

Perspectives on Capacity: Managing Drinking Water State Revolving Fund Infrastructure Investment and Jobs Act Funding

February 27, 2024 | Report No. 24-E-0022



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Abbreviations

DWSRF	Drinking Water State Revolving Fund
EPA	U.S. Environmental Protection Agency
GAO	U.S. Government Accountability Office
IIJA	Infrastructure Investment and Jobs Act
OIG	Office of Inspector General

Cover Image

A glass being filled with water from a faucet. (EPA OIG image)

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At a Glance

Perspectives on Capacity: Managing Drinking Water State Revolving Fund Infrastructure Investment and Jobs Act Funding

Why We Did This Evaluation

To accomplish this objective:

The U.S. Environmental Protection Agency Office of Inspector General conducted this evaluation to identify (1) drinking water state revolving fund agencies' perspectives on their capacity to manage Infrastructure Investment and Jobs Act funds and (2) obstacles that drinking water state revolving fund agencies' administrators believe limit their capacity to manage Infrastructure Investment and Jobs Act funds.

The Drinking Water State Revolving Fund Program is a financial assistance program that helps states to finance critical water infrastructure projects that further the health protection objectives of the Safe Drinking Water Act.

We used a survey to identify state agencies' perspectives on their capacity to manage Infrastructure Investment and Jobs Act funds. Capacity, as addressed in this report, has three relevant dimensions: organizational, financial, and human capital. A lack of capacity within any of these dimensions can adversely impact a state agency's ability to effectively manage federal grant funding, such as Infrastructure Investment and Jobs Act funding, and may result in unspent funds.

To support this EPA mission-related effort:

- *Ensuring clean and safe water.*

To address these top EPA [management challenges](#):

- *Overseeing, protecting, and investing in water and wastewater systems.*
- *Managing grants, contracts, and data systems.*

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[List of OIG reports.](#)

What We Found

The Drinking Water State Revolving Fund, or DWSRF, Program, has provided billions of dollars in financial assistance to public water systems and has helped communities across the United States complete over 17,000 infrastructure projects. Yet, across the country, water infrastructure is aging and in need of repair. The Infrastructure Investment and Jobs Act, or IIJA, appropriated an unprecedented amount of funding for various environmental and infrastructure needs, including drinking water infrastructure needs. The state DWSRF agencies' capacity to effectively manage federal DWSRF grants is crucial to the success of the program.

In response to our survey, most state DWSRF administrators agreed that their agencies had the organizational capacity necessary to manage the DWSRF IIJA funds awarded to their states. A few state DWSRF administrators expressed concerns related to financial capacity. Specifically, state DWSRF administrators cited concerns about meeting state financial matching requirements and identifying projects that are eligible for DWSRF IIJA funding. State DWSRF administrators indicated that it was particularly difficult to identify projects eligible for lead service line replacement funds.

A few state DWSRF administrators disagreed that their agencies had enough staff and sufficient guidance to manage DWSRF IIJA funds. State DWSRF administrators reported workforce management and insufficient federal guidance as common obstacles that limit their agencies' capacity to manage DWSRF IIJA funds. State DWSRF administrators specifically noted insufficient guidance related to the Build America, Buy America Act provisions of the IIJA. In addition, a few state DWSRF administrators cited a lack of coordination with the EPA as an obstacle. Obstacles that affect state DWSRF agency capacity may result in decreased investment in critical water infrastructure projects.

While we make no recommendations based on this evaluation, the EPA has an opportunity to work with state DWSRF agencies to address the obstacles presented in this report.

The state DWSRF agencies' capacity to effectively manage federal DWSRF grants is crucial to the success of the DWSRF Program. Obstacles that affect state DWSRF agency capacity may result in decreased investment in critical water infrastructure projects.



OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

February 27, 2024

MEMORANDUM

SUBJECT: Perspectives on Capacity: Managing Drinking Water State Revolving Fund Infrastructure Investment and Jobs Act Funding
Report No. 24-E-0022

FROM: Sean W. O'Donnell, Inspector General *Sean W O'Donnell*

TO: Radhika Fox, 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-FY23-0043](#). This report contains findings that describe the problems the OIG has identified and suggests improvements for the subject of the evaluation. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

You are not required to respond to this report because this report contains no recommendations. If you submit a response, however, it 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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Purpose

The U.S. Environmental Protection Agency Office of Inspector General [initiated](#) this evaluation to identify:

- Drinking water state revolving fund, or DWSRF, agencies' perspectives on their capacity to manage Infrastructure Investment and Jobs Act, or IIJA, funds.
- Obstacles that DWSRF agencies' administrators believe limit their capacity to manage IIJA funds.

Top management challenges addressed

This evaluation addresses the following top management challenges 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.
- Managing grants, contracts, and data systems.

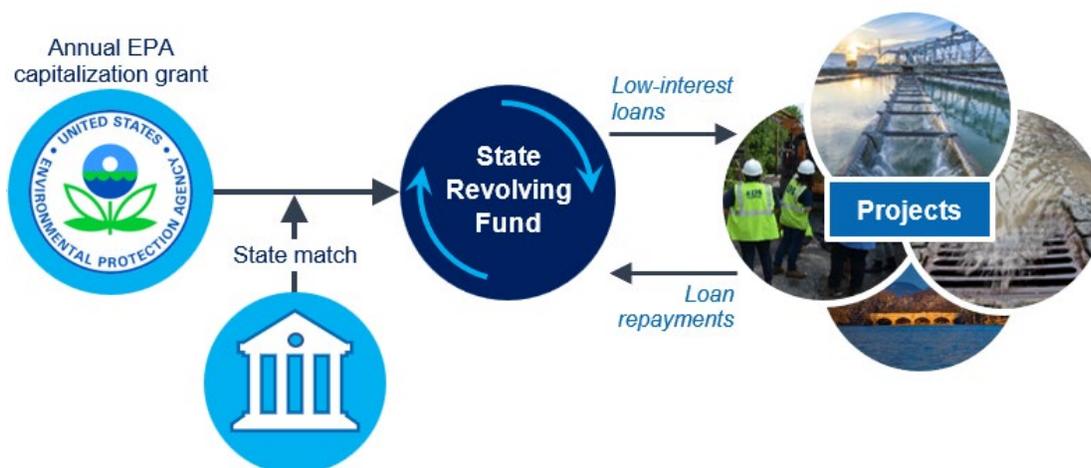
Background

The Safe Drinking Water Act's DWSRF Program

In 1996, Congress amended the Safe Drinking Water Act to establish the DWSRF Program, a financial assistance program that helps states to finance critical water infrastructure projects that further the health protection objectives of the Safe Drinking Water Act. Congress annually appropriates funding for the DWSRF Program, which the EPA administers. The EPA makes DWSRF capitalization grants available to all 50 states and the Commonwealth of Puerto Rico, later referred to simply as states. The amount of a state's capitalization grant is based on the results of the EPA's most recent drinking water infrastructure needs survey and assessment. The EPA then awards the DWSRF capitalization grants to eligible states.

Each state has program officials, referred to throughout this report as state DWSRF administrators, who oversee the state DWSRF program. Pursuant to the Safe Drinking Water Act and the terms of the DWSRF capitalization grant, states contribute a **state match** to the EPA's capitalization grant. The state match serves as the nonfederal portion of the cost of the capitalization grant that is deposited into the revolving fund. The state DWSRF agency may use a portion of the grant funds to administer the state DWSRF program; these funds are known as **set-asides**. The remaining grant funds are deposited into a dedicated revolving loan fund. The state DWSRF agency then issues loans to community water systems for eligible projects. As water systems repay their loans, the repayments and interest replenish the revolving fund to cover the state's future eligible infrastructure projects. Figure 1 illustrates the flow of funds in a state's DWSRF.

Figure 1: General steps in the award of state capitalization grants



Source: OIG analysis of the *Drinking Water State Revolving Fund: Program Operations Manual*, Provisional Edition. (EPA OIG image)

Pursuant to the Safe Drinking Water Act and EPA regulations, six project categories are eligible for DWSRF assistance: treatment, transmission and distribution, source, storage, consolidation, and creation of new systems. Descriptions of these categories are in Table 1.

Table 1: Drinking water infrastructure project categories

Project category	Description
Treatment	Projects to install or upgrade facilities to improve drinking water quality to comply with Safe Drinking Water Act regulations.
Transmission and distribution	Projects to install or replace transmission and distribution pipes to improve water pressure to safe levels or to prevent contamination caused by leaky or broken pipes.
Source	Projects to rehabilitate wells or develop eligible sources of drinking water to replace contaminated sources.
Storage	Projects to install or upgrade eligible storage facilities, including finished water storage tanks or reservoirs, to prevent microbiological contamination from entering the distribution system.
Consolidation	Projects to interconnect two or more water systems.
Creation of new systems	Projects to construct a new system to serve homes with contaminated individual wells or to consolidate existing systems into a new regional water system.

Source: OIG analysis of the *Drinking Water State Revolving Fund Eligibility Handbook*. (EPA OIG table)

The Safe Drinking Water Act mandates that state DWSRF agencies prioritize projects that address the most serious risk to human health and assist systems with the most need. Since its inception in 1996, the DWSRF Program has provided billions of dollars in funding to help communities across the United States complete over 17,000 infrastructure projects. The EPA’s seventh and most recent drinking water infrastructure needs survey and assessment, published in September 2023, found that the financial needs of the nation’s drinking water infrastructure grew 32 percent, or 14 percent when accounting for inflation, since the sixth assessment in 2015.

IIJA Funding to the DWSRF Program

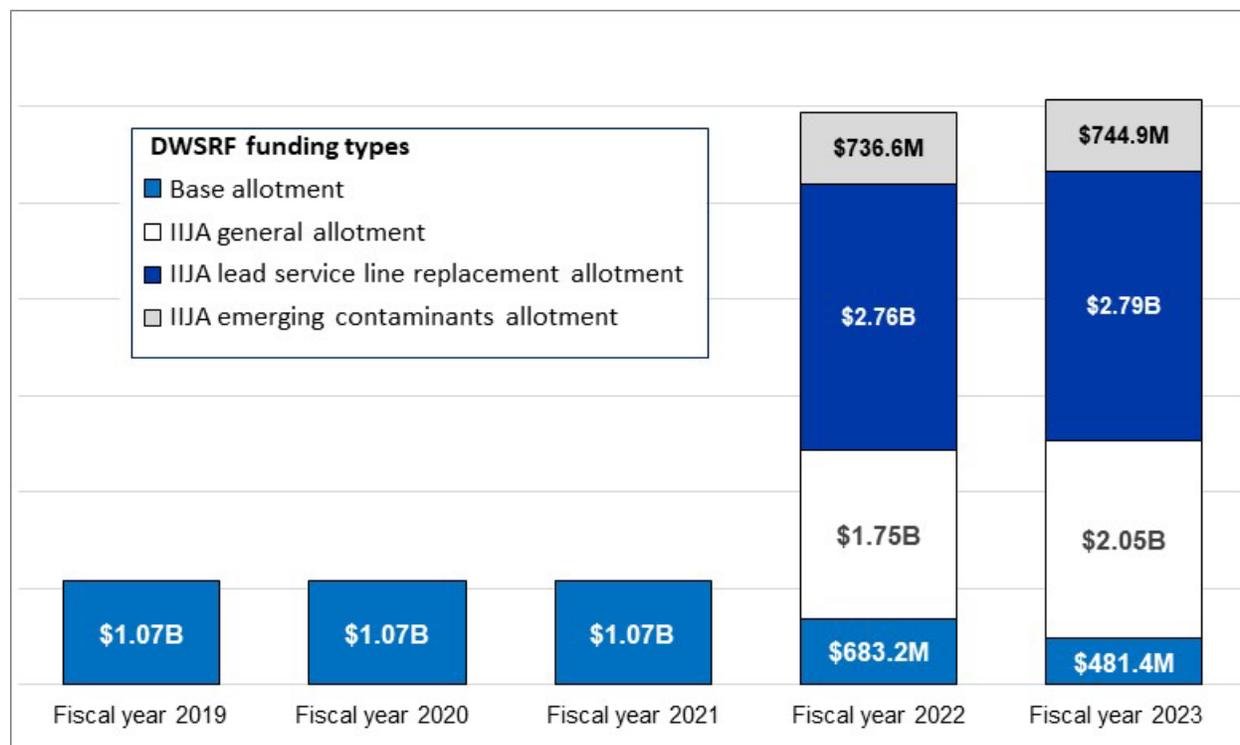
In November 2021, Congress enacted the IIJA, providing the EPA with an unprecedented amount of funding—over \$60 billion—to invest in environmental infrastructure. For context, the EPA’s total annual appropriation has ranged from \$7.9 billion in fiscal year 2013 to \$10.1 billion in fiscal year 2023.

The IIJA invests in the nation’s drinking water and wastewater systems. Nearly 83 percent of IIJA funding, or over \$50 billion, is for water infrastructure programs, including over \$30 billion for the DWSRF Program. The EPA’s *Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law memorandum* provides information and guidelines for the award and administration of capitalization grants under the IIJA. As a result of the IIJA, the EPA’s DWSRF allotments to the 50 states and the Commonwealth of Puerto Rico have also increased significantly. Figure 2 summarizes federal DWSRF allotments from fiscal year 2019 through 2023.

A provision to the IIJA, the Build America, Buy America Act, became effective on May 14, 2022, 180 days after the enactment of the IIJA. The Build America, Buy America Act provisions require the heads of federal agencies to ensure that:

“[N]one of the funds made available for a federal financial assistance program for infrastructure ... be obligated for a project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.”

Figure 2: Federal DWSRF allotments for 50 states and Puerto Rico, fiscal year 2019–2023



Source: OIG analysis of [DWSRF allotments](#). (EPA OIG image)

State DWSRF Agencies' Capacity to Manage Funds

The state DWSRF agencies must have the capacity to effectively manage federal grants to ensure the success of the DWSRF Program. The U.S. Government Accountability Office reports that “[c]apacity involves both the maintenance of appropriate resources and the ability to effectively manage and utilize those resources.”¹ **Capacity**, as addressed in this report, has three relevant dimensions: organizational, financial, and human capital. The GAO found that a lack of capacity within any of these dimensions can adversely impact an agency’s ability to effectively manage federal grant funding.²

Organizational Capacity

Organizational capacity is the degree to which a state agency is prepared to manage and implement federal grants. This includes using technology for grant oversight and reporting and having appropriate leadership and effective communication resources. In addition, the *Standards for Internal Control in the Federal Government* explains that organizations should have a management structure and processes, or internal controls, to achieve their mission.³ The GAO found that “limited organizational capacity ... hampered municipalities’ ability to oversee and report on federal grants.”⁴

Internal controls are processes used by management to help an agency achieve its objectives.

Financial Capacity

Financial capacity is the extent to which a state agency has sufficient financial resources to administer or implement federal grants. This includes having the financial resources to meet state match requirements. Constraints on financial capacity may lead some agencies to reduce the scope of their projects or forgo or delay infrastructure, technology improvements, and hiring staff. The GAO found that decreased financial capacity reduced some municipalities’ ability to apply for federal grants that required grantees to maintain a level of nonfederal funding for the program.⁵

Human Capital Capacity

Human capital capacity is the degree to which a state agency has sufficient staff with the knowledge and technical skills needed to manage its federal grants effectively.⁶ This includes having expectations of competence, recruitment, development, and retention of individuals and succession and contingency

¹ GAO, *Municipalities in Fiscal Crisis: Federal Agencies Monitored Grants and Assisted Grantees, but More Could be Done to Share Lessons Learned*, [GAO-15-222](#), March 2015.

² *Id.*

³ GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#), September 2014.

⁴ GAO, *Municipalities in Fiscal Crisis: Federal Agencies Monitored Grants and Assisted Grantees, but More Could be Done to Share Lessons Learned*, [GAO-15-222](#), March 2015.

⁵ *Id.*

⁶ *Id.*

plans.⁷ The GAO found that decreased human capital capacity negatively affected knowledge management, contributed to a grant management skills gap, and caused funds to be unspent.⁸

How the EPA Assists Communities and State Agencies

The EPA has a history of helping communities identify water challenges and develop plans and application materials to access water infrastructure funding. The EPA provides this support through its no-cost water technical assistance program. The EPA is expanding its technical assistance efforts to help more communities. This assistance is provided through collaboration with states, territories, tribes, and community partners. Nonprofit organizations and public and private nonprofit universities and colleges may be eligible to apply for funding to be technical assistance providers.

Responsible Offices

The EPA Office of Ground Water and Drinking Water, within the Office of Water, works with states, tribes, and environmental partners to protect public health by ensuring that people have access to safe drinking water. The office oversees and assists with funding for state drinking water programs and source water protection programs, including the DWSRF Program. In addition, the EPA’s ten regional offices are responsible for executing related programs in their respective states and territories.

The IJA appropriated over \$30 billion to the DWSRF Program from fiscal year 2022 through fiscal year 2026, as summarized in Table 2. Of that \$30 billion, \$15 billion was appropriated to lead service line identification and replacement to address the health hazards of lead pipes.

Table 2: Summary of DWSRF IJA appropriations, fiscal year 2022–2026

Appropriation	FY 2022 (\$ millions)	FY 2023 (\$ millions)	FY 2024 (\$ millions)	FY 2025 (\$ millions)	FY 2026 (\$ millions)	Five-year total (\$ millions)
DWSRF General Supplemental	1,902	2,202	2,403	2,603	2,603	11,713
DWSRF Emerging Contaminants	800	800	800	800	800	4,000
DWSRF Lead Service Line Replacement	3,000	3,000	3,000	3,000	3,000	15,000

Note: FY = Fiscal Year.

Source: OIG analysis of [DWSRF IJA appropriations](#). (EPA OIG table)

⁷ GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G, September 2014.

⁸ GAO, *Municipalities in Fiscal Crisis: Federal Agencies Monitored Grants and Assisted Grantees, but More Could be Done to Share Lessons Learned*, [GAO-15-222](#), March 2015.

Scope and Methodology

We conducted this evaluation from February 2023 to January 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. We provided the Office of Water with an opportunity to review a draft of this report. The Office of Water responded with technical comments, which we considered and incorporated as appropriate.

We conducted an online survey to collect point-in-time perspectives from state DWSRF administrators. The survey asked state DWSRF administrators to rate their level of agreement with 12 statements by selecting one of the following: Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, or Strongly Disagree. The survey then offered state DWSRF administrators an opportunity to elaborate in optional open-ended text fields. The survey received a 90-percent response rate, with 46 of 51 state DWSRF administrators responding. We did not independently verify the capacity reported by state DWSRF administrators. State DWSRF agency responses discussed throughout the report may not reflect the experiences or perceptions of the five state DWSRF agencies that did not respond to the survey. See Appendix A for a full description of our scope and methodology and Appendix B for our survey results.

Occasionally, when reporting on the results of our survey and to enhance the readability of this report, we use the terms “most,” “several,” and “a few” to quantify the frequency of a perception. Table 3 describes when we use each term. We report responses of “strongly agree” and “agree” together as agreement with a statement, and we individually report the number and percentage of respondents that selected “neither agree nor disagree” or “disagree.” There were no “strongly disagree” responses.

Table 3: Survey results quantification terms and definitions

Quantification	Definition
Most	When 35 or more state DWSRF administrators, or more than 75 percent of state DWSRF administrators responding to our survey, held a similar perception.
Several	When 14 to 34 state DWSRF administrators, or from 30 through 74 percent of state DWSRF administrators responding to our survey, held a similar perception.
A few	When two to 13 state DWSRF administrators, or from 4 through 29 percent of state DWSRF administrators responding to our survey, held a similar perception.

Source: OIG definitions. (EPA OIG table)

Prior Reports

We reviewed EPA OIG and GAO oversight reports related to DWSRF programs dating back to May 2013. The oversight reports analyzed the DWSRF programs and the issues the programs faced. The oversight reports included recommendations for improving the EPA’s data collection methods, improving monitoring practices, and updating the guidance on financial indicators. As of July 2023, there were no published oversight reports directly reviewing DWSRF programs’ management and execution of DWSRF IJIA funds.

The EPA OIG's Oversight of the DWSRF Program

In 2014, the EPA OIG published Report No. [15-P-0032](#), *EPA Needs to Demonstrate Public Health Benefits of Drinking Water State Revolving Fund Projects*. This report described the EPA's need to better manage capitalization grant project data. The EPA OIG recommended improvements to the EPA's data collection methods, including additional reviews, evaluations, and implementation of new information collection methods.

In July 2023, the EPA OIG published Report No. [23-P-0022](#), *The EPA Could Improve Its Review of Drinking Water State Revolving Fund Programs to Help States Assist Disadvantaged Communities*. This report found that not all states met their requirements to award loan subsidies to disadvantaged communities. Barriers to meeting the loan subsidy requirements included inadequate oversight by the EPA regions and underuse of set-asides by the states.

The GAO's Oversight of the DWSRF Program

In March 2013, the GAO published written testimony in Report No. [GAO-13-451T](#), *Water Infrastructure: Approaches and Issues for Financing Drinking Water and Wastewater Infrastructure*. The GAO identified three approaches in funding drinking water infrastructure: a trust fund, a national infrastructure bank, and public-private partnerships. The report analyzed these approaches and listed issues with each approach.

In August 2015, the GAO published Report No. [GAO-15-567](#), *State Revolving Fund Improved Financial Indicators Could Strengthen EPA Oversight*. The report identified that the financial indicators used in reviewing state revolving fund programs did not demonstrate "sustainability" of the programs. Officials in most of the 21 states reviewed said that they "generally cannot sustain their [state revolving] funds without continued federal grants or changes to their programs, such as reducing levels of assistance or increasing revenue." The GAO recommended updating the guidance on financial indicators and using state revolving fund information to forecast lending capacity.

In July 2016, the GAO published Report No. [GAO-16-530](#), *Grants Management: EPA Could Improve Certain Monitoring Practices*. This report analyzed the EPA's grant program processes and evaluated the Agency's organizational structure and reporting requirements. The GAO recommended that the EPA administrator direct the Office of Grants and Debarment and the program and regional offices, as appropriate, to take six corrective actions.

Results

The state DWSRF administrators who responded to our survey had varied perspectives on their agencies' capacity to manage DWSRF IJIA funds.⁹ Most state DWSRF administrators agreed that their agencies had the organizational capacity necessary to manage DWSRF IJIA funds—for example, technological resources, operating procedures, and internal controls. A few state DWSRF administrators expressed concerns related to their agencies' financial capacity, including meeting state match

⁹ For detailed survey results, please see Appendix B.

requirements and identifying eligible projects. State DWSRF administrators indicated that it was particularly difficult to identify eligible projects for lead service line replacement funds. Additionally, a few state DWSRF administrators disagreed that their agencies had enough staff and sufficient guidance to manage DWSRF IIJA funds.

State DWSRF administrators reported workforce management and insufficient federal guidance as common obstacles that limit their agencies' capacity to manage DWSRF IIJA funds. State DWSRF administrators specifically noted insufficient guidance related to the Build America, Buy America Act provisions.¹⁰ Obstacles that affect state DWSRF agency capacity may result in decreased investment in critical water infrastructure projects. In addition, a few state DWSRF administrators discussed the need to improve coordination with the EPA. The EPA has opportunities to address these obstacles and concerns.

Most State DWSRF Administrators Agreed that Their Agencies Had the Organizational Capacity Necessary to Manage DWSRF IIJA Funds

Most state DWSRF administrators agreed that their agencies had the organizational capacity to manage DWSRF IIJA funds. Specifically, 45, or 98 percent, of 46 administrators said that they had the necessary operating procedures for managing DWSRF IIJA funds, as shown in Figure 3. These procedures include policies, regulations, and other process-related documents.

Figure 3: Organizational capacity survey results



Source: OIG analysis of the survey results. (EPA OIG image)

¹⁰ This report captured the perspectives of state DWSRF administrators surveyed in March 2023. To gain a more comprehensive view, we initiated Project No. [OSRE-FY23-0096](#) to review Build America, Buy America Act guidance.

In addition, 43 of 46 administrators said that they had the technological resources for managing DWSRF IIJA funds. These resources include the necessary reporting systems, databases, and other information technology tools.

State DWSRF agencies have had decades to develop their organizational policies and procedures. A few state DWSRF administrators reported that their agencies' pre-existing guidance and practices were applicable to administering DWSRF capitalization grants awarded using IIJA funds. For example, one state DWSRF administrator explained that the state's "technological resources and operating procedures have always been scalable to the amount of federal funds [they] receive." State DWSRF administrators reported that their agencies use the same processes, which include layers of internal controls, for all infrastructure projects. For example, a state DWSRF administrator explained that the EPA regularly reviews state internal controls. Another administrator said that the EPA OIG provided training to state agency staff on how to identify and report credible allegations of fraud, waste, and abuse.

Most state DWSRF administrators agreed that their agencies had the internal controls to ensure DWSRF IIJA funds were spent appropriately. Specifically, 45, or 98 percent, of 46 administrators said that they had controls in place to ensure that recipients of IIJA funds would spend the money appropriately and effectively, as shown in Figure 4. In addition, 44 of 46 administrators said that their staff could recognize indicators of fraud, waste, and abuse. Finally, 45 of 46 administrators said that their staff knew how to report suspected cases of fraud, waste, and abuse.

Figure 4: Survey results related to internal controls



Source: OIG analysis of the survey results. (EPA OIG image)

Ten state DWSRF administrators noted the need to update their agencies' policies and procedures to incorporate new IIJA requirements. For example, one state DWSRF administrator said, "Due to the new

requirements, we are currently working with the EPA to update our documentation with the [IIJA] language.” While policies and procedures are generally in place, provisions within the IIJA may necessitate updating existing policies and procedures to effectively manage and oversee the DWSRF infrastructure project work funded by the IIJA.

In addition, two state DWSRF administrators mentioned being in the process of procuring technological enhancements to strengthen their ability to manage DWSRF IIJA funds. One pointed out that the “SRF [state revolving fund] program is preparing a request for proposal to provide professional services to streamline business processes and to develop business requirements for an IT [information technology] solution.” The other explained that state agency staff “had already been working on developing new software and a database to manage SRF [state revolving fund] projects prior to when [the] IIJA was enacted.” These comments highlight the importance of a technological foundation that can sustain the incoming infrastructure project work funded by the IIJA.

A Few State DWSRF Administrators Expressed Concerns Related to Financial Capacity, Including Not Meeting State Match Requirements or Identifying Eligible Projects

Although most state DWSRF administrators agreed that their agencies had the financial capacity to manage DWSRF IIJA funds, a few reported concerns about meeting state match requirements and identifying eligible projects for DWSRF IIJA funding. Specifically, four of 46 state DWSRF administrators disagreed that their agencies had the fiscal resources needed to provide the state match, and three of 46 state DWSRF administrators neither agreed nor disagreed.

If the required state match is not obtained, a state’s allotted funds may remain unobligated. Unobligated funds may then be reallocated to other eligible states. Therefore, if the required match is not secured, the DWSRF IIJA funds originally allotted to one state may be reallocated to another state.

Unobligated funds are funds that are available for obligation but that have not been obligated. An obligation is a commitment that creates a legal liability for the payment of goods and services. An agency incurs an obligation, for example, when it places an order, signs a contract, or awards a grant.

In addition, six of the seven state DWSRF administrators that disagreed or neither agreed nor disagreed that their agencies had the fiscal resources needed to provide the state match explained that the state match for the DWSRF IIJA funds had not been secured yet or that they were uncertain whether their agency could secure future matches. Administrators may be uncertain because states must increase their financial matches for DWSRF IIJA funding from 10 percent in the first two years, namely fiscal years 2022 and 2023, to 20 percent in year three and beyond.

Future match requirements could also be challenging because the IIJA has a higher additional subsidization requirement than what applies to annual DWSRF appropriations. The **additional subsidization requirement** is the percentage of DWSRF IIJA funds that the state must award as a grant or principal-forgiveness loan. Two state DWSRF administrators noted that the increased additional

subsidization requirements will result in less interest earnings to replenish the state's revolving fund. As one of these state DWSRF administrators explained, the state "has used bond proceeds to provide the match ... [T]he only funds we can use to pay off those bonds are interest earnings from the [state DWSRF] program. With the increased subsidization requirements for IIJA funds compared to regular appropriated funds, there will be less interest earnings available to pay the debt service of those bonds."

In addition, nine of 46 state DWSRF administrators neither agreed nor disagreed that their agencies had identified sufficient eligible projects to use DWSRF IIJA funds, and two of 46 state DWSRF administrators disagreed. Two state DWSRF administrators described that there may not be sufficient demand in their states for debt financing, such as repayable loans, for infrastructure projects.

Limitations on a state DWSRF agency's financial capacity, including not meeting state match requirements or identifying eligible projects, may result in decreased investment in critical water infrastructure projects. The EPA DWSRF Program's ability to provide financial assistance to communities for drinking water projects may be negatively impacted if state DWSRF agencies do not have the financial capacity to successfully manage the federal awards and meet programmatic requirements.

State DWSRF Administrators Cited Several Challenges in Finding Eligible Projects for Lead Service Line Replacement

State DWSRF administrators cited several challenges with finding eligible projects for lead service line replacement, a specific category of infrastructure project for which IIJA DWSRF funds were appropriated. First, finding eligible projects for lead service line replacement funds may be challenging because some states are still finalizing service line inventories in advance of the Lead and Copper Rule Revisions compliance date of October 16, 2024.¹¹ Without inventories, communities and states will not have a clear idea of where and how many replacements are needed. Eight state DWSRF administrators described challenges related to incomplete inventories. One state DWSRF administrator said, "Currently there are not sufficient projects identified for the first two years of [lead service line replacement] grants ... [water] systems do not have sufficient data to know the scope and cost of these types of projects to apply to the [state] DWSRF for project funding at this time." States are not required to provide such inventories under the EPA's Lead and Copper Rule Revisions until October 2024. However, the IIJA appropriated funding for lead service line replacement in November 2021, almost three years before inventories are due. Although lead service line replacement may begin before October 2024, without inventories states will not have a clear idea of what replacements are needed and permissible. This may negatively affect lead service line replacement. Accordingly, the EPA is strongly encouraging states to assist water systems with making rapid progress in developing lead service line inventories earlier than legally required. The EPA has explained that inventory development may be an eligible expense for DWSRF funding.

Finding eligible projects for lead service line replacement may also be challenging because many lead service lines, or portions of lead service lines, are located on private properties. Three state DWSRF

¹¹ For more information on the Lead and Copper Rule Revisions, review the EPA "Proposed Lead and Copper Rule Improvements" [webpage](#).

administrators mentioned challenges with obtaining access to private properties. While not directly discussed in responses to the survey, private property owners may be reluctant to engage in replacement work when the cost burden remains somewhat uncertain. The IJJA does not expressly exempt grant funds from being deemed taxable income requiring reporting to the Internal Revenue Service. As one independent local government association said, “Finding a way to avoid the tax liability problem for property owners will be important in getting [owners] to allow the work to be done on their property.”

Additionally, the EPA maintains a prohibition on partial line replacements. This requires applicants to propose projects that fully replace both public and private portions of any lead service line. One state DWSRF administrator said that the state would “[n]eed to modify state law to allow full use of [IJJA]-lead service line replacement funds on private property.”

Finally, four state DWSRF administrators raised issues with IJJA stipulations around debt financing, including loan repayment and subsidization for lead service line replacement projects. A state DWSRF administrator from one state said, “[W]e have sufficient need to utilize all of the funding, but there is uncertainty in the willingness of municipalities to utilize the portion of the funding that must be awarded as a loan.” It remains to be seen whether municipalities will finance lead service line replacement projects using DWSRF IJJA lead service line replacement funds.

A Few State DWSRF Administrators Disagreed that Their Agencies Had Sufficient Guidance and Enough Staff to Manage DWSRF IJJA Funds

Six of 46 state DWSRF administrators disagreed that their agencies had been provided with sufficient guidance to manage DWSRF IJJA funds, and 14 DWSRF administrators neither agreed nor disagreed. A lack of guidance can impact human capital capacity because it can limit staff’s knowledge of how to effectively manage federal grants.

Moreover, five of 46 state DWSRF administrators disagreed that their agencies had enough staff to manage DWSRF IJJA funds, and 13 of 46 state DWSRF administrators neither agreed nor disagreed. Several state DWSRF administrators expected to hire more staff. Five state DWSRF administrators reported having vacancies, and three of the five reported working to fill their vacancies. Another state DWSRF administrator said that the state program is leveraging external services to address staffing gaps. This state DWSRF administrator noted the program was “augmenting existing staff with ... outside consulting engineering services.”

Finally, seven of 46 state DWSRF administrators neither agreed nor disagreed that their agencies’ personnel had been equipped with the necessary skills to manage DWSRF IJJA funds. One state DWSRF administrator explained, “While we do believe that the staff that we currently have are equipped with the necessary skills to manage DWSRF IJJA funds, we also believe that the amount of work that is required to properly manage these funds is difficult given our current staffing.” This indicates that while the state DWSRF agency staff are skilled, there can still be challenges with meeting the increasing workload.

In the open-ended survey responses, two human capital capacity areas were most often identified as significant obstacles to successful DWSRF administration: workforce management challenges and insufficient federal guidance. These two obstacles are detailed in the sections below.

State DWSRF Administrators Reported Workforce Management as a Common Obstacle

State DWSRF administrators identified workforce management as a common obstacle to managing DWSRF IIJA funds. Specifically, state DWSRF administrators noted that the length of time it takes to hire staff may result in challenges with managing existing workloads. A state DWSRF administrator explained, “Staff can be added by including additional staff in the grant application. However, the hiring process takes additional time and resources.” Another noted that “it is going to take a few years to get staffed up.” A state DWSRF administrator explained that agency employees were working overtime because of this obstacle. Another said that “any vacancy ... immediately puts stress on the remaining staff.” With the additional DWSRF funds made available by the IIJA, state DWSRF administrators may find it challenging to manage workloads.

Internal processes for getting additional positions approved may create workforce management challenges at some state DWSRF agencies. One state DWSRF administrator said, “My organization has been working with our governor’s office and state legislature for approval of additional staff to manage the DWSRF IIJA funds.” Another said state policies restrict the program’s ability to hire staff.

Even if a state DWSRF agency can get approval to hire additional staff, it may face challenges filling positions. Two state DWSRF administrators commented that it can be hard to find qualified candidates. A few state DWSRF administrators emphasized a need for specialized technical staff, such as engineers or designers, to review plans and specifications for DWSRF IIJA projects. Despite the importance of these roles, three administrators said that hiring engineering or technical staff is a challenge. Other administrators reported similar challenges when trying to fill technical roles through a contract. One state DWSRF program encountered challenges with limited contractor availability and suggested that this could delay projects. This challenge was echoed by another state DWSRF administrator who highlighted that a “lack of engineering firms to properly design and deliver these unprecedented number of projects.”

Obstacles in workforce management may result in communities not getting support from the state DWSRF agency. One state DWSRF administrator explained, “With respect to eligible projects, due to limited staffing resources, [our program] has not been able to work with communities in order to identify sufficient projects to be able to fully take advantage of the available IIJA funding.” This state DWSRF administrator went on to say that “staffing limitations also make it difficult to effectively manage these funds while still being able to stay on top of “regular” work activities.” When state DWSRF agencies have obstacles in workforce management, they may not be able to achieve program objectives effectively or efficiently. Difficulty in workforce management could also diminish the agency’s financial capacity, including its ability to identify eligible projects.

State DWSRF Administrators Reported Insufficient Federal Guidance on Build America, Buy America Act Requirements as an Obstacle

State DWSRF administrators reported that insufficient federal guidance posed obstacles to ensuring that staff were fully trained on and equipped to meet the IJIA's Build America, Buy America Act provisions. One state DWSRF administrator expressed that it was challenging to train staff on the EPA's guidance, especially when it is still evolving. Another explained that the Build America, Buy America Act provisions were "being pushed out before all of the issues are worked out ... and after funding was provided for projects," which could impact staff's ability to successfully manage infrastructure projects with DWSRF IJIA funds. State DWSRF administrators also reported that they had not received clear or timely guidance on how to determine whether manufactured products and construction materials are made in the United States, which is a new requirement under the IJIA. Without knowing which products comply with the Build America, Buy America Act, an administrator explained that the design and construction of projects will come to a halt. Another state DWSRF administrator anticipates delays with infrastructure projects because of the uncertainty created by not knowing which manufactured products or construction materials will comply with the Build America, Buy America Act or be eligible for waivers.¹²

To add to the uncertainty, administrators reported that the water infrastructure industry faces supply chain disruptions and inflationary pressures. In addition, state DWSRF programs rely on some manufactured products and technologies that are not made in the United States. Consequently, one state DWSRF administrator explained that there are significant lead times for obtaining manufactured products, regardless of their country of origin, and another said that some "borrowers ... may be reluctant" to use DWSRF IJIA funds for their infrastructure projects. Instead of applying for DWSRF IJIA funds, borrowers could finance their water infrastructure projects through bonds, which would circumvent the Build America, Buy America Act provisions and decrease demand for the DWSRF funds.

A few state DWSRF administrators reported that their water infrastructure projects have continued even though they had not received guidance on the Build America, Buy America Act requirements. Two of those administrators expressed concerns about forthcoming guidance adding new requirements for projects that have already started, such as special signage, additional data collection, and adjustments to guides and forms; new requirements like these would create more obstacles for state DWSRF agencies. To reduce the impact of these obstacles, state DWSRF administrators desired timely guidance and training from the EPA.

Opportunity for improvement: The EPA has an opportunity to address the state DWSRF administrators' desire for additional guidance.

¹² The EPA has authority to issue waivers for the Build America, Buy America Act requirements under specific circumstances. See IJIA § 70914(b).

A Few State DWSRF Administrators Cited a Lack of Coordination with the EPA as an Obstacle

While most state DWSRF administrators reported knowing whom within the EPA to contact with questions, three of 46 state DWSRF administrators disagreed that their agencies can easily obtain assistance from the EPA, and ten state DWSRF administrators neither agreed nor disagreed. In response to our survey, state DWSRF administrators mentioned the need to coordinate and collaborate with the EPA and its technical assistance providers. One state DWSRF administrator explained that because the EPA has recently expanded its technical assistance program, there is uncertainty around the necessary level of state involvement and the process for clear lines of communication. Another state DWSRF administrator reported that the EPA has provided little information about the 29 technical assistance providers.¹³ Another administrator requested that the EPA's technical assistance providers coordinate amongst themselves and with the state DWSRF programs before offering assistance to local governments to avoid duplicating efforts. Concurrent to our March 2023 survey, the EPA issued a [memorandum](#) to its technical assistance providers, stating that the EPA and its technical assistance providers "will work closely together and with states ... to avoid multiple [technical assistance] providers contacting the same community or duplicating ... services."

As described previously, state DWSRF programs may have challenges balancing increasing workloads and assisting communities with identifying eligible DWSRF projects. The EPA's technical assistance program can help with these challenges. As the EPA expands its technical assistance efforts to help more communities develop application materials to access water infrastructure funding, continued coordination and collaboration between the EPA, its technical assistance providers, and state DWSRF programs is needed to avoid duplication of efforts.

Opportunity for improvement: The EPA and its technical assistance providers have an opportunity to coordinate and collaborate with state DWSRF stakeholders on the EPA's expanded technical assistance efforts.

¹³ In November 2022, the EPA selected 29 technical assistance providers to support the EPA's expanded technical assistance program. However, according to the EPA, the Agency was not able to share additional information about the technical assistance providers because the grants had not been awarded to the selected providers at the time of our survey.

Scope and Methodology

We conducted this evaluation from February 2023 to January 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.

We conducted an online survey of state DWSRF administrators to collect point-in-time perspectives on their state DWSRF agency's capacity to manage DWSRF IIJA funds. We determined that the perspectives of state DWSRF administrators from the 50 states and the Commonwealth of Puerto Rico were within the scope of this evaluation. Given differences in program management, we determined that the perspectives of DWSRF administrators from tribes and other territories that received DWSRF IIJA funds were out of scope. We also determined that stakeholder capacity, or the extent to which an organization has sufficient support from its stakeholders, was out of scope.

Survey logistics:

We used an online tool to distribute the survey to state DWSRF program administrators. We opened the survey on Monday, March 13, and closed it on Wednesday, March 29, 2023.

Our survey focused on six subject areas: human capital capacity, financial capacity, organizational capacity, technical assistance, perceived obstacles, and internal controls. The survey consisted of 12 statements and asked state DWSRF administrators to rate their level of agreement on a scale from strongly agree to strongly disagree. State DWSRF administrators were able to elaborate on their responses using six open-ended text fields. The state DWSRF administrators could skip the open-ended text fields if they chose not to offer additional information.

Survey participation:

We validated state DWSRF points of contact to identify a single state program administrator who could respond to the survey. We encouraged state DWSRF programs administered across multiple offices to coordinate their responses.

To increase survey participation rates, we promoted the survey to state DWSRF agencies via an introductory email and sent periodic reminders. The survey received a 90-percent response rate with 46 of 51 state DWSRF administrators responding.

Analysis:

We analyzed the responses to the 12 statements for trends. We then scored the responses in the open-ended text fields based on identified themes. As needed, we conducted additional research to better contextualize the responses. Finally, we created visual heat maps to analyze for spatial trends.

Interpreting our results:

Perspectives shared through the survey reflect a specific point in time. Perspectives on an agency's capacity may change. In addition, we did not independently verify the capacity reported by state DWSRF administrators.

Finally, it is also important to consider that all dimensions of capacity discussed in this report intersect. Each dimension can influence the other. In our report, this notion is evident, as many administrator comments on capacity in one section also corresponded with an entirely different dimension of capacity.

Survey Results

Our survey asked state DWSRF administrators to rate their level of agreement with 12 statements by selecting one of the following: Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, or Strongly Disagree. The survey then offered state DWSRF administrators the opportunity to elaborate in optional open-ended text fields.

Note: because of rounding, percentage totals in the tables below may not equal 100 percent.

Section 1: Organizational Capacity—For the purposes of this survey, we defined organizational capacity as the extent to which a DWSRF agency is prepared to manage and implement IJA funds, including having appropriate management, structure, and technological capability to effectively implement the program as needed. We asked the state DWSRF administrators to rate their level of agreement with each statement below.

Statement: My organization has the technological resources necessary to manage IJA funds.

Result	Tally	Percentage
Strongly Agree	22	47.8
Agree	21	45.7
Neither Agree nor Disagree	2	4.4
Disagree	1	2.2
Strongly Disagree	0	0.0

Statement: My organization has the operating procedures necessary to manage IJA funds.

Result	Tally	Percentage
Strongly Agree	20	43.5
Agree	25	54.4
Neither Agree nor Disagree	1	2.2
Disagree	0	0.0
Strongly Disagree	0	0.0

Please use the space below to elaborate on any of your responses related to organizational capacity.

Optional open-ended response.

Section 2: Human Capital Capacity—For the purposes of this survey, human capital capacity is defined as the extent to which a DWSRF agency has the staffing levels, training, and technical skills to effectively meet its program goals. We asked the state DWSRF administrators to rate their level of agreement with each statement below.

Statement: My organization has enough staff to manage IIJA funds.

Result	Tally	Percentage
Strongly Agree	9	19.6
Agree	19	41.3
Neither Agree nor Disagree	13	28.3
Disagree	5	10.9
Strongly Disagree	0	0.0

Statement: My organization’s personnel have been provided sufficient guidance to manage IIJA funds.

Result	Tally	Percentage
Strongly Agree	9	19.6
Agree	17	37.0
Neither Agree nor Disagree	14	30.4
Disagree	6	13.0
Strongly Disagree	0	0.0

Statement: My organization’s personnel have been equipped with the necessary skills to manage IIJA funds.

Result	Tally	Percentage
Strongly Agree	14	30.4
Agree	25	54.4
Neither Agree nor Disagree	7	15.2
Disagree	0	0.0
Strongly Disagree	0	0.0

Please use the space below to elaborate on any of your responses related to human capital capacity.

Optional open-ended response.

Section 3: Financial Capacity—For the purposes of this survey, financial capacity is the extent to which a DWSRF agency has sufficient financial resources to administer or implement the capitalization grant, such as meeting financial matching requirements. We asked the state DWSRF administrators to rate their level of agreement with each statement below.

Statement: My organization has the fiscal resources needed to provide state match for IJJA funds.

Result	Tally	Percentage
Strongly Agree	19	41.3
Agree	20	43.5
Neither Agree nor Disagree	3	6.5
Disagree	4	8.7
Strongly Disagree	0	0.0

Statement: My organization has identified sufficient eligible projects to use IJJA funds.

Result	Tally	Percentage
Strongly Agree	19	41.3
Agree	16	34.8
Neither Agree nor Disagree	9	19.6
Disagree	2	4.4
Strongly Disagree	0	0.0

Statement: Please use the space below to elaborate on any of your responses related to financial capacity.

Optional open-ended response.

Section 4: Obstacles

Question: What obstacles, if any, limit your DWSRF agency's capacity to manage IJJA funds?

Open-ended response.

Section 5: Technical Assistance—The EPA provides technical assistance to help communities identify drinking water infrastructure needs, plan for capital improvements, build capacity, and apply for the range of eligible DWSRF projects. The EPA is ramping up technical assistance offerings to help communities access infrastructure funding. We asked the state DWSRF administrators to rate their level of agreement with each statement below.

Statement: My organization can easily obtain assistance from the EPA with questions regarding the use of IJJA funds.

Result	Tally	Percentage
Strongly Agree	11	23.9
Agree	22	47.8
Neither Agree nor Disagree	10	21.7
Disagree	3	6.5
Strongly Disagree	0	0.0

Statement: I know who to contact at the EPA with questions regarding the use of IJJA funds.

Result	Tally	Percentage
Strongly Agree	26	56.5
Agree	17	37.0
Neither Agree nor Disagree	1	2.2
Disagree	2	4.4
Strongly Disagree	0	0.0

Please use the space below to elaborate on any of your responses related to technical assistance provided by EPA.

Optional open-ended response.

Section 6: Internal Controls and Identifying and Reporting Fraud, Waste, and Abuse—We asked the state DWSRF administrators to rate their level of agreement with each statement below.

Statement: My organization has controls in place to ensure that recipients of IIJA funds will spend the money appropriately and effectively.

Result	Tally	Percentage
Strongly Agree	31	67.4
Agree	14	30.4
Neither Agree nor Disagree	1	2.2
Disagree	0	0.0
Strongly Disagree	0	0.0

Statement: My organization’s personnel can recognize indicators of fraud, waste, or abuse.

Result	Tally	Percentage
Strongly Agree	23	50.0
Agree	21	45.7
Neither Agree nor Disagree	2	4.4
Disagree	0	0.0
Strongly Disagree	0	0.0

Statement: My organization’s personnel know how to report suspected fraud, waste, or abuse.

Result	Tally	Percentage
Strongly Agree	24	51.2
Agree	21	45.7
Neither Agree nor Disagree	1	2.2
Disagree	0	0.0
Strongly Disagree	0	0.0

Please use the space below to elaborate on any of your responses to internal controls and identifying and reporting fraud, waste, and abuse.

Optional open-ended response.

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