there is no known safe level of lead in a child's blood.

Table 1: Health impacts of lead

Life stage	Effects
Children	• Behavior and learning problems. • Lower IQ and hyperactivity. • Slowed growth. • Hearing problems. • Anemia.
Pregnant Women	• Reduced growth of the fetus. • Premature birth.
Adults	• Cardiovascular effects. • Increased blood pressure and incidence of hypertension. • Decreased kidney function. • Reproductive problems in both men and women.

Source: OIG summary of information in the EPA Office of Ground Water and Drinking Water's *Basic Information about Lead in Drinking Water*. (EPA OIG table)

As the health impacts of lead became documented, many states and cities began to prohibit or limit the use of LSLs to distribute drinking water. In 1986, Congress amended SDWA to prohibit the use of lead in drinking water service lines, and the EPA began regulating lead in drinking water in 1991 with the Lead and Copper Rule.[1] In January 2021, the EPA revised the Lead and Copper Rule to require that each water system develop and submit an initial service line material inventory to its state by October 16, 2024.[2] The rule also requires water systems to update their inventories as they continue their work to identify LSLs. These inventories must be publicly accessible and categorize the material of each service line as either lead, galvanized iron,[3] nonlead, or unknown.

The health effects from lead and the regulatory requirements to identify LSLs make it increasingly important for water systems to know the materials used in their service lines. As we describe below, however, water systems may not have a comprehensive picture of how many LSLs are in their network,

[1] "Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper," 56 Fed. Reg. 26460 (June 7, 1991).
[2] 40 C.F.R. § 141.84(a); "National Primary Drinking Water Regulations: Lead and Copper Rule Revisions," 86 Fed. Reg. 4198 (January 15, 2021).
[3] A galvanized iron or steel service line has been coated in zinc to prevent corrosion and rust. The EPA requires replacement of any galvanized line that is or was at any time downstream of an LSL or is currently downstream of a line of unknown material.

as it can be difficult for water systems to definitively identify the material of a service line, considering they are buried underground.

Drinking Water State Revolving Fund

The Drinking Water State Revolving Fund, or DWSRF, was established by the 1996 SDWA amendments to provide financial assistance to states and water systems to achieve the health protection objectives of SDWA. To be eligible to receive this financial assistance, SDWA requires states to establish a DWSRF and comply with SDWA requirements. Every year, Congress appropriates funding for the DWSRF, and the EPA then allots these funds to each state for its drinking water infrastructure needs based upon the results of the most recent DWINSA.

SDWA requires that the EPA administer the DWINSA every four years to determine the country's drinking water infrastructure needs. Through the DWINSA, the EPA, states, and water systems collect data to identify which DWSRF-eligible infrastructure projects are necessary in each state over the next 20 years to provide safe drinking water to the public.[4] The EPA relies on state participation to effectively and successfully implement the DWINSA. Responding to the survey is voluntary, and the states decide their level of participation. After the EPA sends the survey to the states, the states that decide to respond then choose whether to dispatch the survey to their water systems or to coordinate the responses themselves. The EPA's contractor provides training to the states on administering the DWINSA.

Once the EPA has determined the DWSRF allotments, the states identify eligible drinking water infrastructure projects in their intended use plans and apply to receive capitalization grants from their allotted funds. After the EPA awards the DWSRF grants, each state can request the funds as costs are incurred and the requested money is put into the dedicated DWSRF account operated by that state. The state then uses its DWSRF to provide low-interest loans or other types of financial assistance to water systems for the eligible projects. As water systems repay their loans, the repayments and interest flow back into the DWSRF, allowing the state to provide financing for other projects. Figure 2 depicts the DWSRF process.

Figure 2: The DWSRF process

Source: OIG analysis of the DWSRF process. (EPA OIG image)

[4] EPA Fact Sheet: 7th Drinking Water Infrastructure Needs Survey and Assessment (April 2023).

LSL Questionnaire for America's Water Infrastructure Act of 2018

In 2018, the enactment of the America's Water Infrastructure Act amended SDWA to require the EPA to assess the cost to replace all LSLs in the United States as part of the DWINSA. To meet this mandate, the EPA, in collaboration with the states, led a DWINSA workgroup to develop a supplemental LSL questionnaire to collect service-line-material information. The EPA administered the LSL questionnaire to the states for the first time in 2021 as part of the 7th DWINSA.[5] States were to work with their medium and large public water systems to respond to the LSL questionnaire, and, as part of their responsibility under the general DWINSA, the states were expected to review these responses before submitting the data to the EPA.[6] The EPA and its DWINSA contractor then were to review the state-submitted data, which the Agency used to project the number of LSLs in each state. The EPA published the results of the LSL questionnaire in April 2023.

The 7th DWINSA LSL questionnaire was formatted as a table that included eight rows, with each row describing a distinct type of service line. The EPA instructed survey participants to quantify how many of its service lines that were known to, or that were believed to, fit the description in each row. When completed, Rows 1, 2, 3a, 3b, and 3c represented service lines that had lead content. Rows 3d and 4a represented standalone galvanized lines and other lead-free service lines. Row 4b represented the service lines for which the material makeup was unknown. Appendix A contains the full descriptions for the rows. For each row, survey participants were also to differentiate the ownership of the service lines; in other words, they filled out three "ownership-type" columns noting how many of the service lines were either system-owned, customer-owned, or jointly owned by the water system and customer.

The 7th DWINSA was a statistical survey of 3,629 public water systems in all 50 states, Puerto Rico, the District of Columbia, and U.S. territories, as well as 295 American Indian and Alaska Native village systems.[7] Although responding to the LSL questionnaire was optional, the EPA said that it received LSL questionnaire responses from about 75 percent of those 3,629 public water systems. Based on the results of the LSL questionnaire, the EPA projected that there are 9.2 million LSLs in the United States and that the cost to replace these LSLs would range from approximately $50 billion to $80 billion.

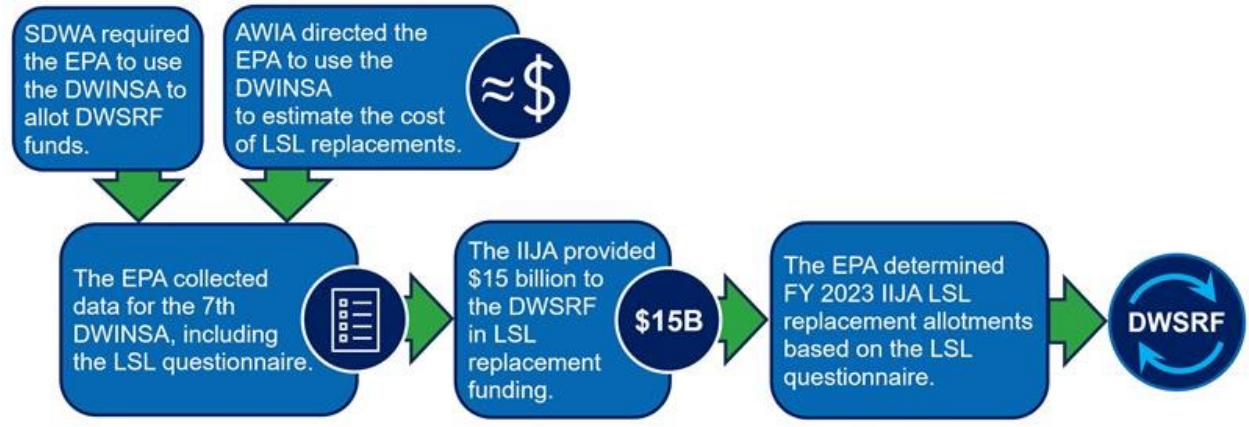
[5] For the purposes of this report, when we refer to the 7th DWINSA or general 7th DWINSA, we are referring to the general infrastructure needs survey and data, not the supplemental LSL questionnaire and data.
[6] States were responsible for collecting data from surveyed systems that serve over 3,300 people, which are categorized as medium and large water systems. The EPA's DWINSA contractor directly surveyed small water systems, which serve a population of fewer than 3,300 people.
[7] According to the EPA Office of Water, the DWINSA collects actual project and asset data from a stratified random statistical sample of water systems, which minimizes bias and uncertainty in the survey and results. The 7th DWINSA surveyed all large community water systems serving over 100,000 people; a random sample of medium community water systems in each state that serve 3,301 to 100,000 people; a national random sample of small community water systems that serve 3,300 people or fewer; and national sample of not-for-profit noncommunity water systems.

The Infrastructure Investment and Jobs Act

In 2021, Congress passed the Infrastructure Investment and Jobs Act, or IIJA, which delivered more than $60 billion to the EPA to improve health and safety, help create jobs, and increase climate resilience throughout the country. The IIJA is the federal government's single largest investment in water to date. The Act includes $15 billion, to be distributed from fiscal year, or FY, 2022 through 2026, for the DWSRFs to finance LSL replacements and related activities,[8] such as LSL identification and inventory. And because SDWA requires the EPA to use the DWINSA to distribute money to the state DWSRFs, the EPA must also use the DWINSA to allot these DWSRF LSL-specific IIJA funds, which we hereafter refer to as IIJA LSL funds. Figure 3 illustrates the relationships of the statutory and regulatory requirements governing LSL replacements and DWSRFs.

Because the results of the 7th DWINSA LSL questionnaire were not published until April 2023, the EPA did not have LSL data to inform its distribution of FY 2022 IIJA LSL funds. The Agency therefore allotted the FY 2022 IIJA LSL funds based on the general infrastructure needs of states identified in the 6th DWINSA. By the fall of 2022, when it was preparing to allot the FY 2023 IIJA LSL funds, the EPA had completed data collection for the 7th DWINSA. According to the EPA, it determined that the results of the 7th DWINSA LSL questionnaire represented the best available information on LSLs, and it used those results to allot the FY 2023 IIJA LSL funds, rather than relying on general DWINSA results as it did in FY 2022.

Figure 3: The EPA's statutory and regulatory authorities regarding IIJA LSL funds



Notes: AWIA = America's Water Infrastructure Act. B = Billion.

Source: OIG analysis of the relationship between the EPA's statutory and regulatory authorities. (EPA OIG image)

Using the LSL questionnaire results, the EPA developed a methodology to project the number of LSLs for each state. First, the EPA categorized the service lines reported in the LSL questionnaire by their material composition. For the purposes of the IIJA LSL allotments and as detailed in Appendix A, the EPA categorized service lines reported in Rows 1 through 3c as LSLs. Service lines reported in Row 3d were

[8] For IIJA LSL-funded projects, full LSL replacement from the water main to the building inlet is required. The EPA's DWSRF Program interprets the "building inlet" as the point at which the service line connects to premise plumbing. See Figure 1.

categorized as standalone galvanized service lines, while service lines in Row 4a were categorized as lead-free and galvanized-free service lines. Service lines reported in Row 4b were categorized as service lines of unknown material. Since some of the surveyed water systems did not respond to the LSL questionnaire, the EPA included a fifth category for unreported service lines. Further, since not all water systems in the state were surveyed, the EPA also weighted the data from the surveyed water systems and then estimated the total number of service lines in each of the five categories for a given state. The EPA recognized that water systems did not have complete information on service line materials in their distribution system and that the unknown and unreported service lines likely included some number of LSLs. The Agency therefore estimated the number of unknown and unreported service lines that were likely to be lead to determine the total number of projected LSLs in a state.

Next, the EPA developed an allotment formula that split the approximately $2.8 billion of FY 2023 IIJA LSL funds based on the number of projected LSLs in each state as a percentage of the 9.2 million total projected LSLs in the United States. According to the EPA, this LSL allotment formula allowed states to receive financial assistance commensurate with their needs. As mandated by SDWA, each state received at least a 1-percent-minimum allotment of the IIJA LSL funds, and the states reporting greater numbers of LSLs received a greater allotment.

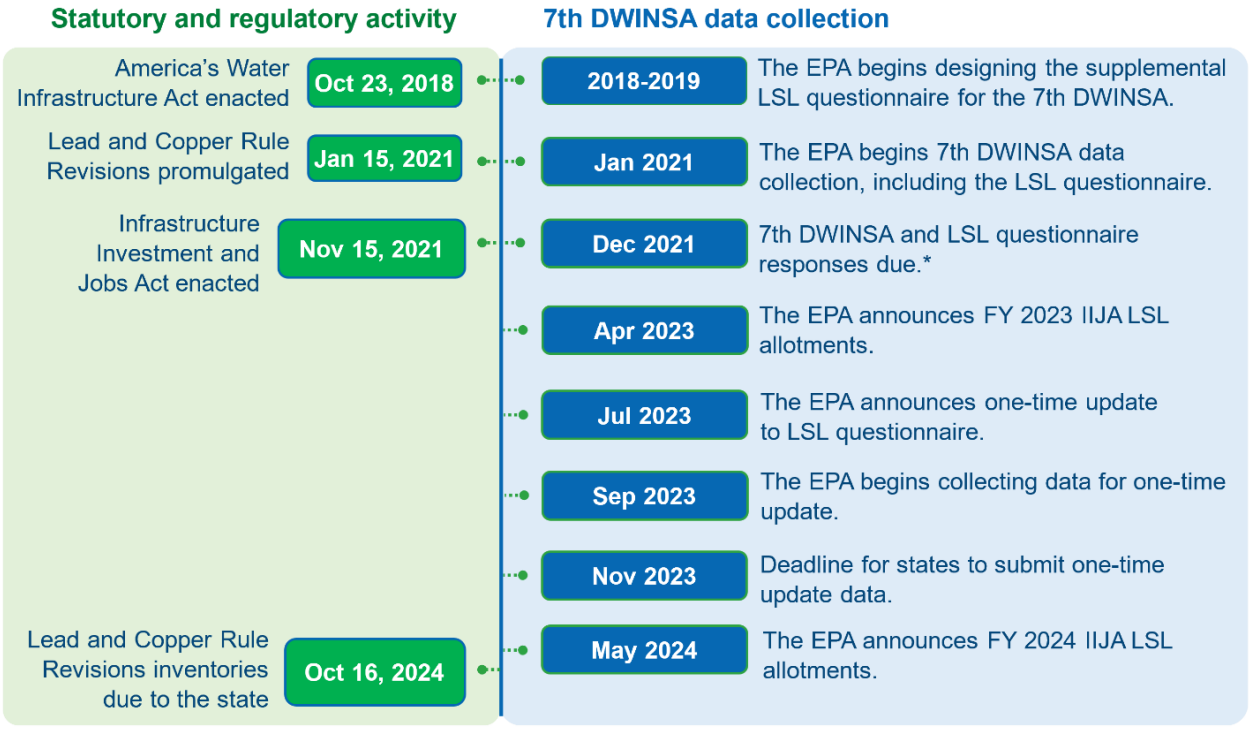
In response to the EPA's FY 2022 IIJA LSL allotments, congressional members from 14 states,[9] including the chairman of the House Committee on Energy and Commerce, urged the EPA to complete the 7th DWINSA expeditiously and reallot money to the states with the greatest needs. The IIJA LSL allotments changed significantly from FY 2022, when they were based on the general infrastructure needs from the 6th DWINSA, to FY 2023, when they were based on LSL estimates from the 7th DWINSA LSL questionnaire. For example, Florida, Illinois, and Ohio received the largest FY 2023 IIJA LSL allotments, which were more than double their allotments in the previous year.

According to the EPA, service line information is rapidly evolving. As noted above, the EPA's January 2021 Lead and Copper Rule Revision requires water systems to prepare initial service-line-material inventories by October 2024. However, the EPA said that when it designed the 7th DWINSA in 2018 and 2019, many of the 3,600-plus water systems surveyed did not have a service line material inventory. According to the EPA, by 2023 many more systems were starting to develop service line material inventories in anticipation of the requirement to submit an initial inventory to their state by October 2024. Consequently, the EPA provided the 7th DWINSA participants with a one-time opportunity in September 2023 to update their LSL questionnaire responses. The update allowed the survey participants to incorporate new service line inventory information in their LSL questionnaire responses or to complete the questionnaire if they had not previously done so. The EPA used the updated responses to inform the IIJA LSL allotments for FY 2024, which the EPA announced in May 2024. The allotments for 25 states were either increased or reduced when compared to their FY 2023 allotments. These changes ranged from an 80.4 percent decrease to a 128.4 percent increase. The allotments for seven states changed more than 20 percent. The states that saw no change in their

[9] These 14 states were Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Pennsylvania, New Hampshire, Nebraska, New Jersey, New York, Ohio, and Wisconsin.

allotments were those that continued to receive the 1-percent-minimum allotment. Figure 4 shows the overall timeline of the 7th DWINSA data collection process.

Figure 4: 7th DWINSA data collection timeline compared to relevant statutory and regulatory activity



Source: OIG analysis of the EPA's statutory and regulatory LSL timeline as compared to the 7th DWINSA data collection process. (EPA OIG image)

* After the states submitted the survey responses in December 2021, the Agency reviewed the data and followed up with the states and water systems, as needed. The EPA also gave survey respondents the opportunity to modify their submissions until it finalized the data in October 2022.

After the EPA determines the IIJA LSL allotments, the funds are available to the states during the fiscal year in which the funds were allotted and the following fiscal year. However, as discussed above, before the EPA will award each state its share of the IIJA LSL funds, the state needs to submit a capitalization grant application to the EPA. Additionally, each state must provide the EPA with an intended use plan, which contains a list of eligible projects for which the state expects to use the allotted funds. By a statutorily mandated process, any funds that are not awarded during the period of availability will be reallotted to eligible states with eligible projects. For example, the EPA announced the FY 2023 IIJA LSL allotments in the spring of 2023. States had until the end of FY 2024, or September 30, 2024, to apply for and receive their FY 2023 IIJA LSL funds. The EPA will then reallot any leftover funds to the other states with eligible projects.

Responsible Offices

The Office of Ground Water and Drinking Water, within the EPA Office of Water, aims to protect public health by ensuring access to safe drinking water. The office is responsible for the implementation of

SDWA and oversees funding for state drinking water programs. In FY 2023, the Office of Ground Water and Drinking Water dedicated the equivalent of two full-time employees to the DWINSA. The EPA also enlisted a contractor to administer the 7th DWINSA and analyze the results.

Scope and Methodology

We conducted this evaluation from November 2023 to August 2024 in accordance with the *Quality Standards for Inspection and Evaluation* published in December 2020 by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that we perform the evaluation to obtain sufficient and appropriate evidence to support our findings.

The scope of this evaluation focused on the Office of Water's design and execution of the 7th DWINSA and the resulting allotment of approximately $2.8 billion of IIJA LSL funds in FY 2023. We interviewed managers in the Office of Water and EPA Regions 4 and 6. We also interviewed the EPA's contractor that administered the 7th DWINSA; several states, including Florida, Illinois, and Michigan; and other external stakeholders, including environmental organizations and drinking water-related associations.

We reviewed and analyzed various documents, including relevant statutes and regulations, such as SDWA and the IIJA; the EPA's *Drinking Water Needs Survey and Assessment: 7th Report to Congress*; the information collection request for the 7th DWINSA; and the quality assurance project plan for the 7th DWINSA.

Finally, we evaluated the LSL data submitted to the EPA, as well as raw data from nine water systems in Florida and Texas, which, according to external stakeholders, received unexpectedly large FY 2023 IIJA LSL allotments. Our analysis included applying the EPA's allotment methodology to the data we obtained to determine the strength of the EPA's LSL projections and subsequent allotments. We did not, however, conduct an in-depth analysis of the data for other systems or other states, outside the two previously mentioned, to assess the accuracy of any of the EPA's other LSL projections. The EPA's formula for allotting the FY 2023 IIJA LSL funds was based on the projected number of LSLs in each state compared to the total number of projected LSLs in the country. Therefore, an inaccurate LSL projection for one state has financial implications for all states.

We assessed the internal controls necessary to satisfy our objective.[10] Internal controls help an entity achieve its objectives and help the organization operate efficiently and effectively. To be effective, an internal control system must be designed, implemented, and operated in an integrated manner. The five components of internal controls are control environment, risk assessment, control activities, information and communication, and monitoring. Together, these components provide reasonable assurance that the organization's objectives will be achieved. Any internal control deficiencies we found are discussed in this report. Because we limited our evaluation to the internal control components

[10] An entity designs, implements, and operates internal controls to achieve its objectives related to operations, reporting, and compliance. The U.S. Government Accountability Office sets internal control standards for federal entities in GAO-14-704G, *Standards for Internal Control in the Federal Government*, issued September 10, 2014.

significant to our objective, our report does not disclose all potential internal control deficiencies that may have existed at the time of our evaluation.

Prior Reports

In *Data Reliability Issues Impede the EPA's Ability to Ensure Its Allotment of Infrastructure Investment and Jobs Act Funding for Lead Service Line Replacements Reflects Needs,* EPA OIG Report No. 24-N-0039, issued May 15, 2024, we detailed our initial results for this report in a memorandum. While our overall evaluation was still ongoing, we shared concerns that the EPA did not have internal controls in place to verify the LSL questionnaire data and, therefore, its allotment of the FY 2023 IIJA LSL funds may have been determined using inaccurate data. We did not make recommendations in the memorandum but included three recommendations in this final report.

In *Perspectives on Capacity: Managing Drinking Water State Revolving Fund Infrastructure Investment and Jobs Act Funding*, EPA OIG Report No. 24-E-0022, issued February 27, 2024, we summarized the results of an OIG survey about state DWSRF agencies' perspectives on their capacity to manage IIJA funds. While we did not make any recommendations, we identified obstacles to their capacity, which may result in decreased investment in critical water infrastructure projects, and we concluded that the EPA has an opportunity to work with state DWSRF agencies to address these obstacles.

In *The EPA Could Improve Its Review of Drinking Water State Revolving Fund Programs to Help States Assist Disadvantaged Communities*, EPA OIG Report No. 23-P-0022, issued July 11, 2023, we detailed how needed infrastructure improvements may not occur when states either do not provide disadvantaged communities with loan subsidies or do not provide them in a timely manner. This negatively affects disadvantaged communities' ability to provide safe drinking water. We recommended updating how EPA regions review the states' DWSRF programs and assessing how states use federal funding to help disadvantaged communities qualify for DWSRF loans. The EPA agreed, and corrective actions for all recommendations were completed.

Results

The design and execution of the 7th DWINSA did not result in FY 2023 IIJA LSL replacement allotments to states that accurately reflect the LSL replacement needs in each state. According to the U.S. Government Accountability Office's *Standards for Internal Control in the Federal Government*, an organization should use quality information to achieve its objectives, which includes identifying information requirements, ensuring relevant data from reliable sources, and processing that data into quality information. The EPA did not implement rigorous internal controls to ensure the reliability of the collected data even when the purpose of the LSL questionnaire expanded from only estimating the cost to replace LSLs to also allotting billions of IIJA funds according to specific state needs. Despite this additional purpose, the EPA relied on the "best professional judgement" of the states and did not have sufficient controls in place during the data review and verification processes. Additionally, the Agency did not require documentation to support the data collected with the LSL questionnaire. We reviewed the LSL questionnaire responses for two states and found significant flaws in the data, which the EPA did

not identify and address and which inflated the LSL projections for those two states. From these data flaws, we identified $943.82 million in questioned costs and recommendations that funds be put to better use. This likely means that fewer LSL funds were available for the states whose LSL replacement needs merited greater allotment percentages.

The States Did Not Consistently Review, and the EPA Did Not Thoroughly Verify, LSL Data

The LSL data that the EPA used to allot the FY 2023 IIJA LSL funds did not undergo consistent reviews by states, and the EPA's data verification process was minimal. For the LSL questionnaire, the EPA emphasized the role of states in reviewing the information, instructing the states to use their "best professional judgement." The EPA continued to rely on this approach even after it decided to use the data to allot the IIJA LSL funds and not just to estimate the cost of LSL replacements.

The EPA Did Not Adjust Data Review Processes After Changing the Purpose of the LSL Questionnaire

In January 2021, when the EPA began administering the 7th DWINSA, the LSL questionnaire's objective was to estimate the cost of LSL replacements, per the America's Water Infrastructure Act. In November 2021, about ten months later, the IIJA was enacted and the EPA identified a new objective for the LSL questionnaire: to allot IIJA LSL funds. Although the DWINSA and LSL questionnaire responses were not due until December 2021 and although the EPA allowed LSL questionnaire responses to be submitted through October 2022, the EPA did not adjust either how the states collected and reviewed the LSL questionnaire responses or how the Agency verified the LSL data to support the new objective.

Office of Water staff told us that when the EPA began administering the 7th DWINSA in 2021, it expected the states to review the data and instructed the states to use their "best professional judgment" before submitting the data to the Agency. Because the states served as the direct contact for and initial reviewer of their water systems' survey responses, they played an important role in ensuring that the EPA used reliable data to achieve the Agency's objective of allotting the approximately $2.8 billion of FY 2023 IIJA LSL funds to states in a manner that reflected the LSL replacement needs of each state. The EPA allowed states to submit up to five systems' DWINSA responses, including their responses to the LSL questionnaire, to obtain the EPA's feedback before their final submissions were due in December 2021. According to the EPA, 30 states participated in the early feedback opportunity, and the EPA provided LSL questionnaire feedback to at least five states. In addition, the EPA told us that it provided more than 20 trainings to states, which included "an LSL component" and "ample and multiple opportunities for states to understand their QA/QC [quality assurance/quality control] role." However, the training slides simply stated that the EPA expected states to review their data before submission. A DWSRF coordinator for Texas could not recall any guidance on how to review the LSL questionnaire responses and said that the state submitted any responses it received to the EPA without making any changes.

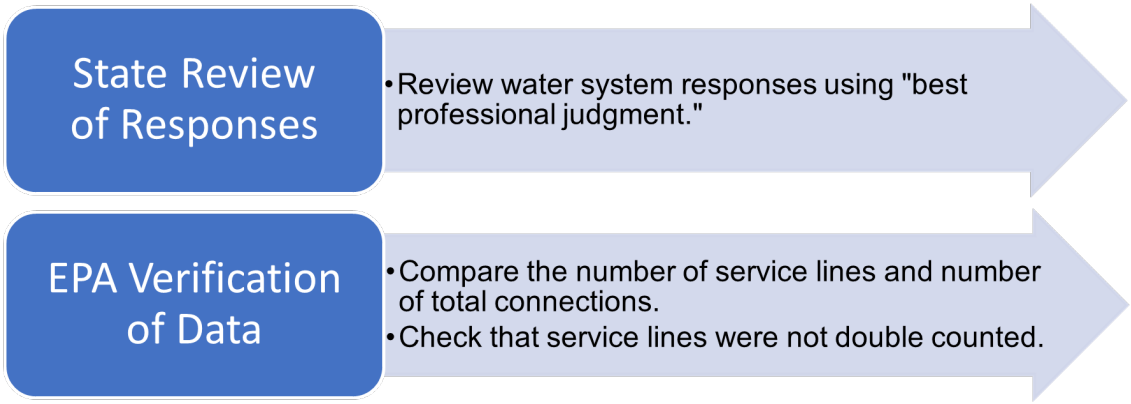
Further, while states were expected to review the LSL questionnaire data before submitting the responses to the EPA, some states were not aware of the expanded objective at the time of data

collection. The EPA had not yet decided to use the LSL questionnaire to inform the IIJA LSL allotments. According to an Office of Water supervisor, some states said they would have "done a better job" completing the LSL questionnaire had they known the EPA would use it to allot IIJA LSL funds, not just to estimate LSL replacement cost. One state told us that it was a "shock" to learn that the EPA was using the LSL questionnaire data to allot IIJA LSL funds. In a letter to the EPA, the governor of another state said that the EPA did not conduct sufficient outreach to notify states of the new LSL questionnaire objective. An organization representing state DWSRFs said that many states believe the EPA should have reconvened its DWINSA workgroup to discuss using the data for the IIJA LSL allotments because states may have modified their efforts and approach to data collection and review. Instead, the EPA continued to rely on the states' "best professional judgment" and, as discussed below, did not ensure valid and reliable data to allot the FY 2023 IIJA LSL funds. According to the EPA, 22 states adjusted their LSL questionnaire data during its one-time update effort.

The EPA's Data Verification Process Was Minimal

After the states submitted their initial LSL questionnaire responses to the EPA, the EPA completed a verification process on that data. According to the EPA's DWINSA contractor, the verification process mainly consisted of two data quality checks: one to determine whether the total number of service lines reported by each system aligned with the number of total connections in the EPA's Safe Drinking Water Information System,[11] and one to determine whether data were entered in more than one ownership-type column, which would indicate double counting of service lines. If the EPA or its DWINSA contractor identified any issues during these quality checks, the contractor or the EPA would discuss the issues with the state and request adjustments, as needed, until it finalized the survey data. Figure 5 shows the overall data review and verification process for the initial LSL questionnaire responses.

Figure 5: State review and EPA verification of LSL questionnaire responses



Source: OIG analysis of the review processes for initial LSL questionnaire responses and data. (EPA OIG image)

However, the EPA's data verification process was not sufficient to identify data anomalies or discrepancies in the state-submitted data. For example, a comparison of the number of service lines to

[11] The Safe Drinking Water Information System houses state-reported information regarding public water systems, including violations and enforcement actions.

the number of connections would raise flags if there were two to three times more lines than connections, since one connection can have several service lines emanating from it. This comparison did not flag that the Houston water system accounted for nearly 99 percent of Texas's reported LSLs, which means the EPA did not ask the water system about the anomaly when it was submitted. Additionally, the EPA's data verification criteria did not flag a pattern in Florida's LSL questionnaire data that inflated the number of reported LSLs for the state. This pattern was not consistent with the methodology that Florida used to respond to the LSL questionnaire for its water systems. We provide more details about the Texas and Florida data anomalies in a later section.

One Office of Water supervisor said that the EPA's review of LSL questionnaire data was based on a "gut" feeling about whether the data made sense, given what the EPA knew about a state's water systems. According to notes from an internal meeting between the EPA and its DWINSA contractor, in most cases the EPA had no way to "correct" the LSL questionnaire data because it did not know how to correct it. According to the EPA, there was not a consistent external source of information to use for comparison to the collected data. And, despite the EPA's expectation for systems to retain documentation or support for how the responses were collected or reviewed, the EPA did not collect such information. Thus, the EPA did not collect supporting documentation to provide any confidence in the state-submitted data and could not use it to pinpoint the reason for any potential anomalies or discrepancies.

Combined with the "best professional judgement" approach for state reviews, the EPA's insufficient data verification process resulted in anomalies in the data set used for the FY 2023 IIJA LSL allotments.[12] The anomalies inflated the number of projected LSLs for at least two states, and these inflated numbers had significant financial implications for some remaining states in terms of how the EPA allotted the FY 2023 IIJA LSL funds.

The EPA Did Not Require Documentation from States to Support LSL Data

The EPA did not require the states to submit documentation to support LSL questionnaire responses, even after the Agency determined that it would use those responses to allot IIJA LSL funds. The *Standards for Internal Control in the Federal Government* describes that an entity should design control activities, which are actions management establishes through policies and procedures, to achieve its objectives and respond to risks. For the general DWINSA, the EPA provides a list of acceptable documentation that survey respondents must submit to support their responses. Before allotting DWSRF grants based on the general infrastructure needs identified, the Agency reviews this documentation to ensure data adequacy. The EPA then allots the DWSRF grants based on a formula that calculates each state's 20-year infrastructure needs compared to the national need. The required documentation helps the EPA to achieve the objectives of the DWINSA by ensuring that accurate and

[12] According to the EPA, for the one-time update to the LSL questionnaire, the EPA did establish additional processes to assess the responses. For example, the EPA directly contacted some systems when their data conflicted with publicly available information. However, the additional processes implemented during the one-time update effort were not part of the original process and, therefore, were not used to inform the FY 2023 IIJA LSL allotments. Additionally, the EPA did not request documentation to support the one-time update data.

reliable data are used for the DWSRF allotment. According to the Supplemental Quality Assurance Project Plan for the 7th DWINSA, documentation for the general DWINSA must be sufficient to enable the EPA's contractor to "review and assess the quality of the [DWINSA responses] and to understand how professional staff reached their conclusions."

As described previously, the EPA developed a similar allotment formula for the FY 2023 IIJA LSL funds, but unlike the general DWINSA, the EPA did not establish documentation requirements for the LSL questionnaire. According to Office of Water subject matter experts, the EPA was aware that water systems were engaged in conversations about the proposed Lead and Copper Rule Revisions when the 7th DWINSA was being administered. The EPA did not want states to misinterpret a request for documentation to support the LSL questionnaire responses as a way for the EPA to obtain the Lead and Copper Rule Revisions-required LSL inventories earlier than the October 2024 deadline. Additionally, Office of Water managers believed that water systems at that time had little information on the material of their service lines, and the Agency did not want to place a high burden on states to develop such documentation ahead of the required inventories. According to Office of Water management, the EPA was attempting to achieve high response rates to the LSL questionnaire by "balancing the value of the requested information with the burden in providing it."

An organization that represents state DWSRFs said that many states expressed concerns about the lack of documentation requirements for the LSL questionnaire. The organization noted that the general DWINSA has strict documentation requirements, which provide credibility and confidence in the allotment of federal funds. As mentioned previously, the Supplemental Quality Assurance Project Plan for the 7th DWINSA states that documentation allows the EPA and its contractor to understand how professional staff reach their conclusions in the DWINSA. While we understand many water systems did not have service line material inventories at the time of data collection to validate material, systems were expected to have records to support their determinations for the LSL questionnaire. This may include records that show, for example, housing age or a state lead ban. The Agency did not request such records for FY 2023 IIJA LSL allotments.

The EPA Was Not Aware of How States Collected or Reviewed LSL Data

Because the EPA did not require states to submit documentation to support their LSL questionnaire responses, the EPA could not fully determine how states collected and reviewed those responses. As previously discussed, according to the EPA, most water systems did not have a complete service line inventory when the 7th DWINSA was being administered, as the Lead and Copper Rule Revisions did not require water systems to submit an LSL inventory until October 2024. As such, the EPA allowed states flexibility with respect to how they identified or estimated LSLs in their water systems.

For example, Florida used a methodology developed by the state's contractor to complete the LSL questionnaire for its water systems. According to that contractor, most water systems in Florida had not yet completed their service line inventory and did not know whether they had LSLs when the 7th DWINSA was being administered. Therefore, to estimate the number of LSLs for the state's water systems, the contractor developed a methodology that was modeled on one Florida water system that

had an LSL inventory. Using build dates for the structures in that one water system, state and federal lead ban implementation dates, and estimated water system renovations, the contractor estimated the percentage of LSLs remaining in that system. The contractor conducted a similar analysis using population growth data, rather than structure build date data, for all counties in Florida. The estimated percentage of remaining LSLs in the model water system was similar under both analyses. Therefore, based on its "best professional judgement," the contractor determined that it could use the population growth data to estimate the percentage of LSLs remaining in each county in Florida. It then used these estimated percentages to complete the LSL questionnaire.

Florida's methodology was allowed by the DWINSA to estimate the state's LSLs; however, according to an Office of Water supervisor, the EPA did not know about Florida's methodology because the state did not submit documentation about it. Additionally, the EPA's DWINSA contractor said that it did not know about Florida's methodology until it started working on the one-time update to the LSL questionnaire. A lack of documentation to support LSL questionnaire responses meant that, beyond its minimal data verification process noted in Figure 5, the EPA had no means to verify data or identify potential data flaws. For example, our analysis showed that Florida's methodology was not consistently applied to all the state's water systems, and for the water systems that did not use the intended methodology, neither the state of Florida nor its contractor could produce the original data or any documentation outlining the practices those water systems used. Without that documentation, neither we nor the EPA could determine why the methodology was inconsistently applied. The inconsistent application resulted in an inflated number of projected LSLs, which we discuss in more detail in the next section.

Significant Flaws Found in LSL Data from Two States

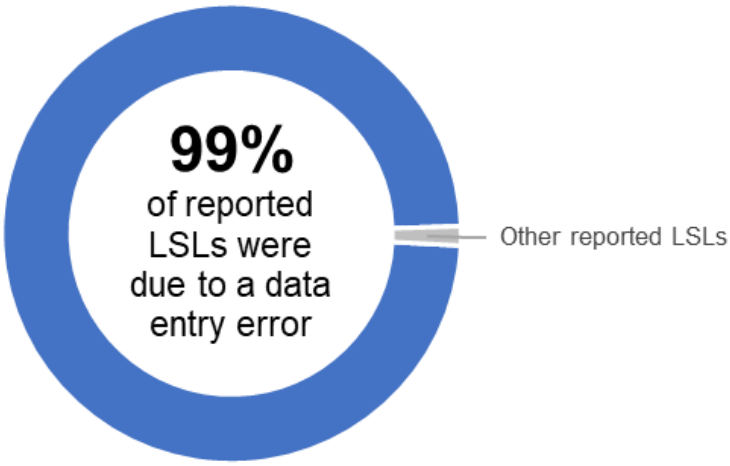
For the two states that we reviewed, the inconsistent data review process by states, the EPA's minimal data verification process, and the lack of a documentation requirement for the LSL questionnaire resulted in significant flaws in the data that both states submitted. These flaws inflated the projected number of LSLs in these two states and likely their LSL replacement needs, which subsequently inflated their allotments of the FY 2023 IIJA LSL funds and reduced the funds available to other states whose LSL replacement needs merited greater allotment percentages. The *Standards for Internal Control in the Federal Government* provides that, to achieve their objectives, agencies should use quality information—specifically data that are reliable and reasonably free from error and bias to produce quality information that is current, complete, and accurate. The EPA, however, relied on the LSL questionnaire responses to allot the FY 2023 IIJA LSL funds to the states, but the data included errors and inaccurate representations of the LSLs for several water systems.

Texas LSL Data Included a Data Entry Error

The EPA relied on flawed data to project the number of LSLs in Texas and allot the FY 2023 IIJA LSL funds, likely leading to a nearly $117.6 million error. The Texas water systems surveyed in the 7th DWINSA reported a combined total of 306,460 LSLs. The Houston water system reported 302,359, or 98.66 percent, of these LSLs. According to a director at Houston Public Works, the Houston water system meant to report all its service lines as being of unknown material, with zero known LSLs. This

means that close to 99 percent of Texas's reported LSLs were due to a data entry error, as shown in Figure 6.

Figure 6: Reported LSLs in Texas



Source: OIG analysis of Texas LSL data. (EPA OIG image)

The EPA's data verification process did not flag that the Houston water system accounted for nearly 99 percent of the state's reported LSLs, which means the EPA did not ask the water system about the anomaly before the IIJA LSL allotments were announced. And while the Houston water system informed the Texas Water Development Board of the data entry error in May 2023, the state decided not to participate in the one-time update to the LSL questionnaire despite its awareness of the data entry error. The EPA was not informed of the error until it contacted the system directly in December 2023 following the one-time update effort. By that time, the EPA had already allotted the FY 2023 IIJA LSL funds.

Based on Texas's inaccurate data, the EPA projected that there were 647,640 LSLs in Texas and allotted Texas approximately $146.25 million of the FY 2023 IIJA LSL funds. If the data entry error had been identified earlier, the number of projected LSLs for Texas would have decreased by about 95 percent. With the adjusted projection, the state most likely would have received the minimum 1 percent allotment of $28.65 million, not the 5.1 percent it received. We identified the difference of nearly $117.60 million between the amount allotted and the 1 percent minimum as questioned costs that could have been allotted to other states in FY 2023.[13]

Texas had until the end of FY 2024 to apply for the EPA to award its FY 2023 IIJA LSL allotment.[14] The EPA may determine not to award the full allotment of $146.25 million to the state. In this scenario, the funds that the EPA does not award to Texas would be reallotted to other states. However, the

[13] Per the Inspector General Act of 1978, as amended, a "questioned cost" is one found, among other things, to be not supported by adequate documentation or to be for an intended purpose that is unnecessary or unreasonable.
[14] The EPA corrected the data entry error as part of the one-time update to the LSL questionnaire on behalf of the water system, and in FY 2024 Texas received the minimum IIJA LSL allotment of $28.65 million. However, Texas's FY 2023 allotment did not change.

reallotment process delays the funds from getting to the states whose LSL replacement needs merited greater allotments and, in turn, delays projects in those states. Alternatively, the EPA could award Texas its full FY 2023 allotment if the state demonstrates that it has eligible projects. In this scenario, the EPA's allotment to Texas, which was based on inaccurate data, reduced the funds available for other states.

Florida LSL Data Do Not Reflect Water Systems' Understanding of Their LSL Numbers

The EPA relied on LSL questionnaire data produced by Florida's inconsistently applied methodology to project the number of LSLs in Florida, likely leading to an overallotment that does not reflect water systems' understanding of the numbers of LSLs in their jurisdictions. In response to the LSL questionnaire, Florida reported that there was a total of 569,641 LSLs among its 112 surveyed water systems. Based on this state-submitted information, the EPA projected that there were more than 1.159 million LSLs in the state, and it allotted Florida approximately $254.79 million of the FY 2023 IIJA LSL funds, the largest allotment that any state received.

As previously discussed, Florida did not use LSL questionnaire responses that came directly from the state's medium and large water systems. According to Florida, the water systems did not know how many LSLs they had, and many of their responses to the LSL questionnaire reported all their service lines as being of unknown material. After the EPA initially reviewed Florida's DWINSA submissions for two of its water systems, the Agency told Florida that it asked states to reduce the number of unknown service lines reported by making informed projections as to which service lines were likely not lead. For example, a state could deduce a line was not lead if it was constructed after the SDWA Amendments of 1986, which prohibited the use of lead in public water systems. To accomplish this, Florida developed a methodology to estimate the number of LSLs for each of its medium and large water systems. While the EPA gave the states flexibility in how they collected the LSL questionnaire responses and while the methodology Florida chose to use was based on the "best professional judgement" of its contractor, the methodology ultimately inflated the number of projected LSLs in the state. Additionally, the methodology was not uniformly applied, further inflating the projected number of Florida's LSLs.

We corresponded with eight water systems in Florida to understand the LSL data submitted on their behalf. The LSL data for these eight systems include a combined total of 227,626 LSLs, which accounts for nearly 40 percent of the total LSLs that Florida reported. However, these data are not consistent with the water systems' understanding of the number of LSLs in their jurisdictions. Four of these eight water systems provided us with their original LSL questionnaire responses, and all four reported zero known LSLs. None of their responses matched the LSL data that the state submitted to the EPA. Additionally, three of the eight water systems we talked to said that they did not know where the LSL questionnaire data that the EPA received for them originated. All eight water systems provided us with information that demonstrated how the state-submitted LSL data did not reflect their understanding of LSL numbers in their jurisdictions:

- Water System A—A manager shared the system's original LSL questionnaire responses, which reported that the system had zero known LSLs. When the system asked the Florida Department of Environmental Protection about the adjusted numbers in the state-submitted LSL data, it said

the department was "at a loss as to how the numbers were crunched." In response to the one-time update effort, the system again reported that it had zero known LSLs.

- Water System B—A manager said that the state-submitted LSL data for the system "made absolutely no sense." The system contacted the EPA to understand where the reported numbers originated, but the EPA could not provide an answer. As of April 2023, the system had not identified any LSLs during its inventory effort, which it reflected in its response to the one-time update.

- Water System C—A conservation/public relations officer said that the system does not know where the state-submitted LSL number originated. As of September 2023, the system had determined that 29,088 of its 92,428 service lines were not lead and had not yet identified any LSLs.

- Water System D—While a manager we spoke with for this water system did not have information regarding the LSL questionnaire, that manager said that, as of January 2024, the system had completed records searches for 61 percent of its service lines and had not identified any LSLs.

- Water System E—A manager said that they do not recall completing the LSL questionnaire for the system but highly doubted the accuracy of the number of the LSLs that the state reported for the system.

- Water Systems F, G, and H—A manager provided the original LSL questionnaire responses for the three water systems, which reflected zero known LSLs and a total of 188,207 service lines of unknown material. An environmental services division director said that the systems do not know when the reported LSL numbers were changed but that they do not have many, if any, LSLs.

The EPA's data verification process did not flag any concerns regarding the reported data for these eight water systems because the total number of reported service lines for each system was consistent with the total number of service connections reported in the Safe Drinking Water Information System. Also concerning is that Florida applied its methodology to estimate the number of LSLs to only one of the eight water systems we discuss above. In fact, Florida applied its methodology to only 27 of the 85 medium and large water systems surveyed in Florida. Meanwhile, data submitted for 37 of Florida's medium and large water systems used a different pattern to characterize their service lines.[15] Neither the Florida Department of Environmental Protection nor its contractor could explain these other patterns or methodologies and could not produce the original LSL questionnaire responses for several of these systems. The EPA's contractor told us that it noticed two patterns in the Florida data, but it never

[15] Of the 21 remaining water systems, 17 did not have LSL questionnaire responses recorded, and four had responses that appeared to be based on still other methodologies or patterns.

received an explanation for those patterns. It also told us that it did not know how the state came up with its LSL numbers.

If Florida's methodology was uniformly applied to all medium and large water systems, the LSL projections for the state would have decreased by about 33 percent. For the eight water systems we communicated with, the total reported LSLs would have decreased by 53 percent. Table 2 shows the state-submitted data for each of the eight water systems compared to our analysis of the estimated LSLs using Florida's methodology.

Table 2: Florida's reported number of LSLs for eight systems compared to the estimated number of LSLs based on Florida's methodology

Water system	Number of LSLs reported in the state-submitted data	OIG estimation of the number of LSLs based on Florida's methodology	Percent reduction between the two numbers
A	44,344	17,061	(61.5%)
B*	47,477	47,477	0.0%
C	40,038	8,044	(79.9%)
D	26,880	7,776	(71.1%)
E	25,498	5,746	(77.5%)
F	29,938	14,733	(50.8%)
G	12,584	5,735	(54.4%)
H	867	381	(56.1%)
Total	**227,626**	**106,953**	**(53.0%)**

Note: Red text in parentheses represents a reduction.

Source: EPA OIG analysis. (EPA OIG table)

* Water System B was the only one of the eight water systems listed that had the Florida methodology applied to its LSL questionnaire response.

Had Florida's methodology been uniformly applied to all its medium and large water systems, Florida's allotment of the FY 2023 IIJA LSL funds would have been less. According to our analysis, Florida's LSL projection should have been similar to Ohio's LSL projection, which received an FY 2023 IIJA LSL allotment of approximately $166.91 million. Florida's allotment of close to $254.79 million represents a nearly $88 million differential. Furthermore, the eight systems we corresponded with represent nearly 40 percent of the reported LSLs in the state-submitted data for Florida, but as of January 2024, none of the systems had identified any LSLs in their jurisdiction. Each of these eight systems expressed its belief that it does not have as many LSLs as was reported to the EPA. The methodology itself, at least for these eight water systems, does not produce an LSL count that reflects the water systems' understanding of how many LSLs are in their jurisdictions and appears to inflate the numbers of projected LSLs in Florida.

According to the EPA, it made several efforts during and after the one-time update period to collect new data from Florida water systems. A January 2024 letter from the EPA to the Florida Department of Environmental Protection stated that, despite multiple attempts by the EPA, the state's environmental department had not submitted any updates. The EPA also reached out directly to some of the largest lead-

reporting systems in the state to update some of the LSL questionnaire data; in a handful of cases, the systems reported data that were "significantly different" from what the EPA previously received.

The EPA has already awarded Florida its full FY 2023 IIJA LSL allotment of $254.79 million. Because of the data issues identified above, we consider any of the FY 2023 allotment beyond the 1 percent minimum of $28.65 million, which Florida would have received regardless, to be questioned costs. This equals an FY 2023 total of $226.14 million in questioned costs that could have been allotted to other states whose LSL replacement needs merited greater allotment percentages. And because these FY 2023 funds have been awarded, it will be difficult for the EPA to reallot this money. Furthermore, while the EPA decreased Florida's FY 2024 allotment to $228.68 million based on the one-time update to the LSL questionnaire, most of the data the Agency used to determine the FY 2024 allotment was the same data that it used in FY 2023. As demonstrated above, these data do not align with our analyses. Therefore, we also consider any of the FY 2024 allotment beyond the 1 percent minimum to be questioned costs, for an FY 2024 total of $200.03 million in questioned costs. For FYs 2023 and 2024, then, we identified a total of $426.17 million in questioned costs for Florida's IIJA LSL allotments.

Because the FYs 2025 and 2026 IIJA LSL allotments will be based on the FY 2024 allotments, we have made a recommendation that funds be put to better use with respect to Florida's $200.03 million in questioned costs for its FY 2024 allotment.[16] This amounts to $400.06 million in FYs 2025 and 2026 IIJA LSL funds that would be put to better use if the EPA were to adjust the FY 2024 IIJA LSL allotments to reflect the unreliable data identified both in this report and via other processes and analyses. Florida received the largest IIJA LSL allotment in FY 2023 and the second-largest IIJA LSL allotment in FY 2024; therefore, flaws in Florida's LSL data carry significant financial implications for other states.

Conclusions

Although the IIJA funds for LSL replacement are significant at $15 billion, the EPA estimated that it will cost between $50 billion and $80 billion to replace all LSLs nationwide. This means that the IIJA LSL funds will cover only about 18 to 30 percent of needed LSL replacement efforts, with every dollar being critical to mitigate the dangerous health effects of LSLs in a timely manner. However, the EPA based its allotments of the approximately $2.8 billion of FY 2023 IIJA LSL funds on data that do not accurately reflect the numbers of LSLs in at least two states. The flawed data inflated the number of projected LSLs for Texas and Florida, which resulted in approximately $343.73 million in questionable IIJA LSL allotments in FY 2023 and which reduced the funds available to states whose LSL replacement needs merited greater allotment percentages. For FY 2024, the EPA corrected the errors in Texas's data, allotting it the 1 percent minimum of $28.65 million, but the EPA's adjustment of Florida's FY 2024 allotment does not align with our findings and exceeds the 1 percent minimum by $200.03 million. For FYs 2023 and 2024, we thus identified a total of $543.76 million in questioned costs for the IIJA LSL allotments for Texas and Florida. Even if Florida and Texas do not receive their full allotments, that $543.76 million in IIJA LSL funds would not be available for reallotment until the end of FY 2024 or

[16] Per the Inspector General Act, a "recommendation that funds be put to better use" means the funds could be used more efficiently if management took actions to implement and complete the recommendation.

FY 2025, respectively, delaying LSL replacement efforts in other states. Moreover, if the EPA allots the same amount to Florida in FYs 2025 and 2026 based on the same flawed data it used for the state's FY 2024 allotment, that would represent a total of $400.06 million in funds that could have been put to better use. Any changes in allotments could have implications for the entire IIJA LSL replacement appropriation from FY 2023 through FY 2026, especially for those states receiving more than the 1 percent minimum.

Recommendations

We recommend that the assistant administrator for Water:

1. Develop a process to identify unreliable lead service line data obtained from both the 7th Drinking Water Infrastructure Needs Survey and Assessment and future lead service line data collection efforts.

2. Based on the process from Recommendation 1, identify actions necessary to address unreliable lead service line data and determine whether further data updates are needed to inform Infrastructure Investment and Jobs Act lead service line allotments for fiscal year 2023 through fiscal year 2026. This should include identifying opportunities to adjust Texas's fiscal year 2023 allotment and assessing whether Florida's fiscal year 2024 allotment is appropriate for fiscal years 2025 and 2026.

3. If updates are necessary and appropriate based on the determination from Recommendation 2, adjust the Infrastructure Investment and Jobs Act lead service line allotments for fiscal year 2023 through fiscal year 2026 so that the allotted funds are commensurate with the lead-service-line-replacement needs of each state.

Agency Response and OIG Assessment

In its response to our draft report, the Office of Water asserted that we did not take its input into consideration and that we did not present sufficient evidence to support our findings. It also characterized our findings and conclusions as "unreasonable." The Office of Water had no basis for these assertions or characterizations. Further, instead of addressing the merits of the issues we raised in our draft report and engaging with us in good faith to improve data reliability, the Office of Water responded with comments that may inappropriately undermine confidence in the quality of our work. For the reasons stated below, we remain steadfast in the quality of our evidence gathering and reporting.

First, regarding taking the Office of Water's input into consideration, we provided the office with regular status updates on our evaluation and had four discussions with the office about our findings and conclusions. We gave the Office of Water time to review and provide comments on both our draft of the predecessor memorandum report and our draft of this report, and we made changes as appropriate to

both reports based on the Office of Water's input. For example, in the memorandum report,[17] we changed the title based on the Office of Water's comments about the word "risks." Additionally, after receiving the office's technical comments on our draft report, we made several changes to add context to this report. The exercise of our independent decision-making regarding the relevance and significance of the information the Office of Water provided should not be misconstrued as a lack of consideration.

Second, regarding the sufficiency of the evidence we used to support our findings, we collected evidence from an array of sources, as discussed in the "Scope and Methodology" section above. For example, we obtained sufficient and appropriate evidence to support our first finding on data review processes through our reviews of relevant statutory and regulatory authorities and other criteria. These included the Government Accountability Office's *Standards for Internal Control in the Federal Government*, information from interviews with the EPA and its DWINSA contractor, EPA guidance documents, congressional and state government letters to the EPA regarding the IIJA LSL allotments, and information from four states. We obtained additional evidence to support this finding by communicating with an organization that represented state DWSRF programs. This organization received extensive feedback regarding the LSL questionnaire data and the IIJA LSL allotments from its communication with state DWSRF program staff.

We understand that the states and water systems likely do not have perfect data or inventories and that they were allowed to use whatever methodology they desired based on their best professional judgment. We also understand that the LSL questionnaire was voluntary and that the Office of Water was balancing the need for information with the burden of providing it. However, under Principle 13 of the Government Accountability Office's *Standards for Internal Control in the Federal Government*, it is ultimately the Agency's responsibility to allot the IIJA LSL replacement funds using information from reliable sources.

Our discussion of internal controls is focused on the LSL questionnaire portion of the 7th DWINSA. While we acknowledge that a new purpose was added after the receipt and review of the data, according to Principle 12.05 in the Government Accountability Office's *Standards for Internal Control in the Federal Government*, the relevancy or robustness of internal controls may change if an objective is modified or added. In this case, the necessary internal controls for the added objective—to allot $12 billion in federal funds—may be different than those for the original objective—to estimate the costs of LSL replacement, per the America's Water Infrastructure Act. Further, because the Office of Water heavily depends on the states for reliable data, additional internal controls may be needed to ensure data reliability when states do not cooperate with the EPA's attempts to understand the data.

The Office of Water asserts that the states are the most reliable source for information on LSLs. We understand that the states play a significant role in providing information on LSLs in the 7th DWINSA and its LSL questionnaire; however, it is ultimately the Agency's responsibility to ensure that it receives reliable information from the states. Throughout our evaluation, we asked the Office of Water and its

[17] EPA Off. of Inspector Gen., 24-N-0039, Data Reliability Issues Impede the EPA's Ability to Ensure Its Allotment of Infrastructure Investment and Jobs Act Funding for Lead Service Line Replacements Reflects Needs (2024).

DWINSA contractor for documentation to demonstrate the Agency's data review process as well as for guidance provided to the states on how to review the LSL data. We reviewed the information we received, but our conclusion remains that these data reviews were not adequate to identify anomalies in the 7th DWINSA data set, which the Agency used for the FY 2023 IIJA LSL replacement allotments.

Finally, the Office of Water asserts that another internal control is the process of reallotment and redistribution if states do not have projects that are eligible for IIJA LSL replacement funds. However, the two states referenced in our report intended to claim or have claimed their full FY 2023 IIJA LSL replacement allotments, and the eligible uses of the IIJA funds at issue ensure that these states will likely have sufficient projects in which to use those funds. In the instance of Texas, where a simple error led to a $117.6 million misallotment that the state intends to apply for the entirety of, it is unlikely that the funds will be redistributed.

For our second finding on documentation to support LSL questionnaire submittals, the Office of Water, again, asserts that neither LSL inventories nor documentation existed and that there was no time to collect such information. However, in addition to the evidence referenced above, we also reviewed the Office of Water's own Supplemental Quality Assurance Project Plan for the 7th DWINSA, which notes that documentation is important for the EPA and its contractor to "review and assess the quality of the [DWINSA responses] and to understand how professional staff reached their conclusions." In fact, the Office of Water's 7th DWINSA LSL questionnaire instructions informed water systems that they should retain records to support their LSL questionnaire determinations.

Despite these existing internal controls, the Office of Water never collected the records it expected the water systems to retain, and it did not systematically verify how the states, who were responsible for submitting the LSL questionnaire, developed their responses. Given the Office of Water's own instructions, it is reasonable to expect the office to understand how states collected and reviewed the data. The Office of Water indicated that it never saw the methodology used to estimate the number of LSLs in Florida's medium and large water systems and that it considers Florida an unreliable reporter. The Office of Water could have collected documentation from Florida—as we did—to better understand and have confidence in the state's methodology. The EPA's stringent documentation requirements for the general DWINSA were not applied to the LSL questionnaire portion. This means that the EPA allotted over $480 million to Florida in FY 2023 and FY 2024 without ever fully understanding how the data for the state was produced and relying almost solely on the state's submittal.

With respect to our last finding, the EPA argues that it provided criteria to the states on how to apply their "best professional judgement." According to the EPA, states have proven to be reliable sources of information in the DWINSA, and the EPA has relied on state reporting for over 20 years. However, with respect to the LSL questionnaire portion of the 7th DWINSA, we found through our communication with four different states and an organization representing state DWSRF programs that the states conducted varying levels of review. After receiving our draft report, the Office of Water described Texas and Florida as "unreliable reporters," but we found that the EPA lacked a process to identify this type of unreliable data used to allot IIJA LSL replacement funds commensurate with state need. Given this, as well as the

minimal data review processes and the lack of documentation that we describe in this report, the Office of Water did not systematically determine the reliability, or lack thereof, of the state-reported data until we outlined the flaws through our memorandum report and draft report.

The EPA concurred with our last finding on the significant data flaws that we found. To develop this finding, we communicated with the state governments, Florida's contractor, eight water systems in Florida, and one water system in Texas. Given the EPA's agreement, we hope that the EPA uses this finding to improve its FY 2025 and FY 2026 allotments.

Regarding our recommendations, the Office of Water did not concur with Recommendation 1. The office provided alternative language that would focus the recommendation on the FY 2023 and FY 2024 allotments and data from unreliable reporters, meaning Texas and Florida. According to the Office of Water, the suggested language considers the context of the statute, the EPA's internal control processes, the states' long-standing role in the DWINSA process, and the limited information available on LSLs at the time of the 7th DWINSA. The Office of Water's proposed corrective actions include identifying what actions are needed to inform the FY 2023 and FY 2024 allotments for states who did not reliably report information and implementing the necessary actions by February 1, 2025. While we agree that the Office of Water should review the FY 2023 and FY 2024 allotments retrospectively, we are still concerned about the remaining data. We recommend that the EPA ensure the reliability of the remaining data by developing a process to identify unreliable data, and we adjusted our recommendation text accordingly. Recommendation 1 remains unresolved.

The Office of Water did not concur with Recommendation 2. It provided alternative language that updates FY 2025 and FY 2026 allotments based on actions taken in Recommendation 1, citing similar justifications for the adjustments. The Office of Water's proposed corrective action includes determining whether there is an opportunity to update and better inform the FY 2025 and FY 2026 LSL allotments by May 15, 2025. While we agree that the Office of Water should update the FY 2025 and FY 2026 allotments based on actions taken pursuant to Recommendation 1, we remain concerned that, because the Office of Water's proposal for Recommendation 1 focuses on the two unreliable reporters identified under the 7th DWINSA, the office's corrective actions for Recommendation 2 will also be limited to the two unreliable reporters. Our adjusted Recommendation 2 text incorporates the actions that the Office of Water mentioned in its alternative Recommendation 1 language and retains our language for addressing the FY 2025 and FY 2026 allotments. Recommendation 2 remains unresolved.

The Office of Water did not concur with Recommendation 3. It provided alternative language that focuses on adjusting the FY 2025 and FY 2026 allotments based on actions taken in Recommendation 2. The Office of Water's proposed corrective action is to "determine whether there is an opportunity to adjust the data" and to update allotments so that they are commensurate with the LSL replacement needs of each state with any necessary adjustments reflected in the FY 2025 allotments by May 30, 2025. We agree with the Office of Water's suggested change to shorten "identify how to adjust the data" to simply "adjust." However, considering our prior comments on Recommendations 1 and 2 on the scope of the Office of Water's proposed corrective actions, we added language about adjusting

allotments, as appropriate, for FYs 2023 through 2026 to our recommendation. Recommendation 3 remains unresolved.

As previously noted, we stand behind our findings and conclusions based on the evidence we collected. We considered the EPA's technical comments and incorporated them as necessary into our report. We hope to establish an effective relationship with the Office of Water to resolve our recommendations, one that is based on mutual respect and recognition of our independent role in promoting economy and efficiency in this important program. Appendix B contains the Office of Water's response to our draft report.

Status of Recommendations and Potential Monetary Benefits

Rec. No.	Page No.	Recommendation	Status*	Action Official	Planned Completion Date	Potential Monetary Benefits (in $000s)
1	20	Develop a process to identify unreliable lead service line data obtained from both the 7th Drinking Water Infrastructure Needs Survey and Assessment and future lead service line data collection efforts.	U	Assistant Administrator for Water		—
2	20	Based on the process from Recommendation 1, identify actions necessary to address unreliable lead service line data and determine whether further data updates are needed to inform Infrastructure Investment and Jobs Act lead service line allotments for fiscal year 2023 through fiscal year 2026. This should include identifying opportunities to adjust Texas's fiscal year 2023 allotment and assessing whether Florida's fiscal year 2024 allotment is appropriate for fiscal years 2025 and 2026.	U	Assistant Administrator for Water		$943,820
3	20	If updates are necessary and appropriate based on the determination from Recommendation 2, adjust the Infrastructure Investment and Jobs Act lead service line allotments for fiscal year 2023 through fiscal year 2026 so that the allotted funds are commensurate with the lead-service-line-replacement needs of each state.	U	Assistant Administrator for Water		—

* C = Corrective action completed.
R = Recommendation resolved with corrective action pending.
U = Recommendation unresolved with resolution efforts in progress.

Appendix A

7th DWINSA Lead Service Line Questionnaire

The LSL questionnaire in the 7th DWINSA included eight rows, labeled Row 1 through 4b, with descriptions. The EPA instructed that survey participants report the number of service lines in each category that are known to, or that are believed to, fit the descriptions. The row descriptions were as follows:

- Row 1: Service lines that contain any lead pipe.
- Row 2: Service lines that do not contain any lead pipe but have lead connectors (such as lead goosenecks or pigtails).
- Row 3a: Service lines that contain galvanized pipe and were previously downstream from a lead pipe that was removed from the service line.
- Row 3b: Service lines that contain galvanized pipe and were previously downstream from a lead connector that was removed from the service line.
- Row 3c: Service lines that contain galvanized pipe and were previously downstream from an unknown source of lead that was removed from the service line.
- Row 3d: Service lines that contain galvanized pipe that have never been downstream from any lead pipe or lead connector in the service line.
- Row 4a: Service lines that do not contain any lead pipe or galvanized pipe and that do not have lead connectors.
- Row 4b: Service lines for which the material makeup of the service line and of the connector are not known.

Agency Response to Draft Report

OFFICE OF WATER
WASHINGTON, D.C. 20460

September 19, 2024

MEMORANDUM

SUBJECT: Response to the Office of Inspector General's Draft Report, Project No. OSRE-FY24-0022, *"Inadequate Execution of the 7th DWINSA Lead Service Line Questionnaire Led to Flawed Data Being Used to Allot Lead Service Line Replacement Funds,"* dated August 5, 2024

FROM: Bruno Pigott, Acting Assistant Administrator

TO: Sean O'Donnell
Inspector General

Thank you for the opportunity to review and respond to the Office of Inspector General's draft report titled, *"Inadequate Execution of the 7th DWINSA Lead Service Line Questionnaire Led to Flawed Data Being Used to Allot Lead Service Line Replacement Funds,"* (Project No. OSRE-FY24-0022) dated August 5, 2024.

The U.S. Environmental Protection Agency is disappointed that the OIG has failed to take the agency's input into consideration with respect to the findings and conclusions over the course of this audit. The EPA has consistently raised concerns throughout this audit about the adequacy of the OIG's evaluation and the sufficiency of the evidence the OIG has used to support its findings/results and conclusions. On January 29, 2024, the OIG sent preliminary findings and recommendations. On March 1, 2024, the EPA responded with eight pages of written comments. On March 12 and March 21, 2024, the EPA provided additional supporting documentation at the OIG's request for clarification of the EPA's March 1, 2024, comments. Nevertheless, on April 4, 2024, the OIG sent a Draft Management Alert Report, or MAR, that largely disregarded that documentation and made no significant changes to the findings. On April 12, 2024, the EPA provided a formal response and ten pages of technical comments on the Draft MAR. Without regard to the agency's comments, on May 15, 2024, the OIG issued a Final MAR with minimal changes.

Following the EPA's receipt of the August 5, 2024, Draft Report, "*Inadequate Execution of the 7th DWINSA Lead Service Line Questionnaire Led to Flawed Data Being Used to Allot Lead Service Line Replacement Funds*," the EPA has been evaluating the OIG's findings and conclusions, as well as the technical content and the agency remains concerned with the unreasonable findings and conclusions of the Draft Report. Nevertheless, the EPA would characterize our interactions with the OIG evaluation team since August 2024 to be cooperative, and the agency anticipates a beneficial outcome is possible, if changes are made to the Report. The EPA agrees that there is an opportunity for further corrective actions beyond those the EPA has already taken under its internal control process.

The EPA does not concur with multiple OIG findings presented as results, the conclusion, or the recommendations, as the Draft Report does not present evidence that adequately supports these findings and conclusions. The OIG used incomplete and invalid evidence to address the evaluation objectives and support the Draft Report's findings and conclusions. For example, the OIG's stated objective is to determine whether the design and execution of the 7th Drinking Water Infrastructure Needs Survey and Assessment were appropriate to create accurate allotments of infrastructure funds based on the lead service line replacement, or LSLR, needs in each state. The OIG's objective of "accurate allocations" for LSLR funds as understood by the definition of accurate to "be correct in all details; exact" is not achievable and is not consistent with the necessary context of this investigation of the statutory construct for Drinking Water State Revolving Fund allotments or of the state of information on LSLs nationally during the DWINSA. The *Safe Drinking Water Act* established a survey to develop estimates of needs as the basis for DWSRF state allotments, and further provides a reallotment process if a redistribution of allotted funds is needed. In another example, the OIG Draft Report incorrectly finds that if the EPA had asked for documentation from each system of LSLs reported, that the information quality would have been improved. The LSL questionnaire was a first-time ever effort under the DWINSA to address the newly mandated SDWA requirement to estimate the cost to replace the nation's service lines that the *America's Water Infrastructure Act* introduced in 2018 for future DWINSA surveys. Data collection under the DWINSA happened three years prior to the regulatory deadline for systems to submit service line inventories supported by the information used to identify the material. The report should recognize that the only available information on water system service line material at the time was the self-reported information that was collected under the 7th DWINSA. The report should further recognize that using information on need from the LSL questionnaire redirected hundreds of millions of dollars to areas of the country with higher need for LSL replacement than could have been possible using allotments determined by the traditional needs survey.

Overall, the OIG failed to evaluate the evidence with an adequate understanding of the context of the objective. The Draft Report fails to sufficiently contemplate, consider, or understand the context of the statute, the EPA's internal control process, the long-standing state role in accomplishing the DWINSA, and the limited detailed and documented information on LSLs at water systems during the 7th DWINSA. Furthermore, the EPA has significant concerns about the title of the report. The report does not present sufficient evidence to support the exaggerated

title. The agency has provided evidence in our technical comments demonstrating that this comprehensive conclusion is not only inappropriate, but also not supported. The EPA does, however, share the OIG's concerns about the unreliable reporting of information by Texas and Florida.

The EPA does not concur with Finding/Result #1 – The States Did Not Consistently Review, and the EPA Did Not Thoroughly Verify, LSL Data.

The OIG's Draft Report does not present evidence that adequately supports this finding. Overall, the OIG failed to evaluate evidence provided by the EPA as mentioned above with an adequate understanding of the context of the objective. As a result, the Draft Report does not sufficiently contemplate or consider (1) the context of the statute, (2) the EPA's internal control process, (3) the long-standing state role in the DWINSA, and (4) the limited detailed and documented information on LSLs available at water systems during the 7th DWINSA. Regarding issues (1) and (2), the Draft Report fails to recognize the EPA's established internal control process (see Attachment 2) that follows from the SDWA statutory requirements and Congressional intent. The DWINSA information was designed to provide an estimate, not an absolute right or wrong value, of state-by-state infrastructure needs gathered through a survey, not a census. The statute also provides a reallotment process that re-distributes unused DWSRF allotments to states where additional funding is needed. This statutory framework is especially relevant to the LSL questionnaire portion of the DWINSA, given the very limited information available on LSL during this survey. Regarding issues (3) and (4), under the DWINSA, the states have an essential role in reliably reporting information to the agency. The OIG's Draft Report also fails to recognize the central role of the states' knowledge and understanding of their systems in the DWINSA data collection and quality assurance process. The OIG's Draft Report minimizes or does not mention the important quality reviews the EPA conducted and how those reviews led to revisions in state-provided data per the established internal control process. Additionally, the Draft Report fails to adequately acknowledge the evolving and limited nature of available data on LSLs at the time of the 7th DWINSA as most water systems had not yet started to develop their initial inventories due per regulation in October 2024. The Draft Report fails to recognize that water systems and the states are the most reliable source for information on LSLs. The states' knowledge of their systems, combined with state assistance informed by the EPA's guidance on the LSL questionnaire and the EPA's internal control process provided reasonable assurance that the objective of obtaining quality LSL information would be achieved. In summary, the OIG's assertion that additional verification would have resulted in improved data and more accurate allotments is not supported. However, the OIG is correct that questions about the data were raised following the release of the 7th DWINSA in 2023. Consistent with internal control processes, the EPA determined the need to adapt and subsequently performed additional data collection and quality evaluations in the one-time update of the 7th DWINSA LSL questionnaire. The OIG should find that EPA appropriately used its internal control process. For the reasons stated above, the EPA disagrees with the OIG's findings/results and recommendations that the EPA should have performed additional data verification for the 7th DWINSA prior to developing allocations or for the future. The OIG

findings are based on incorrect assumptions and inappropriate and insufficient evaluation of the evidence and the context of the objective.

The EPA does not concur with Finding/Result #2 – The EPA Did Not Require Documentation from States to Support LSL Data.

The EPA disagrees with the OIG's finding/result that the EPA should have requested additional documentation to verify data for the 7th DWINSA LSL questionnaire. This OIG finding is based on incorrect assumptions and inappropriate and insufficient evaluation of the evidence. The EPA appreciates the OIG's identification of areas for improvement to guide future data collection efforts while reiterating that the 7th DWINSA's LSL estimates represented the best available information at the time. Indeed, the situation has not yet changed. Systems are required to submit initial service line inventories by regulation later this year. For these inventories, water systems are required to classify each service line (or portion) as lead, galvanized requiring replacement, non-lead, or lead status unknown and provide the information used to identify the material (e.g., the records). The EPA expects that many systems do not know the service line materials in their distribution system and will report many unknowns in their initial inventory and that it will take years to identify LSLs across the country. There was no consistently available documentation on water system service line material to support a national collection of lead service line information under the 7th DWINSA other than self-reported survey data. The OIG does not recognize that detailed, collated documentation largely did not exist in form or function at the system level nationally to compare to state responses. Furthermore, the OIG does not recognize that even where system records were available, most were not yet examined and collated and could not constitute a system inventory. This is not simply a question of attaching a document. As described in the 2021 Lead and Copper Rule Revisions Economic Analysis, the EPA estimates that systems serving > 50,000 people would spend 200 – 400 hours to develop their LCRR initial inventory. The EPA's guidance on how to develop and maintain a service line inventory was issued in August 2022. The OIG Draft Report incorrectly finds that if the EPA had asked for documentation from each system of LSLs reported, that the information quality would have been improved. The 7th DWINSA LSL questionnaire was a first-time ever effort to address the 2018 SDWA amendment. Systems were not required to have an initial or completed inventory at the time of data collection. Under the LCRR, initial inventories (not required to be complete inventories) had to be submitted by October 2024 — years after DWINSA data collection. It was within this evolving information landscape that the DWINSA requested states and water systems to use their best professional judgement to respond on the LSL questionnaire. The majority of water systems did not have accessible detailed records (e.g., locations of LSLs) and the majority of systems had not yet gone through a process of reviewing utility records, state and local laws, etc. (as described in the EPA's LSL Inventory Guidance) and collating that documentation, and this is a costly and time-consuming process. This is not something a system would have the time or money to do when responding to a survey. However, water systems do have best professional judgement knowledge of their system, the age of the neighborhoods they serve, their lead in drinking water monitoring history, and other relevant information that informs their understanding of the status of lead in their distribution system. This knowledge enabled

systems to provide estimates of LSLs in the 7th DWINSA. States have this same type of information and knowledge at the state-level. For example, the timing of state housing development booms relative to state and federal laws banning the use of lead. Water systems and the states are the most reliable source for this information. Although most water systems had not yet started to develop their initial inventories in 2021, their knowledge of their system, combined with state assistance bolstered by the EPA's guidance on the LSL questionnaire, provided reasonable assurance that the objective of collecting data on LSLs would be achieved. Under long-established procedures in the DWINSA, states review responses from medium and large water systems for reporting traditional needs and responses to supplemental questions. States have proven to be a reliable source of information in DWINSA reporting and the EPA has reasonably relied on their reporting to assess infrastructure needs for over twenty years.

Furthermore, the OIG's timeline is inaccurate. It does not support sufficient time for the EPA to ask for documentation and even more importantly, such information was not consistently available. The OIG's timeline must be corrected to reflect that the decision to use the 7th DWINSA LSL information occurred after all responses were collected, reviewed, and submitted to the EPA by the states. The timeline should also include the 2022 period during which the EPA reviewed the DWINSA data, including the "modifications" step of the survey, which encompasses the EPA's quality assurance review of state submitted information for medium and large systems. All told, if these vital facts are not explicitly stated in the report, the OIG report will result in inaccurate, unsupported conclusions. As drafted, this version of the report indicates the OIG did not understand or sufficiently research the state of knowledge on LSL distribution, as reported by experts; did not sufficiently understand or identify the period of the DWINSA analysis and decision-making; and did not understand or even consider important context during the one-time update the EPA performed. For the reasons stated above, the EPA disagrees with the OIG's findings/results that the EPA should have requested additional documentation from states to support LSL data. The OIG findings/results are based on incorrect assumptions and inappropriate and insufficient evaluation of the evidence.

The EPA does not concur with Finding/Result #3 – The EPA Was Not Aware of How States Collected or Reviewed LSL Data.

The EPA disagrees with the OIG's finding/result that the EPA should have requested detailed information from states on their collection and review of LSL data. All data submitted as part of the DWINSA through a state for its medium and large systems are subject to the state's review. The EPA provided states with criteria for applying "best professional judgement" as they advised water systems about how best to respond to the LSL questionnaire and reviewed the information submitted by water systems. These criteria included: estimating based on housing age, direct material testing, as well as records review from previous inventory effort. The EPA entrusted the states to use relevant and appropriate information as sources recognizing that states best understand their specific state and local regulations regarding LSLs that may have factored into appropriate estimation techniques. In its evaluation of the data submitted by the states, the EPA used these criteria as part of its evaluation of information quality. Under long established procedures of the DWINSA, states review responses from medium and large water

systems for reporting traditional needs and responses to supplemental questions. States have proven to be a reliable source of information in DWINSA reporting and the EPA has reasonably relied on their reporting to assess infrastructure needs for over twenty years. For the reasons stated, the EPA disagrees with the OIG's findings and recommendations that the EPA should have requested detailed information from states on their collection and review of LSL data.

The EPA concurs with Finding/Result #4 – Significant Flaws Found in LSL Data from Two States.

The EPA shares the OIG's concerns about the unreliable reporting of information provided by Texas and Florida. The agency is evaluating further corrective actions.

However, the EPA notes that the LSL-specific allotment redirected hundreds of millions of dollars towards areas with higher estimated LSLR needs. The 7th DWINSA traditional infrastructure needs information fit-for-purpose for the DWSRF appropriation intended by Congress to allocate general infrastructure funding. However, the *Infrastructure Investment and Jobs Act* introduced for the first time the special-purpose appropriation for LSLR, for which the EPA had fit-for-purpose DWINSA data. In other words, traditional infrastructure need assessed by the DWINSA has little to do with lead service lines. The data collected under the DWINSA LSL questionnaire addresses the outstanding need more directly.

AGENCY RESPONSE TO RECOMMENDATIONS

OIG Recommendation 1
Develop a data verification process to review all lead service line data obtained from both the 7th Drinking Water Infrastructure Needs Survey and Assessment and future lead service line data collection efforts.

EPA Response to OIG Recommendation 1 – Disagree
The Office of Water does not concur with Recommendation 1, as written. Instead, the Office of Water respectfully offers the following alternative language for Recommendation 1: "Determine and implement actions needed to further inform *Infrastructure Investment and Jobs Act* lead service line allotments for fiscal years 2023 and 2024 to address state-submitted data identified as unreliable under the 7th DWINSA."

The Office of Water is recommending the alternative language as it (1) takes into consideration the context of the statute, the EPA's internal control processes, the long-standing state role in accomplishing the DWINSA, and the limited detailed and documented information on LSLs available at water systems during the 7th DWINSA; and (2) provides for actions to specifically address the risk presented by states who were unreliable reporters under 7th DWINSA.

Under the alternative language for Recommendation 1, the agency plans to take correction action to determine what actions are needed to further inform the fiscal years 2023 and

2024 LSL allotments for states who did not reliably report the information under the 7th DWINSA and implement the necessary actions. The estimated timeframe for completion is no later than October 4, 2024, to determine actions and by February 1, 2025, to implement actions.

OIG Recommendation 2

Using the new data verification process from Recommendation 1, determine whether further data updates are needed to inform Infrastructure Investment and Jobs Act lead service line allotments for fiscal years 2025 and 2026.

EPA Response to OIG Recommendation 2 – Disagree

The Office of Water does not concur with Recommendation 2, as written. Instead, the Office of Water respectfully offers the following alternative language for Recommendation 2: "Based on any actions taken under Recommendation 1, determine whether an update is needed to better inform *Infrastructure Investment and Jobs Act* lead service line allotments for fiscal years 2025 and 2026 commensurate with the lead service line replacement needs of each state."

The Office of Water is recommending the alternative language as it (1) takes into consideration of the context of the statute, the EPA's internal control processes, the long-standing state role in accomplishing the DWINSA, and the limited detailed and documented information available on LSLs at water systems during the 7th DWINSA; and (2) provides the EPA with a direct opportunity to determine whether an update is needed to better inform I*nfrastructure Investment and Jobs Act* LSL allotments for fiscal years 2025 and 2026 commensurate with the LSLR needs of each state.

Under the alternative language for Recommendation 2, the agency plans to take correction action to determine whether there is an opportunity to update and better inform the fiscal years 2025 and 2026 LSL allotments commensurate with the lead service line replacement needs of each state. The estimated timeframe for completion is by May 15, 2025.

OIG Recommendation 3

If updates are necessary based on the determination from Recommendation 2, identify how to adjust the data and update the Infrastructure Investment and Jobs Act lead service line allotments so that the allotted funds are commensurate with the lead service line replacement needs of each state.

EPA Response to OIG Recommendation 3 – Disagree

The Office of Water does not concur with Recommendation 3, as written. Instead, the Office of Water respectfully offers the following alternative language for Recommendation 3: "If updates are necessary based on the determination from Recommendation 2, adjust

the *Infrastructure Investment and Jobs Act* lead service line allotments for fiscal years 2025 and 2026 so that the allotted funds are commensurate with the lead service line replacement needs of each state."

The Office of Water is recommending the alternative language to specifically reflect that this recommendation pertains to future allotments for fiscal years 2025 and 2026. If updates are necessary based on determination from Recommendation 2 with the alternative language suggested by the EPA, the agency plans to take correction actions to determine whether there is an opportunity to adjust the data and update the *Infrastructure Investment and Jobs Act* LSL allotments so that the allotted funds are commensurate with the LSLR needs of each state. If so, such an adjustment would first be reflected in the FY25 allotments. The estimated timeframe for completion is by May 30, 2025.

CONCLUSION

We appreciate this opportunity to provide comments on the Draft Report. For the reasons articulated above and in our technical comments, the EPA does not concur with recommendations 1-3 as written in the Draft Report. Our detailed technical comments are attached and are offered to improve the accuracy and clarity of the Draft Report. We request the OIG include both our formal response and our technical comments as appendices to the final report. Also provided (via secured link) are documents that are referenced in the technical comments document that provide additional contextual information to support our response to this report.

We thank you for the important efforts of the OIG to reduce waste, fraud, and abuse. The EPA recognizes the important role of oversight and welcomes data-driven feedback on ways we can improve the accuracy of the information related to the mandated requirement to derive a national cost of replacing LSLs or ways in which we could improve the DWINSA process to improve the quality of future information. If you have any questions or would like to discuss our feedback in greater detail, please contact me or your staff may contact the Office of Water's Audit Follow-Up Coordinator, Carla Hagerman, at Hagerman.Carla@epa.gov.

ATTACHMENTS (24)

1. Technical Comments on the OIG Draft Report OSRE-FY24-0022

Attachments 2-24 were provided via secure link to the OIG Evaluation Team

2. Explanation of Internal control process
3. The EPA's March 1, 2024, response to OIG's preliminary findings and recommendations

Correspondence Regarding Texas

4. 2023.01.05: Email from Texas to the EPA
5. 2023.12.07: Email thread with Houston and the EPA's contractor
6. 2023.12.18: Letter from the EPA to Texas Water Development Board
7. 2023.12.18: Letter from the EPA to Texas Commission on Environmental Quality
8. 2024.01.22: Letter from the EPA to Texas Water Development Board

9. 2024.02.14: Email from the EPA to Texas Water Development Board

Correspondence Regarding Florida

10. 2023.11.24: Email from the EPA to Florida
11. 2023.12.18: Letter from the EPA to Florida
12. 2024.01.19: Email thread between the EPA and Florida
13. 2024.01.22: Letter from the EPA to Florida
14. 2024.03.04: Email thread between the EPA and Florida

Congressional Correspondence

15. 2022.08.17: Letter from Representative Gottheimer to the EPA
16. 2022.08.19: Letter from Representative Pallone to the EPA
17. 2022.08.18: Letter from Representative Schneider to the EPA
18. 2022.10.04: Letter from the EPA to Representative Schneider

Training Materials

19. 2023.03.31: DWINSA AWIA Clarification Addendum
20. 2023.08.29: LSL Update Launch Slides
21. 2019.11.02: DWINSA Coordinator Training Slides

Information Collection Request

22. ICR Appendix B
23. ICR Appendix C
24. ICR Supporting Statement

cc: Paul Bergstrand, OIG
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Erin Barnes-Weaver, OIG
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U.S. Environmental Protection Agency

The whistleblower protection coordinator's role is to educate Agency employees about prohibitions against retaliation for protected disclosures and the rights and remedies against retaliation. For more information, please visit the OIG's whistleblower protection webpage.

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