



Drinking Water State Revolving Fund

Protecting America's Public Health Since 1997

2018 Annual Report



A Message from the Acting Office Director

I am pleased to present the Drinking Water State Revolving Fund's 2018 Annual Report. This report is an opportunity to both highlight the past year's accomplishments and establish major focus areas for this new decade.

In 2018, we funded over \$2.8 billion in new drinking water infrastructure projects to communities of all sizes. We also funded \$181 million for critical activities including operator certification, water system capacity development, and source water protection.

Over the next few years, the EPA will focus on ways to maximize the program's resources through cash flow management and active community outreach. Together, these activities can strategically put each DWSRF dollar to work on behalf of the American people.

Together with the state programs, we leverage additional infrastructure funding through the Water Infrastructure Finance and Innovation Act (WIFIA) program and implement the new Water Infrastructure Improvements for the Nation (WIIN) Act drinking water grant programs to further extend the reach of public health protection.

I welcome this opportunity to share our accomplishments with you and thank you for your commitment to the work ahead this decade.



A handwritten signature in black ink that reads "Jennifer L. McLain". The signature is written in a cursive, flowing style.

Jennifer L. McLain Ph.D., Acting Director

Office of Ground Water and Drinking Water



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AIS Addendum



I. About the Drinking Water State Revolving Fund



The 1996 Amendments to the Safe Drinking Water Act created the Drinking Water State Revolving Fund (DWSRF) to help communities finance infrastructure improvements needed to protect public health and ensure compliance with drinking water standards. Each of the 50 states and Puerto Rico operate their own DWSRF programs and receive annual grants from the EPA, which in turn provide low-interest loans and other types of assistance to public water systems. The DWSRF programs are managed or co-managed by the state agencies that oversee drinking water systems and can therefore effectively prioritize infrastructure funding needs to protect public health.

The Safe Drinking Water Act (SDWA) directs states to give priority for the use of DWSRF project funds to:

- address the most serious risks to human health,
- ensure compliance with the requirements of the SDWA, and
- assist systems most in need on a per household basis according to state affordability criteria.

Not all drinking water problems, however, can be solved through capital financing of infrastructure improvements. With that in mind, Congress gave states the option to take a portion of their federal capitalization grant for “set-asides.” Set-asides can be used to administer state programs, provide technical assistance and training for water systems,

and fund other activities that support achieving the public health protection objectives of the SDWA. The programs and activities supported by set-asides include DWSRF administration, water system capacity development, operator certification, source water protection, small systems technical assistance, and support for the state Public Water System Supervision (PWSS) program. Each state determines the appropriate balance between water infrastructure projects and set-asides for their unique circumstances.

Through June 30, 2018, more than \$38.2 billion has been signed into 14,577 DWSRF loans* by the state programs to water systems to fund critical infrastructure needs. Furthermore, more than \$3.2 billion has been provided to states and water systems to support the non-infrastructure set-asides programs.

The DWSRF is an exceptionally versatile tool. In 2018, the DWSRF loan program improved the lives of nearly 55 million Americans, returning water systems to compliance and maintaining systems with aging infrastructure, while also focusing on small water systems that are most at risk. Systems serving fewer than 10,000 people accounted for 73 percent of the loans signed by state programs.

**Throughout this report, “loans” and “assistance agreements” are used interchangeably.*

II. Highlights From 2018

A. Continued Demand, Making Loans of All Sizes

In 2018, states provided more than \$2.8 billion in new infrastructure loans, the most assistance ever provided outside of the American Recovery and Reinvestment Act (ARRA) of 2009. This follows an upward trajectory over the past three years, as states adopt cash flow management and conduct more effective outreach to water systems. Exhibit 1 demonstrates this trend.

The DWSRF supports water systems and projects of all sizes across the country. While the median loan size was about \$1 million this year, the program's loans ranged from a few thousand dollars to hundreds of millions of dollars (see Exhibit 2). The State of California made the nation's smallest loan, for \$6,000, to the Bar-Len Mutual Water Company,

with about 125 persons served, for a planning study to address the water system's arsenic compliance issues. The State of New York made the nation's largest loan, a \$196 million agreement, to the New York City Municipal Water Finance Authority for design and construction of the Croton Filtration Plant. This is phase 12 of 16 for this project, which will serve over 1 million persons. The nation's most commonly-occurring DWSRF loan amount (or *mode*) was \$200,000 this past year.

Visually demonstrating the DWSRF program's broad, nationwide reach, Exhibit 3 shows counties with DWSRF-funded projects this past state fiscal year (SFY) (in purple) and between 2010 and SFY2017 (in gray).

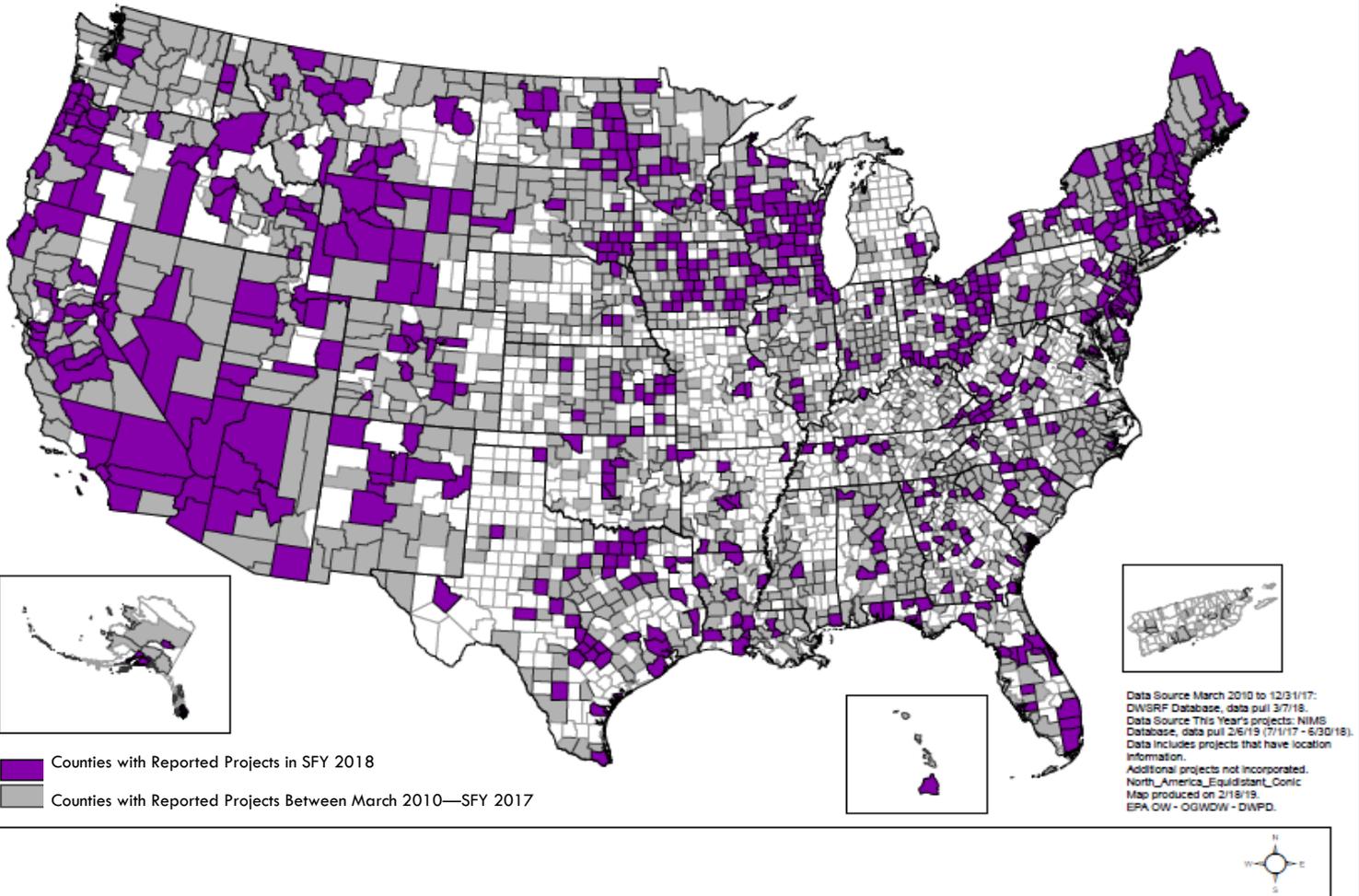
Exhibit 1: DWSRF National Assistance Provided (Loans Signed)



Exhibit 2: Distribution of DWSRF Loan Amounts in SFY 2018



Exhibit 3: Map of Counties with DWSRF Projects in SFY 2018 and Between March 2010—SFY 2017



B. Leveraging and Co-Funding Expand Program's Reach

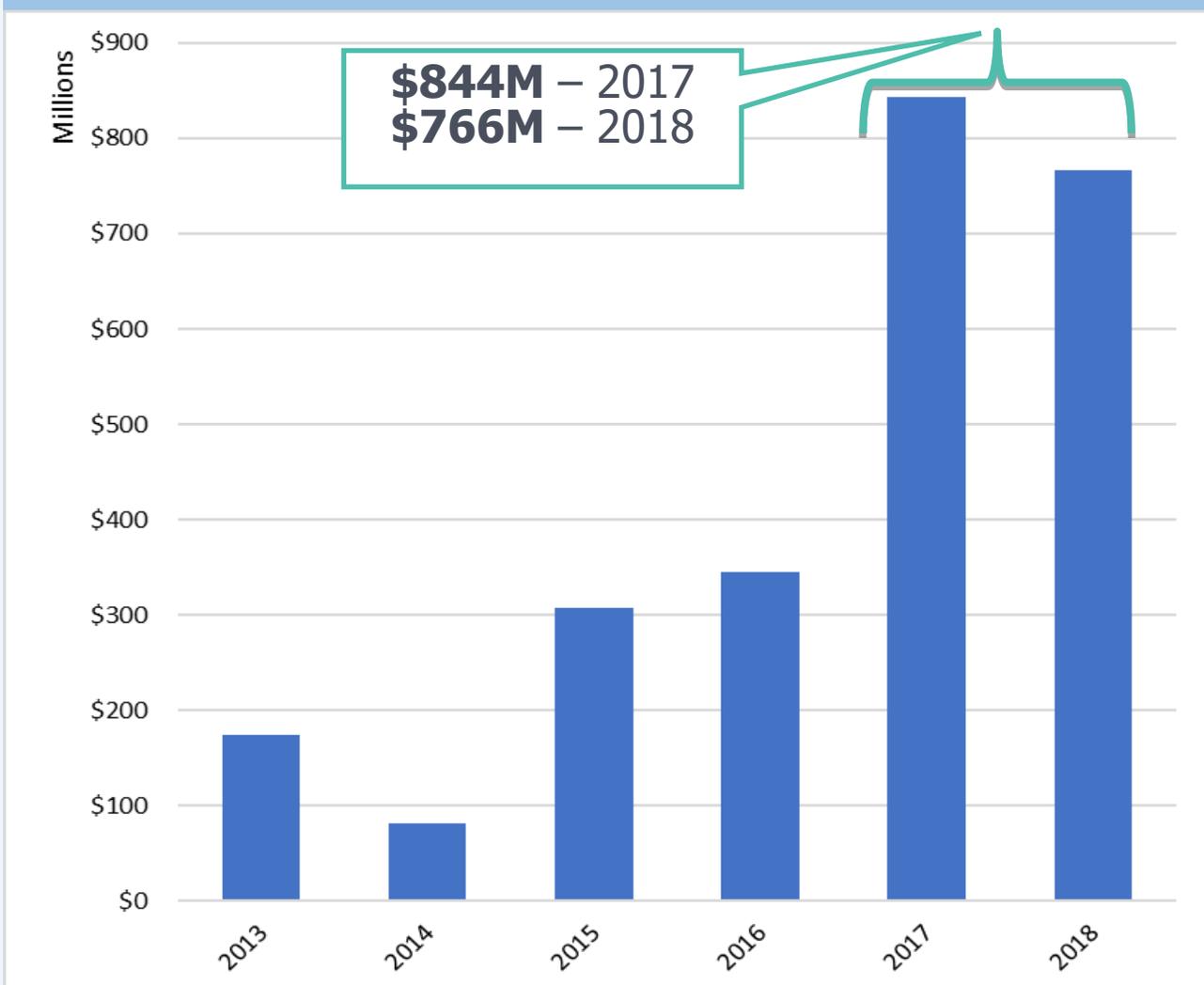
Increasing the amount of money available through the DWSRF is important to meeting our nation's drinking water needs. The state DWSRFs have two ways to quickly raise money to meet immediate needs where there are more projects than funds available. The first is for the state DWSRFs to borrow money on the bond market. In 2018, eleven state DWSRF programs borrowed \$766 million to assist projects that needed immediate financing. The second way involves borrowing money from the EPA's Water Infrastructure Finance and Innovation Act (WIFIA) program.

Exhibit 4 below shows leveraging in the past six years. Note the significant increase in 2017 and 2018. Leveraging is at a state's discretion and must be paired with an effective outreach strategy to

increase customer demand. After evaluating cash needs, some states choose to leverage nearly every year, and others episodically. Regardless of approach, state managers must carefully design their leveraging structure to minimize idle funds. Optimally, states will leverage when the amount of cash needed to pay construction invoices is greater than actual available cash on hand. With the ability to access the bond market when cash is needed in the future, states can confidently make more loans to communities in the near-term, expanding the reach of public health protection from the program.

Another way to expand the DWSRF's reach and benefits is through co-funding. Approximately one-quarter of the 2018 projects were co-funded with another source, including funds from the United States Department of Agriculture's Rural Development program and other state and private sources.

Exhibit 4: Annual Net Leveraged Bonds Issued



C. Helping Water Systems Achieve Compliance

The DWSRF has been instrumental in helping the nation's community water systems achieve and maintain compliance with health-based standards under the SDWA. Of the water systems receiving DWSRF loans in 2018, one-quarter (172) were out of compliance with a health-based SDWA standard in the previous five years. Exhibit 5 below maps the locations of these 172 water systems.

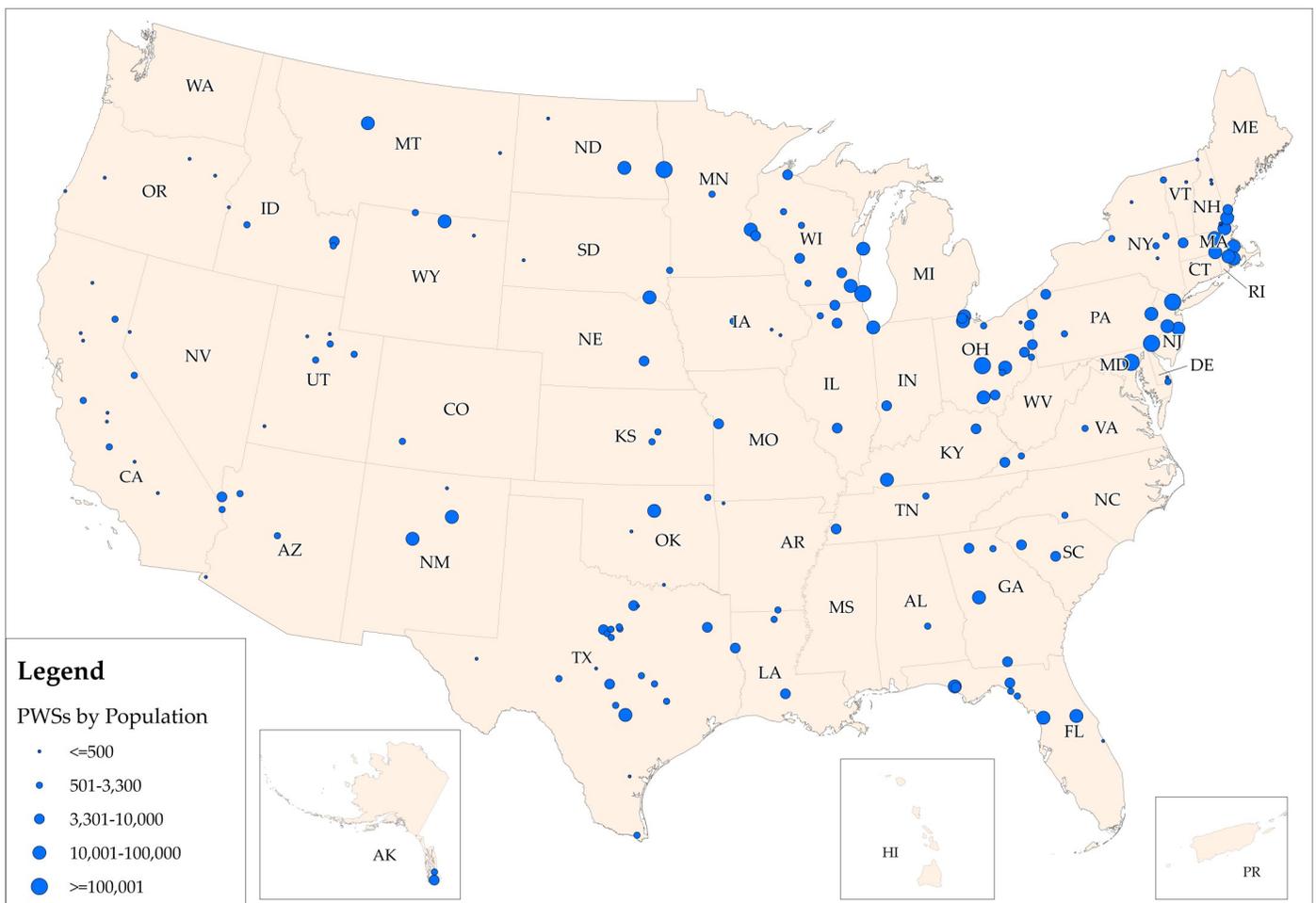
State DWSRF managers, partnering with their state Public Water System Supervision (PWSS) program colleagues, utilize the program's extraordinary flexibility to tailor assistance through the loan and set -aside portions of the fund to address a broad array of local needs.

American Iron and Steel Requirement

The American Iron and Steel (AIS) statutory requirement states that SRF assistance recipients must use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of public water system or treatment works. On October 23, 2018, the "America's Water Infrastructure Act" (AWIA) extended the AIS requirements for the DWSRF through fiscal year (FY) 2023.

For details about AIS compliance, waivers, and EPA oversight, please see the attached AIS addendum.

Exhibit 5: Public Water Systems with SFY 2018 Loans that had a Health-Based Violation in the Past 5 Years



III. How States Used DWSRF Infrastructure Funds

In 2018, the DWSRF provided more than \$2.8 billion in assistance and entered into 814 assistance agreements. Since 1997, the DWSRF has provided more than \$38 billion in assistance, and 35 percent of this assistance has been directed to communities with populations of 10,000 or fewer.

Half this year's funding went to transmission and distribution projects (Exhibit 6). This is the highest proportion for this category in program history. This more closely aligns with water systems' needs demonstrated in the Sixth Drinking Water Infrastructure Needs Survey and Assessment. The Survey confirmed that nearly two-thirds of the nation's drinking water infrastructure needs over the next two decades are for these types of projects. The EPA anticipates sustained, growing demand in distribution system projects over the coming years.

In 2018, the DWSRF facilitated assistance agreements with a broad diversity of communities, emphasizing a strong focus on communities serving 10,000 individuals or fewer. Approximately 73 percent of the 2018 loans provided were given to these smaller water systems. Principal forgiveness was a key tool utilized in these agreements; 67 percent of water systems serving populations of 500 or fewer received principal forgiveness, with 43 percent of those water systems receiving principal forgiveness for the full loan amount. As the charts in Exhibit 7 show, the proportion of assistance going to small systems in 2018 is similar to historic program values.

Exhibit 6: Assistance by Project Type (Millions of Dollars)

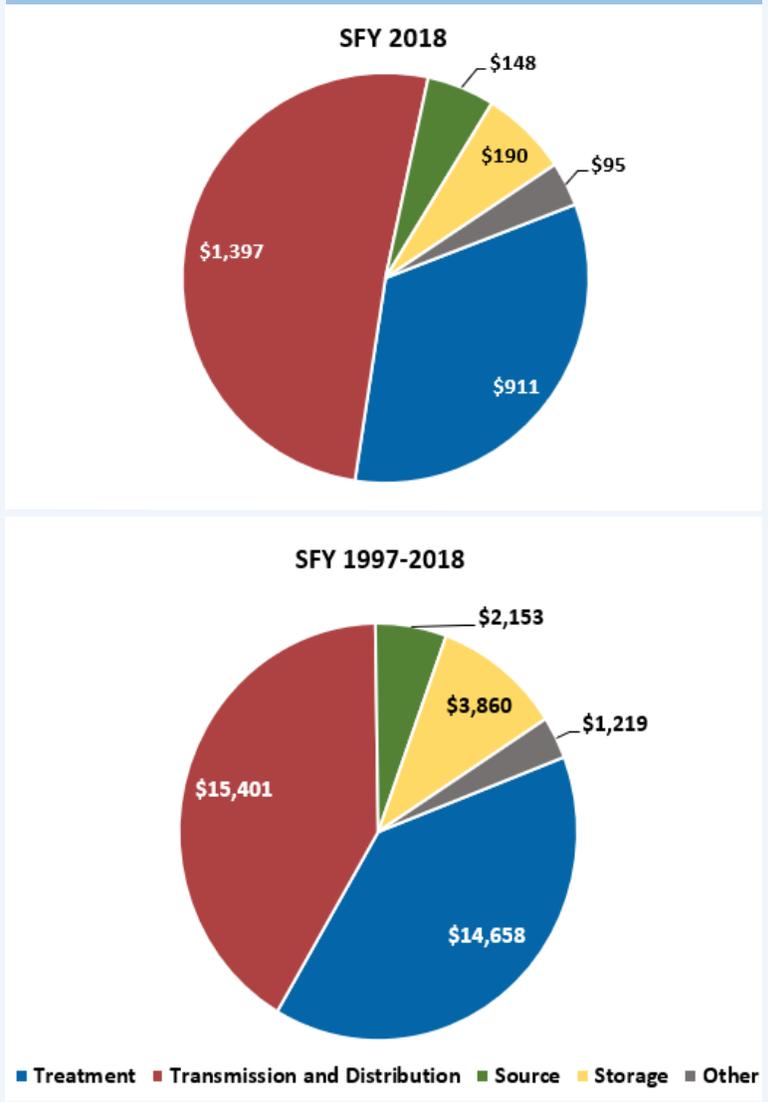
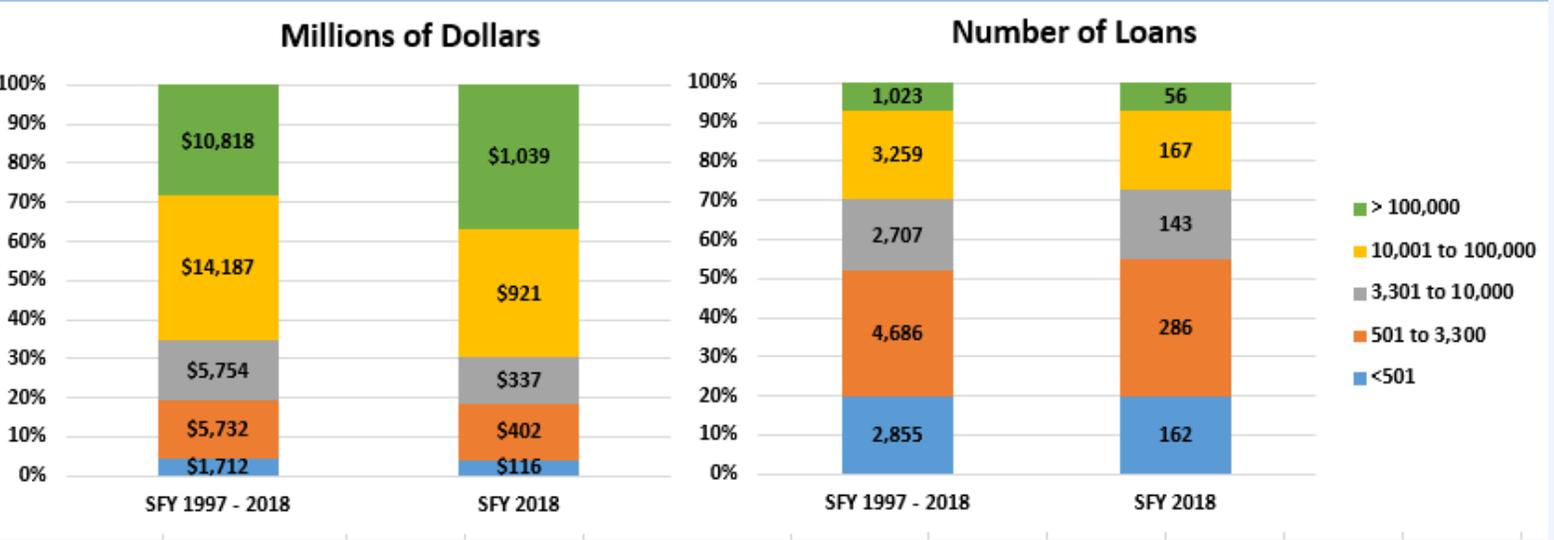


Exhibit 7: Assistance by Community Size



IV. The Decade Ahead: 2018 Through 2027

This decade, the program has a tremendous opportunity to maximize the use of DWSRF funds to meet the great drinking water-related public health needs across the United States. The [most recent Needs Survey](#) shows that \$472 billion is needed over the next two decades for DWSRF-eligible infrastructure. The DWSRF must be managed in a way to maximize the availability of funding to meet ready-to-proceed, documented water system needs. Financial forecasting, including cash flow management, is essential to the program's success this decade.

The DWSRF must also be operated in a way to help water systems achieve and maintain SDWA compliance. In 2018, approximately 3,500 community water systems had health-based SDWA violations. As part of the EPA's FY 2018-2022 Transformation Strategy, the Agency aims to reduce this total by 25 percent by 2022. Each non-compliant

water system has different challenges; some water systems may need infrastructure investment, some may need capacity-building resources, and others may need to partner with a neighboring water system through consolidation or other operational means. The DWSRF can and should be a part of the solution for many of these water systems. The program can also help SDWA-complaint water systems maintain their ability to provide safe drinking water. Through a successful marketing and outreach strategy, DWSRF programs will help communities understand how the DWSRF can meet their water system-specific needs this decade.

As visualized below in Exhibit 8, financial forecasting and marketing/demand management form two major structural elements for the program's success. Bridging these foundations are the program's inherent flexibilities.

Exhibit 8: DWSRF Flexibilities Bridge



A. Financial Forecasting

A revolving fund, with its dynamic inflows and outflows of funds, is fundamentally different than a traditional grant program and therefore must be managed in a fundamentally different way. By design, the program grows larger each year with infusions of federal capitalization grants and interest earnings from past loans. Cash flow management involves modeling inflows and outflows of monies in federal capitalization grants, state match, principal

repayments, interest earnings, and leveraged funds. Such management informs sound financial decisions for the program and empowers DWSRF managers to maximize the availability of resources for communities.

Using the DWSRF administrative set-aside, many states have successfully built financial modeling tools that accurately predict the revolving fund's cash availability over time. These cash flow analysis tools help state managers evaluate the "supply side" of

funding sources: the amount of money that is potentially available to lend for drinking water infrastructure construction.

States should also consider engaging in financial leveraging through the bond market and/or Water Infrastructure Finance and Innovation Act (WIFIA) to expand the reach of DWSRF program benefits.

With financial management based upon cash flow, DWSRF managers can confidently market the program to water systems, with a detailed understanding of how much funding is available to communities in the short, medium, and long-term.

B. Dynamic Program Marketing

The most successful DWSRF programs pair financial projections with dynamic outreach to water systems throughout their state, supporting the “demand side” of the program. This is accomplished by working with the state Public Water System Supervision (PWSS) program, the water industry, and associations. Talking to water systems of all sizes to understand their needs and to convey the opportunities available through the DWSRF will build demand.

As detailed at the beginning of this chapter, the Needs Survey showed that \$472 billion is needed in the next two decades for DWSRF-eligible infrastructure. The Survey contains a wealth of documented water system-level needs information useful for directly marketing the program. These data can be used as conversation starters with drinking water systems.

The [PWSS sanitary surveys](#) also have a wealth of information about drinking water systems that can be used to seek potential DWSRF customers. A sanitary survey is a review of a public water system to assess its capability to supply safe drinking water. The DWSRF can be a resource to address deficiencies found during the sanitary surveys. If a water system currently lacks the technical capacity to develop these capital improvement projects, DWSRF set-asides could be used to provide technical assistance, such as planning and design development.

C. Bridging the Foundations: New and Existing Flexibilities

In reauthorizing the DWSRF via America’s Water Infrastructure Act (AWIA) of 2018, Congress signaled continued strong support for the program. Congress also added new program flexibilities for state managers to consider, in addition to existing options.

States may now offer loan repayment terms up to 30 years to any DWSRF-eligible recipient, or up to 40

DWSRF Eligibility Highlights

- Lead service line replacement
- Drinking water treatment for harmful algal blooms (HABs) and per and polyfluoroalkyl substances (PFAS)
- Loans of nearly any dollar size

years for disadvantaged communities. These flexibilities enable states to reduce annual repayment costs for communities. States may now provide more of their annual federal capitalization grant as additional subsidy to those disadvantaged communities, further lowering the cost of critical infrastructure.

Congress also expanded the source water protection-related eligibilities under the Local Assistance Set-Aside, giving states and communities additional resources to promote preventative activities to protect the water supply.

These AWIA changes add to the suite of program flexibilities that are a hallmark of the DWSRF program, including below-market rate financing, the ability to provide capacity-building assistance to water systems, and support to state programs protecting drinking water.

D. Conclusion

The EPA’s national DWSRF Team stands ready to assist our state partners in achieving the fullest utilization of all sources of DWSRF funds to maximize the protection of public health in America this decade.



V. 2018 Financial Overview

A. Financial Success

The fundamental purpose of the DWSRF is to provide low-cost capital to finance sustainable, long-term public health protection. The fund's ability to assist projects that protect public health is dependent on three pillars:

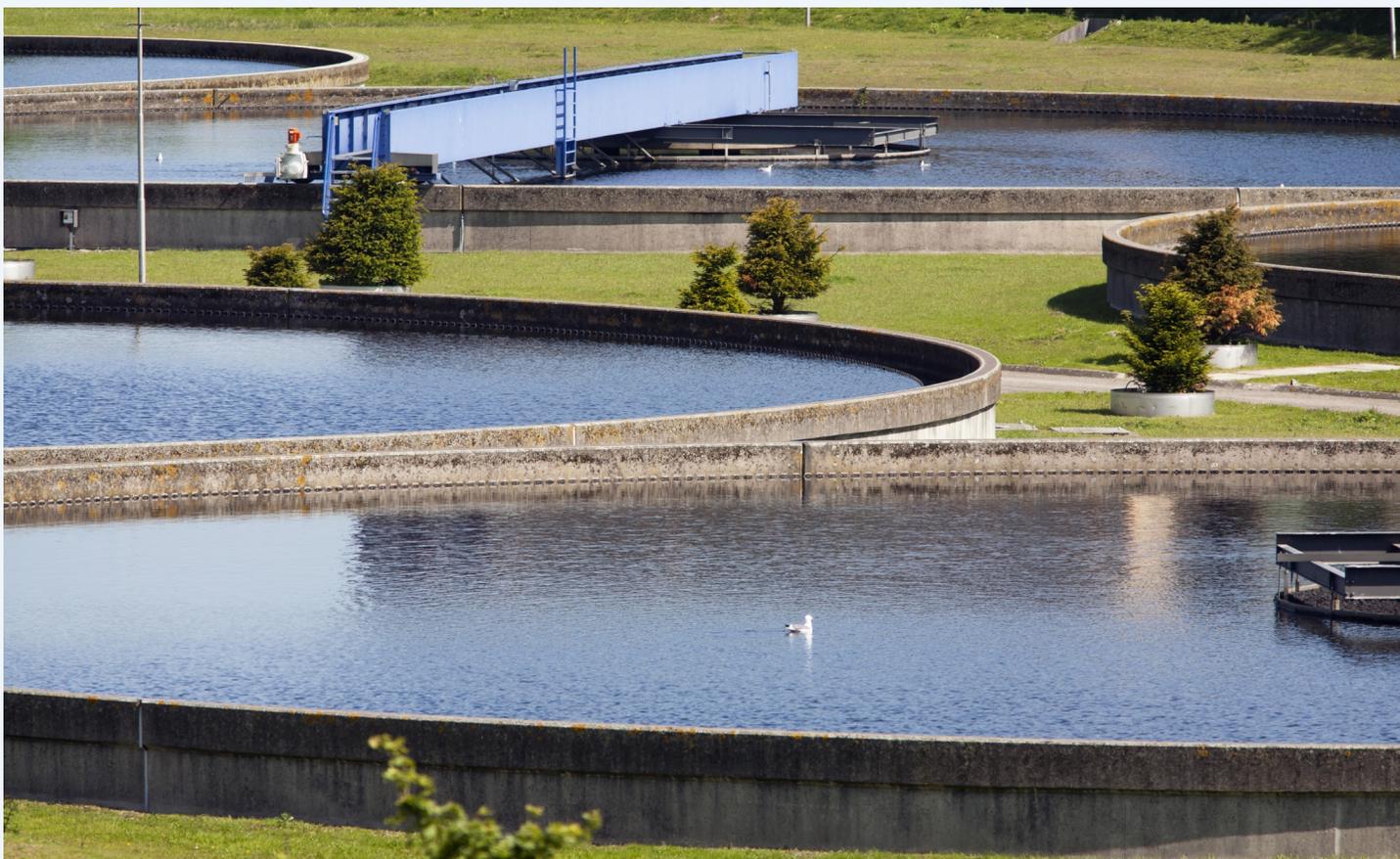
- continued federal capitalization,
- innovative, intelligent, and effective state management, and
- maintaining the fund's growth and revolving nature.

Since the DWSRF's inception, Congress has appropriated about \$20 billion into the fund. These funds have gone both to the revolving loan fund and the state set-asides. Together, the 51 state DWSRF programs have effectively leveraged these funds to provide \$38.2 billion in loans to the nation's water systems and \$3.2 billion to both states and water systems for set-aside programs to support capacity development, source water protection, and operator training and certification. For the loan program, this translates into \$1.95 in disbursements for every \$1 drawn from the Treasury.

From the 2010 appropriation onward, Congress mandated that a certain portion of the federal capitalization grant be provided to borrowers as additional subsidy. This allows states to aid communities most in need and incentivize particular types of projects.

B. Financial Reports

The Single Audit Act designates the threshold for auditing federal programs. Most DWSRF programs receive a program-specific audit in addition to auditing required under the Single Audit Act. Because the 51 DWSRF programs are independent state-level entities, no nationally-audited DWSRF program financial reports are available. Developed using the EPA's National Information Management System, national aggregate financial statements, best viewed as non-audited cash flow-based reports, are shown on the following pages.



1. Statement of Fund Activity

As shown in Exhibit 9 below, in SFY 2018, DWSRF programs executed approximately \$2.8 billion worth of assistance agreements. Overall for SFY 2018, assistance provided as a percent of funds available (“pace of funds provided”) was 96 percent, indicating that states have successfully directed federal funding to drinking water infrastructure projects. This robust percentage of funds utilization also demonstrates a high demand for DWSRF funding. A portion of the disbursed funds are used to provide principal forgiveness to disadvantaged communities or to help finance specific water systems meeting the criteria for state priority funding; in SFY 2018, more than \$263 million was provided in the form of principal forgiveness.



Exhibit 9: Statement of Fund Activity (Millions of Dollars)

Annual Fund Activity	SFY2017	SFY2018
Federal Capitalization Grants	823.1	794.2
State Matching Funds	263.4	179.9
New DWSRF Funds Available for Assistance	2,809.6	2,705.6
Project Commitments (Executed Loan Agreements)	2,738.9	2,814.4
New Set-Aside Funds Available for Assistance	169.3	180.7
Project Disbursements from the Fund	2,593.8	2,534.7
Cash Draws from Federal Capitalization Grants (Fund) ¹	835.7	643.4
Cash Draws from Set-Asides ¹	193.4	193.8
Cumulative Fund Activity		
Federal Capitalization Grants	19,182.3	19,976.6
State Matching Funds	3,726.3	3,906.2
DWSRF Funds Available for Assistance	37,126.5	39,832.2
Project Commitments (Executed Loan Agreements)	35,406.7	38,221.1
Set-Aside Funds Available for Assistance	3,042.5	3,223.1
Project Disbursements from the Fund	30,868.4	33,403.1
Cash Draws for Fund	15,874.9	16,518.3
Cash Draws for Set-Asides	2,774.6	2,968.4
Loan Principal Forgiven	(306.3)	(263.7)

¹ This includes funds drawn from previous grants.

2. Statement of Revenues, Expenses, and Earnings

The statement, Exhibit 10, is a useful tool to view the sources of funds and the expenses of the DWSRF program nationally and how those impact net assets. For 2018, interest earnings exceeded expenses, adding to the growth of the program. From 2017 to 2018, operating expenses increased by \$4.04 million, with an increase in DWSRF funds used for refunding. DWSRF net assets increased by \$978 million, reflecting the steady increase in assets since the program's inception.

3. Statement of Cash Flow

This statement, Exhibit 11, is a useful tool to view the impact of DWSRF activities on cash on hand. DWSRF programs require a reserve to maintain their

programs. With the program reaching its first milestone under the ULO strategy of spending down built up federal funds, it is expected that states will need to draw heavily from state cash reserves in the near future to pay invoices from the high level of lending at which they are operating. While state match bond proceeds decreased by \$3.79 million, leveraged bond proceeds added \$670 million to program cash flows. In SFY 2018, states paid \$535.9 million in principal and interest on leveraged bonds and state match bonds, demonstrating a decrease of \$25.7 million from the previous year. Bond issuance is one method by which states may balance their loan demand with the need to maintain the long-term sustainability of their revolving funds.

Exhibit 10: Statement of Revenues, Expenses, and Earnings (Millions of Dollars)

Operating Revenues	SFY2017	SFY2018
Interest on Fund Investments	67.5	102.3
Interest on DWSRF Loans	293.1	301.8
<i>Total Operating Revenues</i>	360.6	404.1
Operating Expenses		
Bond Interest Expense	150.4	157.3
DWSRF Funds Used for Refunding ²	1.5	0
Amortized Bond Issuance Expense	7.0	5.7
<i>Total Operating Expenses</i>	158.9	163.0
Non-Operating Revenues and Expenses		
Cash Draws from Federal Capitalization Grants ¹	1,029.1	836.1
State Contributions ³	183.2	103.5
Loan Principal Forgiven	(306.3)	(263.7)
Transfers from (to) CWSRF	1.9	66.4
<i>Total Non-Operating Revenues (Expenses)</i>	907.9	742.2
Increase (Decrease) in Net Assets	1,109.6	983.3
Net Assets		
Beginning of Year	19,567.6	20,677.1
End of Year	20,677.1	21,660.5

¹ This includes funds drawn from previous grants.

² Refunding occurs when outstanding bonds are retired with newly-issued bonds.

³ This includes state match but excludes state match bonds.

Exhibit 11: Statement of Cash Flow (Millions of Dollars)

Operating Activities	SFY2017	SFY2018
Loan Disbursements to be Repaid	(2,593.8)	(2,534.7)
Loan Principal Forgiven	306.3	263.7
Loan Principal Repayments	1,221.1	1,200.1
Interest Received on Loans	293.1	301.8
State Contributions ³	183.2	103.5
Cash Draws from Federal Capitalization Grants ¹	1,029.1	836.1
<i>Total Cash Flows from Operating Activities</i>	439.1	170.5
Non-Capital Financing Activities		
Bond Issuance Expense	(4.6)	(7.1)
Interest Paid on Leveraged and State Match Bonds	(150.4)	(157.3)
DWSRF Funds Used for Refunding ²	(85.3)	0
Principal Repayment of Leveraged Bonds	(336.7)	(329.5)
Principal Repayment of State Match Bonds	(74.6)	(49.1)
State Match Bond Proceeds	80.2	76.5
Cash Received from Transfers with CWSRF	1.9	66.4
Gross Leveraged Bond Proceeds	760.2	671.9
<i>Total Cash Flows from Non-Capital Financing Activities</i>	190.9	271.7
Investing Activities		
Cash Flows from Capital and Related Financing Activities	0	0
Interest Received on Fund Investments	67.5	102.3
Deposits to Debt Service Reserve for Leveraged Bonds	27.7	45.3
<i>Total Cash Flows from Investing Activities</i>	95.2	147.6
Net Increase (Decrease) in Cash and Cash Equivalents	725.2	589.8
Cash and Cash Equivalents		
Beginning of Year	6,763.2	7,488.3
End of Year	7,488.3	8,078.1

¹ This includes funds drawn from previous grants.

² Refunding occurs when outstanding bonds are retired with newly-issued bonds.

³ This includes state match but excludes state match bonds.

4. Statement of Net Assets

Total assets increased by \$1.3 billion, while total liabilities increased by \$366.2 million; therefore, net assets increased by \$1.35 billion, or 5.4 percent of total 2017 net assets. This reflects the overall health

of the DWSRF program, which has shown a net asset growth of at least 5 percent per year over the past 10 years (Exhibit 12).

Exhibit 12: Statement of Net Assets (Millions of Dollars)

Assets	SFY2017	SFY2018
Cash and Cash Equivalents	7,152.2	7,440.7
Debt Service Reserve - Leveraged Bonds	641.2	595.8
Loans Outstanding	17,062.4	18,133.3
Unamortized Bond Issuance Expenses ⁴	63.7	65.1
<i>Total Assets</i>	24,919.4	26,234.9
Liabilities		
Match Bonds Outstanding	251.3	278.7
Leveraged Bonds Outstanding	3,995.6	4,334.4
<i>Total Liabilities</i>	4,246.9	4,613.1
Net Assets		
Federal Contributions	18,638.9	19,474.9
State Contributions	2,773.0	2,876.5
Transfers - Other SRF Funds	534.3	595.6
Other Net Assets	(1,269.0)	(1,286.6)
<i>Total Net Assets</i>	20,677.2	21,660.5
Total Liabilities & Net Assets	24,924.0	26,273.6

⁴ Unamortized bond issuance expenses are costs that have been incurred but have not been fully recognized (amortized). These costs will be recognized (amortized) over time over the remaining life of the bonds outstanding, similar to a pre-paid expense.



VI. DWSRF Set-Asides

States may reserve a portion of their annual capitalization grants to fund non-infrastructure programs supporting safe drinking water. Set-asides expand the impact of DWSRF by helping to ensure that water systems have the necessary technical, managerial and financial capacity to get the greatest public health protection from their drinking water infrastructure investments. Each of the four DWSRF set-aside categories has a different connection to public health. Upon receiving capitalization grants, states may reserve funds under each of the four categories at their discretion and up to the maximum allowable limit. This section provides an overview of the four set-asides and a breakdown of set-aside usage in 2018 and cumulatively.

Administrative and Technical Assistance (4% Set-Aside)

States may set aside the greatest of \$400,000, 0.2 percent of the current Fund value, or 4 percent of the capitalization grant to administer their DWSRF programs and to provide technical assistance to water systems of any size. For example, states may use these funds to hire staff or to assist water systems with project plans or loan applications.

Small Systems Technical Assistance (2% Set-Aside)

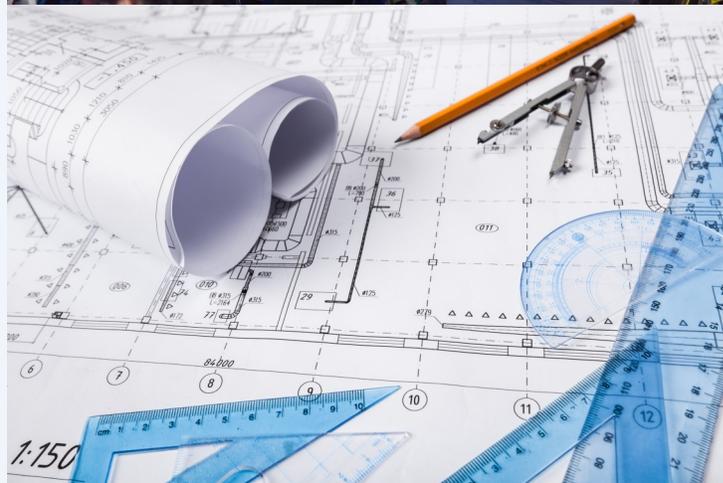
States may reserve up to 2 percent of their annual capitalization grant to fund programs providing assistance to drinking water systems serving 10,000 people or fewer. Small water systems often face greater challenges than larger systems, and they frequently have difficulty obtaining funding. This set-aside helps them to build their capacity and to better align their operations with current population needs.

State Program Management (10% Set-Aside)

This set-aside may be used to fund Public Water System Supervision (PWSS) programs overseeing all drinking water programs in individual states. Funding from this set-aside can be used for source water protection work, capacity development, operator certification programs and other activities.

Local Assistance and Other State Programs (15% Set-Aside)

States can use up to 15 percent of their capitalization grant (but no more than 10 percent for any single activity) to provide loans for the purchase of land, to support source water protection, to implement voluntary water quality protection activities or to assist water systems with their capacity development.



Recent Set-Aside Usage

In 2018, states took more of the state program management (10 percent) set-aside and local assistance (15 percent) set-aside than they have

historically (Exhibit 13). Exhibit 14 shows how states used each set-aside account in 2018 and cumulatively since the DWSRF program inception in 1997.

Exhibit 13: Set-Asides Taken as a Percentage of Capitalization Grants

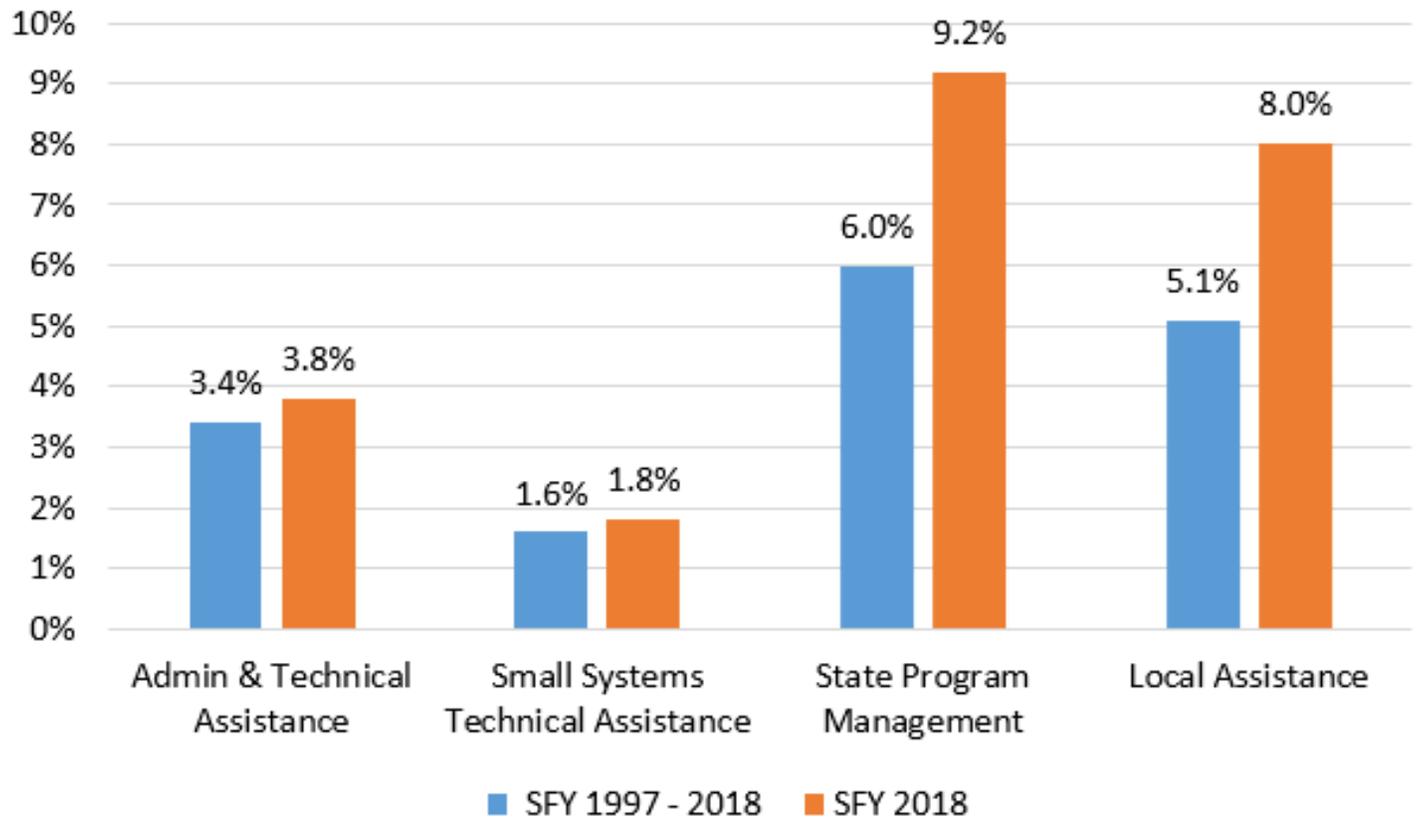


Exhibit 14: Set-Aside Expenditures (Millions of Dollars)

Set-Aside Category	Sub-Category	SFY2018	Cumulative (1997-2018)
Administrative	Administrative Assistance	\$ 29.13	\$ 645.17
	Technical Assistance	\$ 0.00	\$ 3.23
Small Systems	Technical Assistance	\$ 11.73	\$ 275.80
State Program Management	PWSS Administration	\$ 63.83	\$ 816.54
	SWP Technical Assistance	\$ 3.98	\$ 100.22
	Capacity Development	\$ 6.85	\$ 167.45
	Operator Certification Programs	\$ 1.77	\$ 42.77
Local Assistance & Other State Programs	Loans for SWP Land Acquisition	\$ 0.07	\$ 8.95
	Loans for Incentive-Based SWP Measures	\$ 0.00	\$ 7.75
	SWP Area Delineation/ Assessment	\$ 2.84	\$ 124.42
	Wellhead Protection	\$ 20.87	\$ 317.29
	Technical or Financial Assistance	\$ 52.47	\$ 461.77
TOTAL		\$ 193.54	\$ 2,971.36

VII. DWSRF Project Highlights

These projects exemplify the DWSRF's ability to help water systems achieve and maintain SDWA compliance, to reach disadvantaged communities, and the program's flexibility in set-aside eligibilities.

Region 1

Litchfield, NH: Perfluorooctanoic acid (PFOA) was identified in 370 private wells. In response, the Pennichuck East Utility (PEU) received \$2.4 million of DWSRF assistance to improve the water supply capacity for several PEU water systems by interconnecting the Pennichuck Water Works distribution system with the part of the water distribution system operated by PEU in Litchfield. This project, which started in April 2018, increased the capacity of PEU and allowed those with PFOA detected in their private wells to connect to the existing public water system.



Woodland Summit Community Water Association, CT: Woodland Summit Community Water Association (WSCWA) replaced its existing finished water storage tank and iron and manganese removal systems with \$280,000 in DWSRF assistance. These improvements addressed concerns about the current treatment systems inability to effectively remove excess iron and manganese from the source water. This project, completed in February 2019, allowed WSCWA to continue providing a reliable source of drinking water to residents.



Region 2

North Castle, NY: North Castle constructed an ultraviolet (UV) disinfection facility to treat water supplied by the Kensico Reservoir for North Castle Water District No. 1. An Administrative Order on Consent (AOC) was issued to North Castle by the EPA, which describes an enforceable schedule to achieve compliance with the LTESWTR through construction and operation of an UV facility by October 1, 2016. This project was completed in May 2018 and utilized \$587,000 in DWSRF assistance.



Bordentown, NJ: Bordentown received \$1.2 million in DWSRF assistance for the replacement of their existing Well #2 with a new well, Well #2A. Bordentown exceeded the allowable maximum contaminant levels (MCL) for gross alpha and was under an Administrative Order, signed November 30, 2015. Project costs included engineering and design, construction management, remediation, and abandoning Well #2. This project was completed in August 2017.



Region 3



Sussex County, DE: The Delaware DWSRF program partnered with the Sussex County Conservation District and the DE Rural Water Association to identify high-risk public wells in or near active agricultural lands in Sussex County. The 15% Local Assistance DWSRF Set-Aside was used for a variety of activities, including reviewing GIS mapping and PWSS records to identify high-risk wells (nitrate maximum contaminant level of 5 parts per million (ppm) or higher), supplement Sussex County's current cover-crop program to ensure all agricultural lands near high-risk wells use best management practices, and promote the cover crop program. The State hopes to expand this program to other counties, if funding is available.



Port Royal, VA: In 2014, Port Royal received a Notice of Violation for significant deficiencies related to the town's elevated storage tank and its structural integrity. Port Royal received planning and design assistance through the Community Engineering Corps, a volunteer organization, and technical assistance from Southeast Rural Community Assistance Project (SERCAP). The US Department of Agriculture Rural Development and Virginia DWSRF program provided a combined \$1.4 million in assistance. The collaboration among these groups allowed Port Royal to replace or repair nearly all the water distribution mains, construct a new water storage tank, and install new water meters.

Region 4



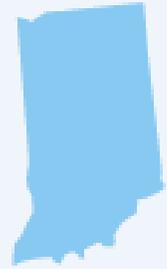
Clio, SC: Clio utilized approximately \$266,000 in DWSRF assistance for the replacement of water mains to improve water quality issues and comply with a State Consent Order. Existing cast iron water mains had mineral buildup, affecting water quality and flow. This tuberculation led to water discoloration and several customer complaints. The new water mains increased flow and decreased water discoloration issues. This project was completed in July 2018 and improved water quality for residents.



Monroe County, KY: Monroe County used more than \$15.7 million in DWSRF assistance (including \$2.9 million in loan principal forgiveness) for the construction of a new water intake, a 600,000 gallon water storage tank, a pump station, transmission mains, and a two million gallon per day (gpd) water treatment plant. Monroe County previously purchased potable water from the City of Tompkinsville, which frequently experienced water shortages, particularly during drought periods. Monroe County's new water treatment plant will treat water from the Cumberland River. This project, serving a state-defined disadvantaged community, was completed in October 2018 and provides a reliable source of drinking water to residents.

Region 5

Indiana Lead Sampling Program for Public Schools: Using SRF fee income and the 10% State Program Management DWSRF Set-Aside, the Indiana Finance Authority (IFA) implemented a lead sampling program for public schools during the 2017-2018 school year. During the program's first year, 915 school buildings enrolled in the program and 57,000 samples were collected. Ninety-five percent of all the fixtures tested had lead concentrations under 15 parts per billion (ppb). However, Sixty-two percent of schools had at least one fixture with lead concentrations over 15 ppb, also known as action level exceedance (ALE). Seven percent of schools had at least 10 fixtures with ALEs (schools average 40 fixtures per school). IFA expended approximately \$4.4 million for the cost of sample collection and analysis, technical assistance, data platform creation, and project management activities.



Moweaqua, IL: Moweaqua utilized approximately \$3.2 million in DWSRF assistance for various projects including a new well and new water treatment plant. A well house, piping, pumps and motors with variable frequency drives and an emergency generator were installed as part of the well project. The new water treatment plant included iron and nitrate removal, pressure filters, ion exchange water softening, brine regeneration system, sodium hypochlorite disinfection system, fluoridation system, low and high service pumps, process controls and new building with offices and a laboratory. This project allows Moweaqua to continue providing safe drinking water to residents.



Region 6

Honey Grove, TX: Honey Grove's water distribution system experienced low pressure levels that did not meet state capacity and pressure requirements and had significant water loss. To address these issues, Honey Grove received \$2.7 million in DWSRF assistance to rehabilitate aging, undersized water mains and install new water mains. This project results in approximately 30,000 linear feet of water mains improvements for Honey Grove and a reliable water supply for its residents.



Las Vegas, NM: Las Vegas, a state-defined disadvantaged community, received over \$150,000 in DWSRF assistance for Phase II of its storage tank rehabilitation project. This project included cleaning and inspecting the tank; purchasing and installing a mixer to improve tank recirculation; performing minor piping modifications, and putting the tank back in service until the start of Phase III. This project was completed in August 2017, and Phase III began in May 2018.



Region 7



Spencer Municipal Utilities, IA: The Iowa DWSRF program provided \$14 million in assistance to Spencer Municipal Utilities for the construction of two new wells. These wells were necessary to meet redundancy requirements and ensure that peak demand could be met with the largest well out of service. Spencer also made treatment improvements, replaced outdated equipment and upgraded its supervisory control and data acquisition (SCADA) system. This project, completed in June 2017, ensured a reliable drinking water source for the community.



Clarksville, MO: Clarksville, a state-defined disadvantaged community, received a \$200,000 DWSRF grant for the construction of a new well. This project also included the installation of approximately 1,100 feet of polyvinyl chloride (PVC) water mains, which connected the new well to the existing water treatment plant. Clarksville's project was completed in February 2019.

Region 8



Midland, SD: Midland had haloacetic acid (HAA5) concentrations over the maximum contaminant level (MCL), resulting in several Disinfectants and Disinfection Byproducts Rule (DBPR) violations. Midland constructed a new 54,000-gallon water storage facility with mixing system and installed over 3,000 linear feet (LF) of water mains to provide looping in the distribution system. This project replaced aging infrastructure and eliminated DBPR violations. Midland's project utilized \$205,000 in DWSRF assistance and was completed in September 2017.



White Hills Water Company, UT: This construction project, completed in October 2017, consisted of replacing the 10-inch water mains, rehabilitating two above-ground steel storage tanks, adding fencing around the well site, and installation of several valves. The Utah DWSRF program provided more than \$1.0 million in assistance (\$518,000 in loan principal forgiveness) to this state-defined disadvantaged community.

Region 9

Pioneer Union School District, CA: The aging 20,000 gallon redwood storage tank for the Pioneer Union School District (PUSD) was consistently leaking and had previously tested positive for bacteria. To improve safety and reliability, PUSD is in the process of replacing the existing tank with a steel storage tank of the same capacity. The tank site will also be retrofitted with a booster station, control panels, and a disinfection system. PUSD was categorized by the California DWSRF program as a severely disadvantaged community and received a funding commitment of \$355,000 in the form of loan principal forgiveness to design and construct this project.



Water Loss Audits, HI: The Hawaii Department of Health (DOH) provided funding from the 15% Local Assistance Set-Aside to support a water audit program, which is a state requirement that the HI Department of Land and Natural Resources—Commission on Water Resource Management (DLNR-CWRM) established. Using contract support, DLNR-DWRM conducted Phase 1 of its HI Water Audit Validation Effort (WAVE) on 45 discrete county-owned public water systems (PWSs). All 45 PWSs submitted their Level 1 water loss audits by July 2018. Phase 2 has recently begun and includes 51 large capacity PWSs (serving population >1000), and their Level 1 water loss audits are due by July 2020.



Region 10

Bellingham, WA: Algae in Lake Whatcom resulted in filter clogging and reduced filter run times for Bellingham's treatment plant. Treated water had to be used to backwash the clogged filters, increasing costs for Bellingham and decreasing the amount of treated water available for consumption. To address this issue, Bellingham utilized \$12 million in DWSRF assistance to implement a dissolved air flotation (DAF) process to mitigate the algae. Additionally, Bellingham's existing gas chlorination system was converted to hypochlorite generation for safety reasons and the treatment plant's controls were updated to accommodate the new systems and processes. To offset the energy costs associated with the DAF process, Bellingham is using a grant from the Northwest Clean Air Agency to install solar panels. DWSRF assistance will save Bellingham approximately \$2.4 million over the life of the loan.



Anchorage Water and Wastewater Utility, AK: The Anchorage Water and Wastewater Utility received \$2.8 million in DWSRF assistance to rehabilitate 16-inch cast iron water mains adjacent to the Alaska Railroad Corporation (ARRC) yard. The water mains identified for rehabilitation have had breaks in the past. This increases the potential for bacterial contamination of the water distribution system. In addition, the site is known to have chemical contaminants that could enter the water distribution system as well.



State Agencies Managing the DWSRF

EPA Region 1

Connecticut Department of Public Health
Connecticut Office of the Treasurer
Maine Department of Human Services
Maine Municipal Bond Bank
Massachusetts Clean Water Trust
Massachusetts Department of Environmental Protection
Massachusetts Executive Office of Administration and Finance
New Hampshire Department of Environmental Services
Rhode Island Infrastructure Bank
Rhode Island Department of Health
Vermont Department of Environmental Conservation

EPA Region 2

New Jersey Department of Environmental Protection
New Jersey Environmental Infrastructure Trust
New York State Department of Health
New York State Environmental Facilities Corporation
Puerto Rico Department of Health
Puerto Rico Infrastructure Financing Authority

EPA Region 3

Delaware Department of Health and Social Services
Maryland Water Quality Financing Administration
Maryland Water and Science Administration
Maryland Department of the Environment
Pennsylvania Infrastructure Investment Authority
Pennsylvania Department of Environmental Protection
Virginia Department of Health
Virginia Resources Authority
West Virginia Department of Health and Human Resources
West Virginia Water Development Authority

EPA Region 4

Alabama Department of Environmental Management
Florida Department of Environmental Protection
Georgia Environmental Finance Authority
Georgia Department of Natural Resources
Kentucky Infrastructure Authority
Kentucky Department of Environmental Protection
Mississippi State Department of Health
North Carolina Department of Environmental Quality
South Carolina Department of Health and Environmental Control
South Carolina Budget and Control Board
Tennessee Department of Environment and Conservation
Tennessee Comptroller of the Treasury

EPA Region 5

Illinois Environmental Protection Agency
Indiana Finance Authority
Michigan Department of Environmental Quality
Michigan Municipal Finance Authority
Minnesota Public Facilities Authority
Minnesota Department of Health
Ohio Environmental Protection Agency
Ohio Water Development Authority
Wisconsin Department of Natural Resources
Wisconsin Department of Administration



EPA Region 6

Arkansas Natural Resources Commission
Arkansas Department of Health
Arkansas Development Finance Authority
Louisiana Department of Health
New Mexico Finance Authority
New Mexico Environment Department
Oklahoma Department of Environmental Quality
Oklahoma Water Resources Board
Texas Water Development Board
Texas Commission on Environmental Quality

EPA Region 7

Iowa Department of Natural Resources
Iowa Finance Authority
Kansas Department of Health and Environment
Kansas Department of Administration
Kansas Development Finance Authority
Missouri Department of Natural Resources
Missouri Environmental Improvement and Energy Resources Authority
Nebraska Department of Environmental Quality



EPA Region 8

Colorado Water Resources and Power Development Authority
Colorado Water Quality Control Division
Colorado Department of Local Affairs
Montana Department of Environmental Quality
Montana Department of Natural Resources and Conservation
North Dakota Department of Health
North Dakota Public Finance Authority
South Dakota Department of Environment and Natural Resources
Utah Department of Environmental Quality
Wyoming Office of State Lands and Investments
Wyoming Department of Environmental Quality
Wyoming Water Development Office

EPA Region 9

Arizona Water Infrastructure Finance Authority
California State Water Resources Control Board
Hawaii Department of Health
Nevada Division of Environmental Protection
Nevada Office of Financial Assistance

EPA Region 10

Alaska Department of Environmental Conservation
Idaho Department of Environmental Quality
Oregon Health Authority
Oregon Infrastructure Finance Authority, Business Oregon
Oregon Department of Environmental Quality
Washington State Department of Health

DWSRF At-a-Glance

Assistance Provided for Projects (Millions of Dollars)

	2018	1997 2018
Total, by Project Type	2,814.4	38,223.9
Planning and Design Only	48.0	415.7
Construction		
Treatment	910.9	14,657.8
Transmission & Distribution	1,396.8	15,400.9
Source	147.7	2,153.0
Storage	189.6	3,860.3
Purchase of Systems	0.8	294.4
Restructuring	14.8	130.5
Land Acquisitions	10.3	92.0
Other	95.4	1,219.3
Total, by Population Served		
Less than 501	116.2	1,712.1
501 to 3,300	401.6	5,731.5
3,301 to 10,000	337.3	5,754.3
10,001 to 100,000	920.7	14,186.7
100,001 and Above	1,038.6	10,817.8
# of Loans, by Population Served		
Less than 501	162	2855
501 to 3,300	286	4686
3,301 to 10,000	143	2707
10,001 to 100,000	167	3259
100,001 and Above	56	1023

Funds Available for Projects (Millions of Dollars)

	2018	1997 2018
Total Funds	2,705.6	39,832.2
Federal Capitalization Grants	794.2	19,976.6
State Match	179.9	3,906.2
Net Leveraged Bonds	811.5	8,814.1
Net Loan Principal Repayments	870.5	7,753.2
Net Interest Earnings	197.8	2,198.1
Net Transfers with CWSRF	32.3	407.1
Less Set Asides	(180.7)	(3,223.1)

Other Key Statistics

- In 2018, every \$1 federal drawn to DWSRF programs resulted in **\$1.95** disbursed.
- The DWSRF average interest rate in 2018 was **1.6%**, compared to 3.3% market value interest rate. This lower interest rate results in over **\$500 million** in savings to local community ratepayers over the life of these loans.
- States also awarded **\$263.7 million** as principal forgiveness to communities in 2018. These grant like funds help keep water rates affordable for communities.
- **23** states sell bonds in order to further leverage their DWSRF programs.

For more information about the Drinking Water State Revolving Fund, please contact us at:

Drinking Water State Revolving Fund Program
U.S. Environmental Protection Agency
1201 Constitution Avenue, NW (Mail code 4606M)
Washington, DC 20460

Internet: www.epa.gov/dwsrf

Office of Ground Water and Drinking Water
July 2019
EPA 816 R 19002





Drinking Water State Revolving Fund American Iron and Steel Requirement

2018 Annual Report Addendum



I. Overview of the American Iron and Steel (AIS) Requirement

A. History of the AIS Requirement

Congress first introduced a domestic procurement preference for the State Revolving Fund (SRF) programs under the American Recovery and Reinvestment Act (ARRA) of 2009, which provided the SRF programs an additional \$6 billion in funding. ARRA included a "Buy American" provision that required Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) assistance recipients of these ARRA funds to use domestic iron, steel, and manufactured goods.

In 2014, Congress introduced a new domestic procurement preference for the SRF programs under the Consolidated Appropriations Act (CAA) of 2014 (P.L. 113-76), which included the "American Iron and Steel (AIS)" requirement. The AIS requirement states that CWSRF and DWSRF assistance recipients must use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of public water

system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014, through the end of Federal Fiscal Year (FFY) 2014. Since the enactment of the CAA of 2014, the AIS requirement has been included for DWSRF-funded projects in each subsequent appropriation bills. On October 23, 2018, the President signed the "America's Water Infrastructure Act of 2018" (AWIA). Section 2022 of AWIA amended Section 1452(a)(4)(A) of the Safe Drinking Water Act (SDWA) to extend the AIS requirement for projects receiving financial assistance from the DWSRF through FFY 2023. For details see the memorandum, [Application of American Iron and Steel Requirements for Drinking Water State Revolving Fund Projects for Fiscal Years 2019 Through 2023](#). Exhibit 1 shows a timeline of the legal authorities of the AIS requirement for the DWSRF program through FFY 2018.

Exhibit 1: Timeline of AIS Legal Authority for the DWSRF Programs

2009 Congress passed the ARRA of 2009, which includes the "Buy American" provision and was the first domestic procurement preference for SRF programs

2014 Congress passed the CAA of 2014 which included the AIS requirement for the DWSRF program through September 30, 2014

2014 Congress passed the Consolidated and Further Continuing Appropriations Act of 2015 which included the AIS requirement for SRF programs through September 30, 2015

2015 Congress passed the CAA of 2016 which included the AIS requirement for the DWSRF program through September 30, 2016

2016 Congress passed the Further Continuing and Security Assistance Appropriations Act of 2017, which included the AIS requirement for SRF programs through April 28, 2017

2017 Congress passed the CAA of 2018 and Supplemental Appropriations for Disaster Relief Requirements Act of 2017, which included the AIS requirement for the DWSRF program through

2018 Congress passed the CAA of 2018, which included the AIS requirement for the DWSRF program through September 30, 2018

2018 The President signed the "America's Water Infrastructure Act of 2018" (AWIA), which extends the AIS requirement for the DWSRF program through September 30, 2023

Iron and Steel Products Covered by the AIS Requirement

Under the AIS requirement, an iron or steel product is considered one of the following products that is made primarily of iron or steel and is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole covers;
- Municipal castings;
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel;
- Reinforced precast concrete; and
- Construction materials.

Primarily Iron or Steel, Permanently Incorporated

Under the AIS requirement, a product is considered to be made primarily of iron and steel if it is made up



of greater than 50% iron or steel, measured by material cost. For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). The assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, it does not need to be produced in the United States. However, if a product is listed above, made primarily of iron or steel and permanently incorporated into the project, then the product must be produced in the United States, or otherwise be covered by a waiver (discussed more in the Section II). For a product to be produced in the United States all manufacturing processes, excluding application of external coatings of components, must take place domestically the EPA has published an [implementation memo and a series of question and answer](#) documents that address the types of projects that must comply with the AIS requirement and the types of products covered by the AIS requirement.



Project Highlight: Roswell, NM

The EPA visited the Water Main Replacement Project for the City of Roswell, NM in February 2018. The city of Roswell received \$4.8 million in DWSRF funding for the removal and replacement of portions of 36-inch and 48-inch diameter concrete cylinder water mains installed in the 1960s. Due to corrosive soil areas, the mains were leaking and failing as evidenced by numerous breaks in recent years. The city had previously spent \$2 million in spot repairs. Ductile iron pipe was used for the 36-inch water main

and fiberglass was used for the 48-inch water main. The City disqualified the two lowest bidders on the 36-inch main project because they were not using AIS-compliant pipe. However, the selected contractor on the 36-inch main project was the low bidder on the 48-inch main project. The 36-inch diameter water main was replaced in 2015. The 48-inch diameter water main replacement project started in April 2017 and is now complete.



Project Highlight: Gainesboro, TN

The EPA visited the Town of Gainesboro, TN water line and meter replacement project in February 2018. The project was broken into three contracts under a single \$648 thousand DWSRF loan. The first contract was to replace service lines, the second to replace distribution lines, and the third to install meters. The meters include both zone meters to better track distribution water loss and radio read customer meters. The purpose of this project was to reduce leaks in the distribution system, which were leading to greater than 50 percent unaccounted-for water. At

the time of the site visit, AIS product certifications and documentation were on file for all products incorporated into the project and the certifications were all letters from the manufacturer's representative. Also, the project engineer was tracking *de minimis* items in a clear and comprehensive manner. Following the criteria of the national waiver, the products were low cost and incidental items and were well under five percent of the material costs. Construction for this project began June 2017 and is now complete.



II. Compliance with the AIS Requirement

A. First and Foremost, Buy Domestic

DWSRF assistance recipients should procure domestic iron and steel products to ensure compliance with the AIS requirement. A state or assistance recipient can contact the EPA if they are having difficulty locating a domestic product and the EPA can help with product research.

B. Certification Letters

Manufacturers should provide certification letters to verify that their iron or steel products comply with the AIS requirement. These certification letters also establish accountability and better enable assistance recipients to take enforcement actions against potential violators. A proper certification letter should assert that all manufacturing processes for purchased iron or steel products were domestically-performed. The EPA recommends these letters contain the following five key elements:

- **Products Delivered-** The letter should list the specific iron or steel product(s), including the quantity, delivered to the project site.
- **Location of Manufacturer-** The letter should include the city and state of the manufacturing facility where the product or process took place (not its headquarters), multiple locations are okay as long as all of them are in the U.S.
- **Reference to Specific Project-** The letter should include the name of the project or jurisdiction where the product was delivered.
- **Signature of Company Representative-** The letter should include a signature from a company representative on company letterhead.
- **Reference to the AIS requirement-** The letter should include a reference to the EPA's AIS requirement, especially if the letter also references other domestic preference laws (e.g. ARRA's Buy American requirement or the Buy America Act).

C. Waivers

The EPA has authority to waive the AIS requirement and to issue waivers for a case or category of cases

where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the U.S. in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent. There are two main types of waivers: national and project-specific.

Rise in Domestic Manufacturing

The EPA has seen a steady rise in domestically produced iron and steel products since the inception of the AIS requirements in 2014. Manufacturers have constructed new foundries and continue to invest in their domestic manufacturing capabilities. As a result, products the EPA had previously approved waivers for due to lack of domestic availability are now being readily manufactured in the United States. The EPA will continue to promote domestic manufacturing through the AIS requirements.



National Waivers

National waivers are readily available for use by assistance recipients or manufacturers and, therefore, do not require any approval by the EPA prior to use. As of June 30, 2018, the EPA has issued the following five national waivers:

- **De Minimis Waiver**- a public interest waiver that allows SRF assistance recipients to use a small percentage of incidental iron and steel products of unknown or non-domestic origin in their projects. For more details see the memorandum, [De Minimis Waiver Pursuant to Section 436 of P.L. 113-76, Consolidated Appropriations Act.](#)
- **Plan and Specs Waiver**- a public interest waiver that allows assistance recipients to use non-domestic iron and steel products for eligible projects that had engineering plans and specifications approved by an appropriate state agency prior to and on April 2014. For more details see the memorandum, [Plans and Specifications Waiver of Section 436 of P.L. 113-76, Consolidated Appropriations Act.](#)
- **Minor components in Iron and Steel Products (with Cost Ceiling)**- an availability waiver that allows iron and steel product manufacturers to include a small percentage of non-domestic, minor components in otherwise AIS-compliant products. For more details see the memorandum, [National Product Waiver for Minor Components in Iron and Steel Products \(with Cost Ceiling\).](#)
- **Short-Term Product Waiver for Stainless Steel Nuts and Bolts Used in Pipe Couplings, Restraints, Joints, Flanges, and Saddles**- an availability waiver that allows iron and steel product manufacturers the use of non-domestic stainless-steel nuts and bolts in the specified products that are otherwise AIS-compliant. This waiver has been extended several times since originally approved in 2015. The final extension of this waiver is currently in place until February 24, 2020; upon expiration, the EPA has indicated the waiver will not be renewed. For more details

see the memorandum, [Final Extension of the Short-Term Product Waiver for Stainless Steel Nuts and Bolts Used in Pipe Couplings, Restraints, Joints Flanges, and Saddles.](#)

- **Product Waiver for Pig Iron and Direct Reduced Iron** – an availability waiver that allows iron and steel product manufacturers to use non- domestic pig iron and direct reduced iron in otherwise AIS-compliant products. For more details see the memorandum, [National Product Waiver for Pig Iron and Direct Reduced Iron.](#)



Project-Specific Waivers

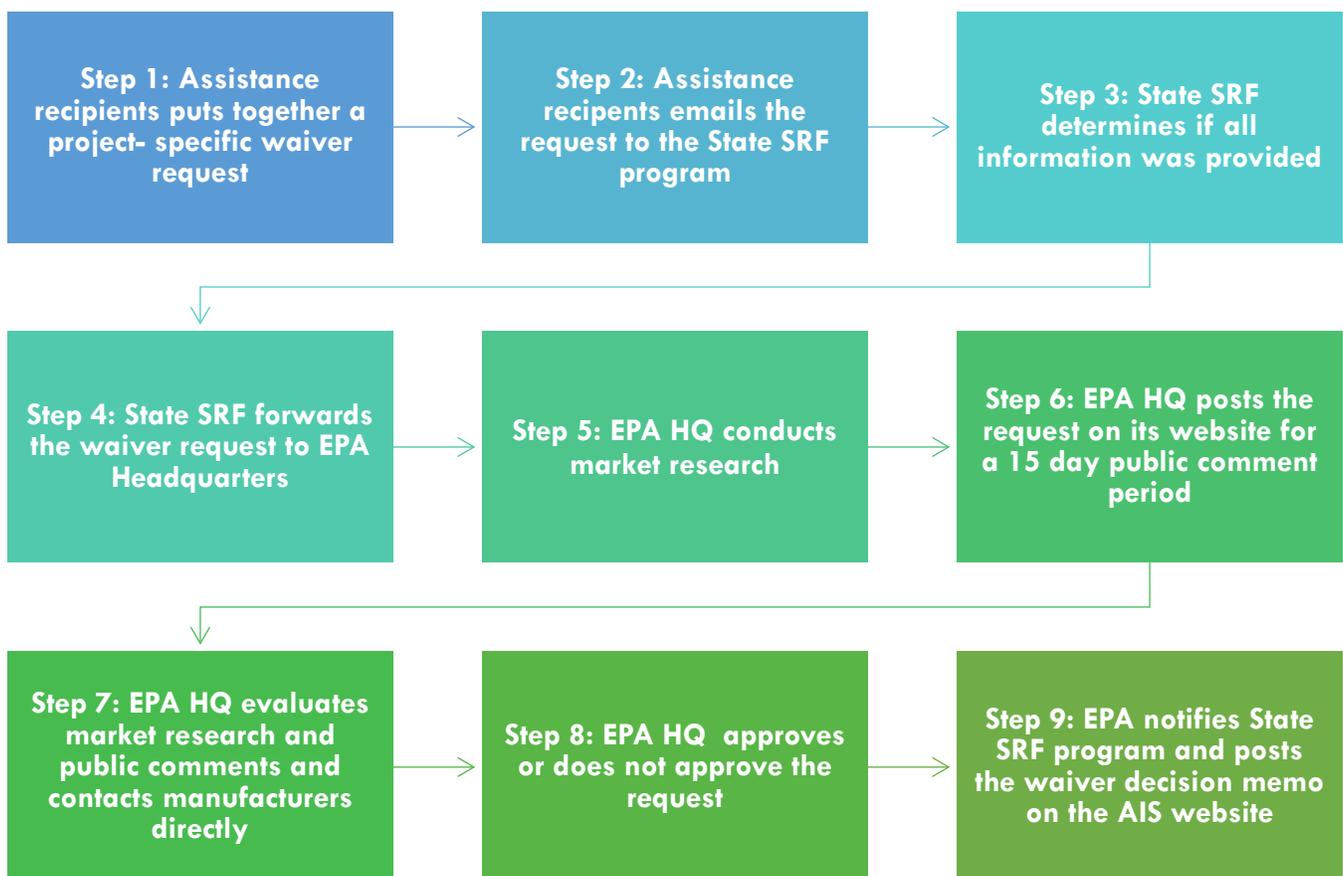
Project-specific waivers are for the use of a specified non-domestic product for a specific project. An assistance recipient may request this waiver from the EPA through their state SRF Program. Exhibit 2 shows the multi-step decision process of a project-specific waiver request. Waiver requests must be approved by the EPA before a non-domestic iron or steel product can be permanently incorporated into an SRF-funded project. Because these waiver requests are both project and product specific, any other assistance recipient that wishes to use a similar product must apply for a separate waiver based on specific project circumstances. As of June 30, 2018, the EPA approved 17 project-specific waivers for DWSRF projects, with 6 being approved in SFY 2018.

All approved and not approved project-specific waiver requests can be found on the [EPA AIS website](#).

D. Noncompliance

A DWSRF assistance recipient is in noncompliance with the AIS requirement if a non-domestic iron or steel product, not covered by an EPA-issued waiver, is permanently incorporated into their project. If there is potential noncompliance, it is the responsibility of the state DWSRF program to work with the assistance recipient on corrective measures (i.e., requesting a project-specific waiver or replacing the product with a practicable domestic alternative). The EPA is available to assist the state SRF program with assessing appropriate enforcement action if the assistance recipient fails to complete the corrective measures.

Exhibit 2: Decision Process for Project-Specific Waiver Request



Project Highlight: Arkansas City, KS

The EPA visited the City of Arkansas City, KS Water Treatment Plant Project in April 2017. A \$22 million assistance agreement for Arkansas City, one of the largest in Kansas at the time, included two projects: 1) Construction of a new 1.5 MG pre-stressed concrete finished water storage tank; and 2) Construction of a new 5.4 MGD reverse osmosis water treatment plant and associated site work, including mechanical, electrical, supervisory control and data acquisition (SCADA) and process systems.

The project includes a significant amount of iron and steel products. The City revised the design during the bid phase to accommodate the lack of a domestic alternative for one of the products needed. A bid addendum was issued to allow alternative materials for restrained joints. This change allowed the City to avoid having to request a product specific waiver to use a non-domestic product. The City was utilizing the national *de minimis* waiver and had a list of the items to-date that were covered by this waiver. At the time of the site visit the new storage tank was complete apart from testing and disinfection to put the tank into service. Construction of the new water treatment plant was underway and is now complete.



Project Highlight: Winnsboro, SC

The EPA visited the Broad River Raw Water Intake in the town of Winnsboro, SC in May 2018. The Town received \$13 million in DWSRF funding to establish a new intake on the Broad River to serve the water treatment plant and includes a new intake and pump station, as well as, a transmission main to transport raw water to the treatment plant. Previously, the water treatment plant relied on a reservoir that was dependent on rainfall. During recent droughts, the reservoir proved inadequate requiring the Town to purchase water from other water systems at a significant cost. The design for the project was completed in Fall 2017 and construction began in December 2017. The project is now complete. The engineer collected the certification letters during the submittal process and will keep copies for at least 3 years, a best practice recommended by the EPA. The engineer will also provide the letters to the Town.



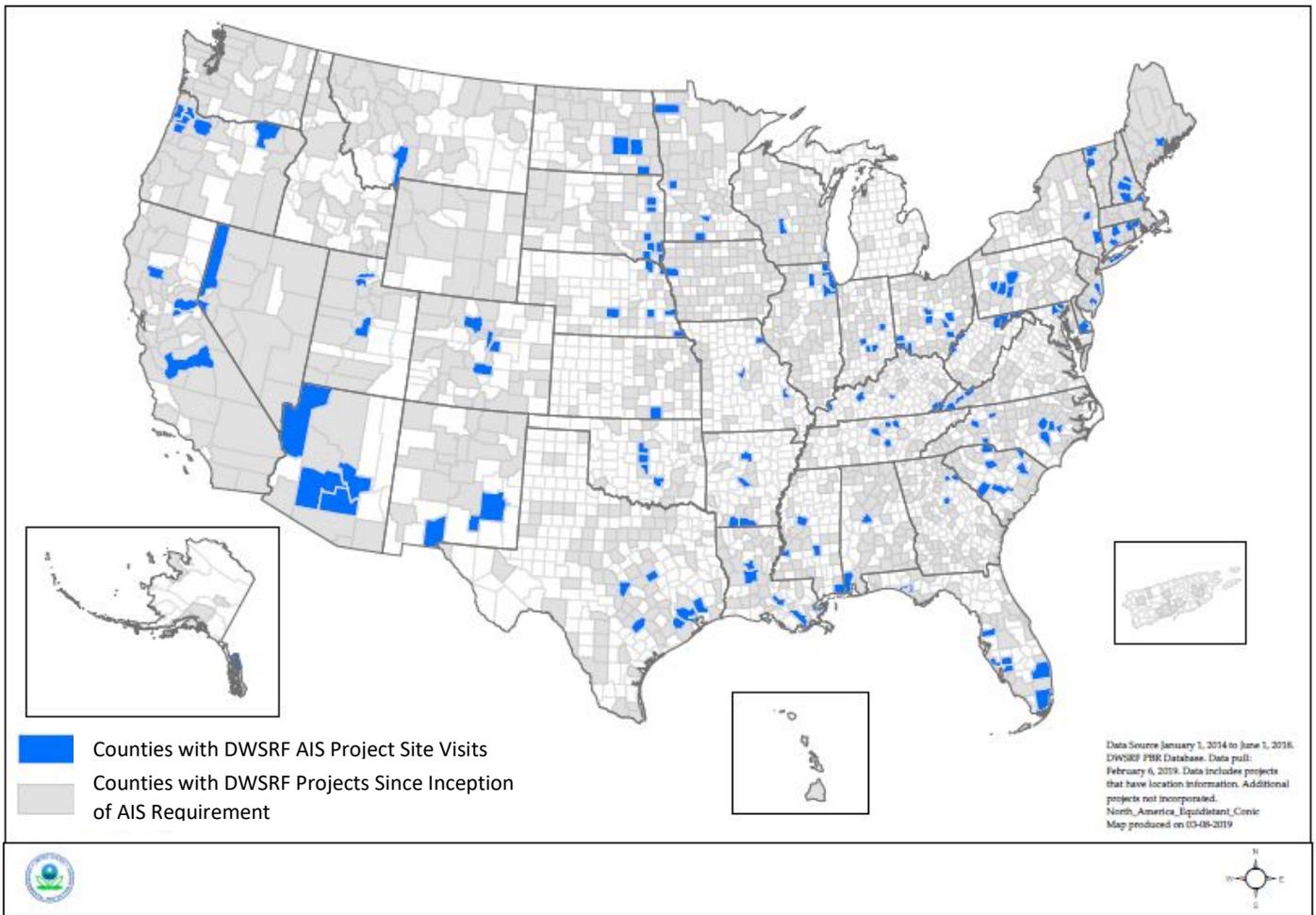
III. Oversight of the AIS Requirement

A. Project Site Visits

As a part of the EPA’s oversight of the AIS requirements, the EPA conducts informal project site visits. These visits assess consistency of AIS implementation and initiate one-on-one discussions with assistance recipients to reiterate AIS requirements, conduct preliminary review of project AIS documentation and materials, and identify potential areas of non-compliance for projects to address prior to substantial completion. Following the site visit, the EPA provides the state SRF program and assistance recipient with observations and recommendations for improving AIS documentation.

Exhibit 3 highlights all of the projects that have been visited since the inception of the AIS requirement in January 2014. As of June 30, 2018, the EPA has conducted a total of 170 site visits at 46 of the 51 DWSRF programs, visiting 57 projects in 15 states during SFY18. These projects range in size, cost, and type. Of the projects visited in SFY18, the lowest total project cost was approximately \$215,000 and the highest was \$196 million; while the smallest population served was one hundred and the largest was one million.

Exhibit 3: Project Site Visit Map Since the Inception of the AIS Requirement (January 2014)



Common Observations

Generally, the EPA has observed domestic products being purchased and installed at DWSRF-funded project sites, and the visits continue to confirm that most products covered by the AIS requirements are readily available from domestic sources. Some common observations include inadequate or missing certification letters and unfamiliarity with or inappropriate use of national AIS waivers, especially the *de minimis* waiver.

B. Trainings

The EPA conducts trainings and outreach activities to engage various groups through in-depth discussions on AIS requirements and implementation. The trainings are attended by SRF assistance recipients, state SRF program staff, consulting engineers, general construction contractors, suppliers, and manufacturers. The EPA tailors the information presented based on the target audience. During SFY18, the EPA participated in 12 training and outreach events, including manufacturer meetings, state trainings, and national conference presentations. The EPA offers these trainings on an ongoing basis upon request.



For more information about the Drinking Water State Revolving Fund, please contact us at:

**Drinking Water State Revolving Fund Program
U.S. Environmental Protection Agency
1201 Constitution Avenue, NW (Mail code 4606M)
Washington, DC 20460**

Internet: www.epa.gov/drinkingwatersrf

EPA 816-R-19-009 July 2019



Looking to the Future

Since 2014, the EPA has provided billions of dollars to states under the Drinking Water State Revolving Fund program for drinking water infrastructure system upgrades in thousands of communities across the United States. With the successful implementation of the AIS requirements to date, an overwhelming majority of these DWSRF projects have installed domestic products, thus protecting American manufacturing jobs, creating local construction jobs, and protecting public health. The EPA will continue to promote domestic manufacturing and conduct robust oversight to ensure appropriate application of the AIS requirements.