U.S. Chamber of Commerce

Small and Disadvantaged Community Water Funding Roadmap

Prepared by
the U.S. Chamber of Commerce in partnership with

VEOLIA

The Water Center
University of Pennsylvania

Introduction

Communities cannot exist without a reliable supply of drinking water. In the U.S., the 20th century saw these basic elements of public health and civic life become widely available across the country. As government funding allowed communities to put new technologies to work, Americans grew to expect that every community deserves quality drinking water and wastewater treatment—improving public health, allowing business to thrive, spurring economic growth, and creating better futures for everyone.

Today, America's water and wastewater systems are showing their age. Treatment plants built for an earlier time are reaching the end of their useful lives, no longer able to function efficiently or manage new environmental challenges. Governments face higher costs to keep these systems running, much less to treat emerging contaminants, reduce their environmental impacts, and prepare for the challenges of a changing climate. Customers are facing higher bills for less reliable service, but the cost of decaying infrastructure is not measured just in money: It can result in less reliable water that fails to meet modern standards, hurting a community's economic prospects as well as its public health.

Unfortunately, all these trends impact small and disadvantaged communities much more acutely. Time and again, the communities least able to pay for necessary infrastructure upgrades have become the most at risk when that infrastructure fails. Fortunately, there is growing awareness in Washington that ensuring equitable access to water and wastewater services is a national priority— and there is new funding and technical assistance (TA) to make it happen.

Almost 50 years after passage of the Clean Water Act and Safe Drinking Water Act, the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law, allocates transformational funding for water resource management and infrastructure improvement over five years, especially focused on small and disadvantaged communities. These funds, along with regularly appropriated funds, are set to modernize clean drinking water and wastewater systems in these communities and continue efforts to ensure universal access to water, sanitation, and hygiene (WASH) services for the more than 2 million Americans currently excluded.

According to the DigDeep report titled *Draining: The economic impact of America's hidden water crisis*, the water access gap in the U.S. is costing the economy more than $8 billion annually. The IIJA allocates more than $50 billion to the Environmental Protection Agency (EPA), $8.3 billion to the Bureau of Reclamation, $3.5 billion to the Indian Health Services, and additional resilience funding across various agencies for water and wastewater infrastructure projects to repair aging water delivery systems, secure dams, complete rural water projects, and protect aquatic ecosystems. In addition to IIJA allocations, the U.S. Department of Agriculture (USDA) Rural Development Water and Environmental Programs (WEP) provide funding to rural communities for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas with recent obligations of over $2.0 billion annually.

In October 2022, the U.S. Chamber of Commerce , together with Veolia and the Water Center at University of Pennsylvania, convened more than 100 public- and private-sector stakeholders for the Small and Disadvantaged Community Water Dialogue. Leaders in small and disadvantaged communities have made it clear that the state of water infrastructure is top of mind. But understanding potential options to improve water systems, the role of the private sector in assisting these efforts, and navigating the funding landscape can be complex and overwhelming.

The roadmap is intended to—

- Lay out solutions to help communities and companies get started on water innovation, including interim, decentralized solutions and water reuse.
- Share best practices for small and disadvantaged communities to access the significant IIJA funding and other federal resources.
- Outline a policy agenda to fill needed gaps in water infrastructure funding, policies, and technical assistance to ensure that small and disadvantaged communities can access resources for sustainable water supplies, to support environmental justice initiatives, and build modern, resilient drinking water infrastructure.

The U.S. Chamber stands ready to collaborate across the business community and with all relevant stakeholders to ensure that small and disadvantaged communities are able to deliver affordable, high-quality water that meets all applicable standards for citizens and businesses to rely on.

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Roadmap

Step 1: Getting started *See Appendix A for more information.*

Reaching out to the relevant technical assistance providers and finance centers is the first step for small and disadvantaged communities to receive assistance for their water systems.

EPA provides technical assistance to communities that identify drinking, waste, or stormwater infrastructure needs and apply for a range of eligible projects under the Clean Water State Revolving Fund (CWSRF), the Drinking Water State Revolving Fund (DWSRF), and tribal or territory funding programs. EPA's Water Infrastructure and Resiliency Finance Center provides financing information to help local communities make informed decisions for drinking water, wastewater, and stormwater infrastructure to protect human health and the environment. The Center partners with Environmental Finance Centers (EFCs), which have received IIJA funding to deliver targeted TA, including holistic and planning solutions, to local governments, states, tribes, territories, and non-governmental organizations to protect public health, safeguard the environment, and advance environmental justice. Climate and resilience planning in Step 6 must be included as communities think through their approach.

EPA also partners with the Capacity Development Program, the National Rural Water Association, and the Rural Community Assistance Partnership. In addition, the Federal Emergency Management Agency (FEMA) provides nonfinancial TA on holistic hazard mitigation planning and project support to help communities reduce disaster damage, build resilience, and sustain successful mitigation programs. Communities can also seek assistance from the private sector, drawing on businesses with experience in improving infrastructure, promoting innovative technologies, and structuring the necessary financing. Many private water companies, which partner with public water and wastewater utilities across the U.S., offer an array of public-private partnership (P3) options to optimize operations and maintenance while local governments maintain control of their assets.

USDA Rural Development WEP provides Water and Waste Disposal Technical Assistance and Training Grants to help qualified, private nonprofits deliver technical assistance and training to: identify and evaluate solutions to water and waste problems; help candidates prepare applications for water and waste disposal loans/grants; and help associations improve the operation and maintenance of water and waste facilities in eligible rural areas.

Step 2: Identifying projects, engineering requirements, and capital options to ensure bankable projects. *See Appendix B for more information.*

Understanding the available options and opportunities is critical for small and disadvantaged communities as they begin to pursue capital projects. Community leaders should be prepared to dedicate ample time and resources to predevelopment planning and requirements to help ensure that their communities are better able to access funding and achieve successful implementation.

Implementation involves communication, coordination, capacity consultation, and climate-focused discussions to ensure that communities are aware of the project and capital options available to them. This process of formulating an approach and gathering information about funding sources, TA entry points and streamlined service, P3s, project development, off-the-shelf solutions, technology innovation, and efficiencies is crucial to successful implementation.

Step 3: Exploring existing solutions:[1] technologies and approaches that can be used to reduce costs and optimize resources *See Appendix C for more information.*

There are numerous models, tools, and databases available through EPA to help reduce costs and optimize resources for small and disadvantaged communities (e.g., REUSExplorer). In addition, the recently passed Community Disaster Resilience Zones (CDRZ) Act of 2022 requires FEMA to regularly update data that defines natural hazard risk factors across the U.S., from flooding and extended droughts to wildfires and extreme heat, which will underscore communities most in need. Under the act, the president can provide financial, technical, or other assistance to an eligible entity that plans to perform a resilience or mitigation project within, or that primarily benefits, a CDRZ.

EPA also offers water quality assistance through its Clean Water Technology Center (Tech Center) and Rural, Small, and Tribal Technical Assistance (RSTTA) providers. The Tech Center created the Searchable Clearinghouse of Wastewater Technology as an informative platform that shares resources on the cost-effectiveness and performance of wastewater technologies and compiled research focused on small and underserved communities.

Companies are also delivering direct TA and information to communities in need. For instance, Veolia's Capital Program Management team can also provide comprehensive project management systems starting from the preconstruction phase using its expertise to recommend strategies for building and upgrading utility infrastructure. By taking into account complex considerations such as asset conditions, growth projections, and hydraulic modeling, the teamt can plan smart investments using existing solutions.

Step 4: Engaging agencies and potential partners *See Appendix D for more information.*

Accessing funding, technical assistance, financial assistance, partnerships, research, science, and technology can seem like a distant prospect for small and disadvantaged communities. However, there are government agencies and non-governmental organizations that offer resources and stand ready to partner with communities to help them achieve their water infrastructure priorities. The Water Funders Initiative and the Water Finance Exchange are examples of programs that offer support to small system owners and operators, state and tribal agencies, and technical assistance providers so that small water systems can provide safe drinking water and protect public health.

Step 5: Convening additional, relevant stakeholders *See Appendix E for more information.*

Engaging and convening with tribal, state, territorial, and local government partners; stakeholders; the regulated community; and the public are essential before, during, and after the implementation of any water infrastructure project. The U.S. Conference of Mayors' Water Council provides a forum for local governments to share information on water technology, management methods, operational experience, and financing of infrastructure development, P3s. Further resources on stakeholder planning can be found through the Association of State Drinking Water Administrators, the National Conference of State Legislatures, and local chambers of commerce, among others.

When starting a project using government grants, specifically those accounting for environmental justice, consider guidance from the White House, the National Association of Clean Water Agencies, the American Water Works Association, the Water Environment Federation, and other sources. In addition, reviewing the White House Council on Environmental Quality's Economic Justice and Climate Screening Tool (CEJST) and EPA's EJ Screening and Mapping Tool ahead of outreach on environmental justice conversations is vital. The CEJST is a critical component of the president's historic environmental justice commitments in Executive Order 14008, including the Justice40 Initiative—a commitment to deliver 40% of the overall benefits of federal clean water investments to disadvantaged communities.

Step 6: Accounting for the changing climate and building resilience *See Appendix F for more information.*

Improving water infrastructure is necessary for communities to respond more effectively before the next crisis. We need a new generation of water systems that not only meet the physical demands of a modern economy but withstand the unpredictable blows of extreme weather events and other national crises. These efforts should begin during project planning. FEMA's Building Resilient Infrastructure and Communities program provides support to communities as they undertake hazard mitigation projects. The Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act authorized FEMA to provide capitalization grants to states, eligible federally recognized tribes, Puerto Rico, and the District of Columbia to provide financial assistance for local governments to reduce risks from natural hazards and disasters. Resilience and pre-disaster mitigation are effective public policy, which is good for the environment and the economy.

Rationale for Roadmap

Data demonstrates that deficits in coverage and quality of water services tend to be concentrated in low-income neighborhoods, vulnerable groups, and rural populations, suffering from shrinking populations, dwindling tax bases, and aging infrastructure, including water services.

Drinking water contaminants disproportionately impact low-income and historically marginalized communities because they often lack access to affordable water quality solutions.

Small and disadvantaged communities play a critical role in the overall economic health of America. Because their needs and capabilities vary, these communities are home to a variety of industries that drive the economy, often being the starting point of the raw material of a production chain or the home of labor of large national and international companies. The sectors include agriculture, service industries, mining, and/or manufacturing hubs.

Small and disadvantaged communities play a critical role in the overall economic health of America.

A healthy, skilled workforce is fundamental to attract and retain employers in key sectors. Without sustainable, reliable supplies of water, operating current companies and attracting new businesses to small and disadvantaged communities become more challenging.

Much of the bipartisan IIJA's funding is intended for small and disadvantaged communities, which often do not have the wherewithal to pursue the funds. A study published in the Proceedings of the National Academy of Sciences (PNAS) shows that between 2013 and 2017 approximately 471,000 households—1.1 million people—in the U.S. lacked a piped water connection.

Moreover, according to the Natural Resources Defense Council (NRDC) "[w]hen full replacement of lead pipes depends on a household's ability to pay part of the cost, those who can least afford the added expense—disproportionately people of color— will be left behind." This trend provides yet another example that additional technical assistance, partnerships, and funding resources are needed.

Water-related investments connect multiple sectors and policy agendas, including agriculture, energy, urban development, and public health. Inconsistency of water-related policies across sectors impedes efficient cross-sector planning and capturing potential synergies. Existing financing mechanisms tend not to support the design and implementation of cross-cutting interventions. More must be done to provide for programs that were authorized but not appropriated in the IIJA.

In addition, the 2023 Farm Bill is an omnibus bill that will include provisions for nutrition, crop insurance, conservation, rural investment, and land access. It sets the priorities of U.S. agriculture production systems. Agriculture is a fundamental part of the country's economy and, because these types of activities are often fueled by small and disadvantaged communities, the bill offers them a solid legislative vehicle to provide solutions on different levels.

Following are some of the key challenges and barriers for small and disadvantaged communities to access funding identified during the Chamber session—

	Capacity to know where to get started and how to complete funding applications.
	Lack of operational and financial capacity to adequately manage utilities while also modernizing for resilience and sustainability.
	Capacity of technical assistance providers to reach all communities of need.
	Disadvantaged communities do not want to burden their taxpayers.
	The Buy America preference limits federal financial assistance for infrastructure projects to projects where "all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States."
	The target market is often not networked with traditional trade groups.
	Scale of service is a significant challenge in implementing projects and addressing costs.

	Human resource capacity and expertise to access funding and modernize.
	Many professionals in the water space are retiring— the silver tsunami. According to the American Society of Civil Engineers, between 2016 and 2026 an estimated 10.6% of water sector workers will retire or transfer each year, with some utilities expecting as much as half of their staff to retire in the next 5 to 10 years.
	Low margins, lack of personnel, and rapidly increasing operations and maintenance costs are making it increasingly difficult for small systems to adequately deliver affordable water services.
	Predevelopment funding that assists in de-risking the up-front project engineering and design.
	The definition of "disadvantaged," while flexible at the state level, can limit access to funding and the ability of technical assistance providers to reach all communities in need.
	Improving the efficiency of systems to lower the resources required to modernize service, including access to smart and innovative technologies to make utilities more self-sufficient. According to the American Society of Civil Engineers, nearly half of water utilities report declining or flat total water sales in the past 10 years, largely due to efficiency improvements.
	Energy and resilience costs are the most significant expenses and risks for utilities.
	Education and awareness are needed regarding eligible and readily deployable technologies to manage contamination under specific IIJA, SRF, USDA RD WEP, and other programs.

Current Policy and Funding Landscape

** See Appendix G for a chart detailing current policy mechanisms, timelines, and eligibility.*

There are several ways small and disadvantaged communities can receive funding and TA through IIJA programs. The CWSRF and the DWSRF, together referred to as the SRF, are federal-state partnerships that provide communities with low-cost financing for water infrastructure projects to achieve the Safe Drinking Water Act's (SDWA's) and our nation's health protection objectives.

These programs receive their funds from EPA but are administered by the states. Before the IIJA, the SRF stipulated that for each federal dollar a state received through the program, the state had to give 20 cents—i.e., a 20% state match.

The IIJA allocates a total of $44 billion in general SRF funding through 2026. Of this sum, $11.7 billion was made available for the CWSRF and DWSRF programs with 49% to be provided as loans with principal forgiveness or grants. The state match requirement was also reduced to 10% for FY2022 and FY2023, but it will return to 20% for FY2024 through FY2026. Additionally, the IIJA designates $15 billion for the removal and replacement of lead pipes through the DWSRF without cost-share or state matching requirements. These funds can also be directed to water filtration solutions to address household concerns about water quality involving lead.

From its founding in 1997 through 2021, the DWSRF funded drinking water infrastructure projects to the tune of about $21.9 billion, according to EPA. Since its founding in 1987, the CWSRF contributed more than $27.9 billion

in funding to clean water infrastructure projects.

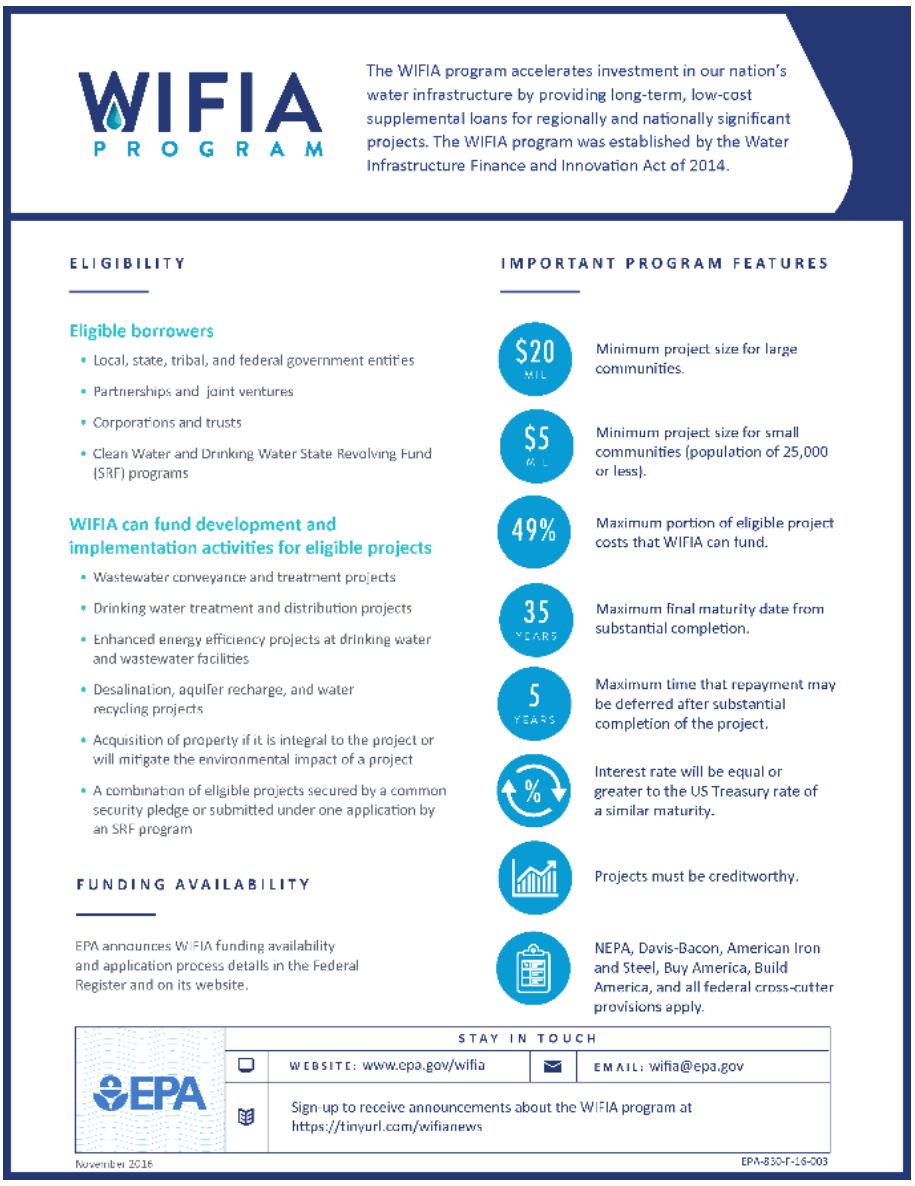
The following projects qualify for financing under the DWSRF and CWSRF programs:

- Providing infrastructure for clean water and drinking water development, restoration, and replacement
- Developing source water protection measures
- Implementing groundwater management and conservation schemes
- Putting green infrastructure initiatives into action
- Building on-site drinking water treatment and compact, decentralized wastewater treatment facilities

A competitive method is used to choose the projects, and they are then assessed for factors such as public health protection, environmental protection, and compliance with relevant laws and regulations.

The funding allocation is done by states and territories yearly and is based on the availability of money and the projects submitted by the states and territories.

It is important to note that EPA maintains databases with information on prior DWSRF and CWSRF initiatives, including project descriptions, grant amounts, and contact details for the project sponsors. Small systems may utilize the Small Systems Compliance Technology List (SSCTL) tool (see Appendix C) as a



WIFIA PROGRAM

The WIFIA program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects. The WIFIA program was established by the Water Infrastructure Finance and Innovation Act of 2014.

ELIGIBILITY

Eligible borrowers

- Local, state, tribal, and federal government entities
- Partnerships and joint ventures
- Corporations and trusts
- Clean Water and Drinking Water State Revolving Fund (SRF) programs

WIFIA can fund development and implementation activities for eligible projects

- Wastewater conveyance and treatment projects
- Drinking water treatment and distribution projects
- Enhanced energy efficiency projects at drinking water and wastewater facilities
- Desalination, aquifer recharge, and water recycling projects
- Acquisition of property if it is integral to the project or will mitigate the environmental impact of a project
- A combination of eligible projects secured by a common security pledge or submitted under one application by an SRF program

FUNDING AVAILABILITY

EPA announces WIFIA funding availability and application process details in the Federal Register and on its website.

IMPORTANT PROGRAM FEATURES

$20 MIL — Minimum project size for large communities.

$5 MIL — Minimum project size for small communities (population of 25,000 or less).

49% — Maximum portion of eligible project costs that WIFIA can fund.

35 YEARS — Maximum final maturity date from substantial completion.

5 YEARS — Maximum time that repayment may be deferred after substantial completion of the project.

Interest rate will be equal or greater to the US Treasury rate of a similar maturity.

Projects must be creditworthy.

NEPA, Davis-Bacon, American Iron and Steel, Buy America, Build America, and all federal cross-cutter provisions apply.

STAY IN TOUCH

EPA

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Sign up to receive announcements about the WIFIA program at https://tinyurl.com/wifianews

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resource when putting together a grant request under the DWSRF or CWSRF program. Small systems' chances of receiving the financing they are requesting might be increased if it helps them discover and choose the proper treatment technology to remove pollutants from their drinking water and comply with laws.

For more information, EPA has provided infographics for both DWSRF and CWSRF that serve as useful resources.

For larger projects, the Water Infrastructure Finance and Innovation Act (WIFIA) loan funding was enacted in 2014. WIFIA, intended to complement both the CWSRF and DWSRF, authorizes EPA and the U.S. Army Corps of Engineers to provide assistance through secured or direct loans for a range of water infrastructure projects.

WIFIA appropriations primarily cover long-term credit subsidy costs, so if the subsidy cost of a WIFIA loan is 10%, a $1 million appropriation can provide $10 million of loan capacity. Lower subsidy rates support larger loan amounts; thus, relative to its budget authority, WIFIA appropriations may provide a large amount of loans.[2]

Through the IIJA, Congress reauthorized $50 million in subsidy costs annually to WIFIA for FY2022 through FY2026, as well as administrative costs annually for FY2022 through FY2026.[3]

In addition to these programs, small and disadvantaged communities can receive funding for water through the U.S. Department of Agriculture (USDA) Rural Development loans, environmental justice programs across the federal interagency community, the Low-income Household Water Assistance Program at the Department of Health and Human Services, the U.S. Army Corps of Engineers, local funding, the Small and Disadvantaged Communities Grant (EPA's WIIN Grant), and Private Farm Credit Institutions. Moreover, FEMA offers several routes to build community resilience and pre-disaster mitigation through the Building Resilient Infrastructure and Communities (BRIC) program, the STORM Act, and the Community Disaster Resilience Zone Act.

In October 2022, the assistant secretary of the Army for Civil Works announced additional projects, studies, and programs funded by the IIJA adding up to almost $800 million to address emergencies in Houston, Texas; Sault Ste. Marie, Michigan; Rio Guayanilla, Puerto Rico; and Jackson, Mississippi.

Policy Gaps

Passed in 2021, the IIJA aims to support the reconstruction of U.S. infrastructure, including public works projects, water, power, and energy infrastructure, as well as transportation networks, broadband, and other utilities. While the IIJA has received praise for its efforts to improve the effectiveness and safety of water systems, more must be done to ensure that the law achieves its intended goals. Prior infrastructure spending packages and existing programs produced insufficient impacts on and results for low-income and rural communities. The law will aid the growth of a more sustainable and equitable economy. For instance, the IIJA provided dedicated funding to replace lead water supply pipes and clean up emerging contaminants, including PFAS.

Gaps include the following:

- Non-point source projects
- Decentralized solutions, such as Point-of-Use (POU) and Point-of-Entry (POE) water treatment systems

- Market-based solutions, nutrient trading, and off-site management
- Operations and maintenance funding
- Dedicated water reuse funding
- Storage
- Resilience, contingency planning
- Cost

Preventing water contamination and providing clean water are and will continue to be expensive. In a period of high inflation and competing demands on U.S. infrastructure, continued investment in clean water will confront severe pressure on cost allocation.

According to the 2020 economic study by the American Society for Civil Engineers, the annual drinking water and wastewater investment gap will grow to $434 billion by 2029. A similar $271 billion demand for wastewater over the next 20 years exists. Over the next 25 years, $1 trillion will be required to maintain and expand service to meet demand for drinking water. The water infrastructure in the U.S. has the biggest challenges when compared with other infrastructure types.

Some IIJA programs—including the most important programs for funding water infrastructure—were authorized but have not yet been appropriated. This infrastructure is vital to communities and people across the nation, so a failure to fund these programs will most negatively impact individuals living in small and disadvantaged communities that have the greatest need for improvements to water infrastructure.

In the past, the U.S. has made substantial expenditures in water storage and delivery in the West to sustain its growing cities and encourage settlement in arid areas. However, prior to the IIJA, federal funding for water infrastructure had significantly dropped in recent years. Therefore, the operations and maintenance of water resource infrastructure systems is a burden on state and municipal governments. In the next 20 years, Western regions are expected to catch up to Eastern regions by spending more on water infrastructure. In states like Texas and California, direct appropriations and obligation bonds are still utilized to fund a few water projects.

Water infrastructure is vital to communities and people across the nation.

These community water projects are struggling and are becoming more difficult to deliver. Due to government financing limitations for water infrastructure, P3s are becoming a crucial source of finance for water projects. PPPs could help raise the necessary funds, but the government still must raise lending rates to pay off its obligations. These initiatives include improvements to water distribution systems, drought contingency plans, plans for watershed restoration by groups, programs for water reuse and recycling, and more. They also encompass a wide variety of water management operations.

Case Studies

The following case studies show what is possible in improving water infrastructure:

America's Wastewater Access Gap Community Initiative

In August 2022, EPA and USDA announced the Closing America's Wastewater Access Gap Community Initiative to be piloted in 11 disadvantaged and small communities in the country. The initiative is the result of a partnership between the USDA and states, and it's funded through the IIJA and EPA. Through this initiative, each community receives direct support to develop and design wastewater assessments and community solution plans, identify and pursue funding opportunities, and build long-term capacity infrastructure.

Industrial Water Reuse Champions Award

The Industrial Water Reuse Champions Award recognizes top Fortune 1000 companies that incorporate the best-in-class water recycling and reuse programs to improve water stewardship and achieve their water management goals. Additionally, the WateReuse Association's annual Awards for Excellence recognize individuals and projects that have made significant contributions in support of greater adoption of water reuse.

Greenbrier County, WV investments

USDA invested $75 million in August 2022 to ensure that thousands of rural people in Greenbrier County have clean drinking water and sanitary wastewater systems for years to come. The City of Lewisburg received $52.7 million in USDA loans and grants to upgrade its water treatment facility, benefitting 13,000 people and allowing the city to meet increased demand in an area that has been experiencing economic growth.

The Greenbrier County Public Service District No. 2 will use just over $22 million in USDA loans and grants to replace aging infrastructure and equipment for its wastewater collection and treatment system, which has not been significantly upgraded in more than 30 years. This project will benefit more than 2,000 residents and more than 100 businesses.

REUSExplorer

The Regulations and End-Use Specifications Explorer (REUSExplorer) is an EPA database that compiles state-level regulations and guidelines for different sources of water and reuse applications to assist states interested in developing regulations and utilities and

practitioners to better understand current regulations. It also helps technology developers decide to work with several key states at the same time instead of working state by state.

Justice 40 Initiative

The Justice 40 Initiative is the federal government's whole-of-government initiative to have 40% of the overall benefits of certain federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. The categories include the development of critical clean water and wastewater infrastructure. Notably, the EPA's Bipartisan Infrastructure Law SRF Memorandum outlines a strategy for collaborative implementation with state, local, and tribal partners of $43 billion in water infrastructure funding through the Bipartisan Infrastructure Law.

Water Infrastructure Finance and Innovation Act

EPA administers a federal loan program known as the Water Infrastructure Finance and Innovation Act (WIFIA), which offers low-cost funding to help communities finance infrastructure projects that improve water quality, including projects related to drinking water and wastewater treatment. The program's goals include encouraging the adoption of cutting-edge technology and methods to solve problems with water quality and helping communities fund infrastructure projects they may not otherwise be able to afford.

In 2021, EPA announced a $275 million loan from the WIFIA program to fund water infrastructure projects in New Orleans, Louisiana. The money borrowed will be used to modernize and swap out the city's old water pipelines, increasing the water system's dependability and security. Additionally, the loan will be used to upgrade the city's wastewater treatment facility, which will help lower pollutants and enhance the city's water quality. The financing will also be used to put green infrastructure concepts into place, such as rain gardens and permeable pavement, which will benefit the city's water quality and minimize pollution.

Veolia

See Appendix H for more information.

Veolia, a water technology company, supports local economies across North America through its Supplier Diversity Program and Water Technology Services to provide water to disadvantaged communities. Small and small disadvantaged businesses can apply to join this program, contributing to a diverse pool of prequalified subcontractors to

provide water to communities they are a part of. Veolia further promotes employment by partnering with local educational institutions to help professionals, often from disadvantaged communities, obtain additional training and diplomas to learn new skills that are essential for working in the water and wastewater space. Veolia's prior outreach experience includes O&M contracts for the management of a reclamation facility in Fulton County, GA, and the Milwaukee Metropolitan Sewage District (MMSD).

Appendix A: Step 1

EPA Office of Water—Infrastructure Implementation and Technical Assistance

INFRASTRUCTURE IMPLEMENTATION		
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TECHNICAL ASSISTANCE		
DIVISION	**PRIMARY CONTACT**	**EMAIL**
Senior Advisor for Technical Assistance and Community Outreach	Jonathan Nelson	Nelson.Jonathan.D@epa.gov

EPA Water Infrastructure and Resiliency Finance Center (Water Finance Center)

Water Finance centers provide financing information to help local decision makers make informed choices for drinking water, wastewater, and stormwater infrastructure to protect human health and the environment. Contacts can be found here for the following regional divisions:

- National
- Region 1 (Connecticut | Maine | Massachusetts | New Hampshire | Rhode Island | Vermont)
- Region 2 (New Jersey | New York | Puerto Rico | Virgin Islands)
- Region 3 (Delaware | Maryland | Pennsylvania | Virginia | West Virginia | District of Columbia)
- Region 4 (Alabama | Florida | Georgia | Kentucky | Mississippi | North Carolina | South Carolina | Tennessee)
- Region 5 (Illinois | Indiana | Michigan | Minnesota | Ohio | Wisconsin)
- Region 6 (Arkansas | Louisiana | New Mexico | Oklahoma | Texas)
- Region 7 (Iowa | Kansas | Missouri | Nebraska)
- Region 8 (Colorado | Montana | North Dakota | South Dakota | Utah | Wyoming)
- Region 9 (Arizona | California | Hawaii | Nevada)
- Region 10 (Alaska | Idaho | Oregon | Washington)

The Water Finance Center developed the Water Finance Clearinghouse, a database of financial assistance sources available to fund a variety of watershed protection projects. The Water Finance Clearinghouse helps communities locate information and resources to help them in make informed decisions for their drinking water, wastewater, and stormwater infrastructure needs. It includes two searchable databases: one contains available funding sources for water infrastructure, and the second contains resources such as reports, weblinks, and webinars. on financing mechanisms and approaches that can help communities access capital to meet their water infrastructure needs.

EPA's Water Infrastructure and Resiliency Finance Center collaborates with stakeholders within small and rural systems. Their partners include the following:

EPA CAPACITY DEVELOPMENT PROGRAM

EPA provides technical assistance to help communities identify drinking water, wastewater, and/or stormwater infrastructure needs; plan for capital improvements; build capacity; and apply for the range of eligible projects under the Clean Water State Revolving Fund (CWSRF); the Drinking Water State Revolving Fund (DWSRF); and tribal, or territory funding programs. EPA's capacity development program aids small system owners and

operators, state and tribal agencies, technical assistance providers, and consumers help small water systems provide safe drinking water and protect public health. Every state has a capacity development program to facilitate small systems improve their finances, management, infrastructure, and operations.[4]

REGION	REGIONAL CONTACT	PHONE	EMAIL/CONTACT PAGE
National Coordinator	Alison Flenniken	(202) 564-4412	Contact Page
Region 1 (Connecticut | Maine | Massachusetts | New Hampshire | Rhode Island | Vermont)	Andrea Traviglia	(617) 918-1993	Traviglia.Andrea@epa.gov
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ENVIRONMENTAL FINANCE CENTER NETWORK

The IIJA provides funding to expand the number and reach of Environmental Finance Centers (EFCs) tasked with helping communities across the country access federal funding for infrastructure projects that improve public health and environmental protection. EFCs deliver targeted technical assistance to local governments, states, tribes, territories, and non-governmental organizations to protect public health, safeguard the environment, and advance environmental justice.

REGIONAL WATER INFRASTRUCTURE EFCS		
ORGANIZATION NAME	**PHONE**	**EMAIL/CONTACT PAGE**
Delta Institute (Midwest)	(312) 554-0900	delta@delta-institute.org

Hawaii Community Foundation (Hawaii)	(808) 537-6333	info@hcf-hawaii.org
National Rural Water Association	(580) 252-0629	Contact Page
Rural Community Assistance Corporation	(916) 447-2854	Contact Page
Southeast Rural Community Assistance Project Inc.	(540) 345-1184	Contact Page
Syracuse University	(315) 443-8818	kadodson@syr.edu
University of Maine System		efc@maine.edu
University of Maryland	(301) 405-8000	jcotting@umd.edu
University of New Mexico	(505) 277-0644	swefc@unm.edu
University of North Carolina at Chapel Hill	(919) 966-5381	Contact Page
Wichita State	(316) 978-7240	efc@wichita.edu
Great Lakes Community Action Partnership	(800) 775-9767	Contact Page
NATIONAL WATER INFRASTRUCTURE EFCS		
ORGANIZATION NAME	**PHONE**	**EMAIL**
Moonshot Missions	(202) 256-1981	info@moonshotmissions.org
Rural Community Assistance Partnership	(202) 408-1273	Contact Page
Sand County Foundation	(608) 663-4605	info@sandcountyfoundation.org
US Water Alliance	(415) 921-9010	info@uswateralliance.org

U.S. DEPARTMENT OF AGRICULTURE RURAL DEVELOPMENT

The USDA offers a variety of programs to ensure that rural communities can obtain the technical assistance and financing necessary to develop drinking water and waste disposal systems.

The WEP provides funding for the construction of water and waste facilities in rural communities. It is the only federal program that focuses exclusively on communities with populations of 10,000 or less.

Communities that qualify for funding of specific projects can submit applications here. National and state office contact information and USDA service centers and civil rights contacts are available here.

NATIONAL RURAL WATER ASSOCIATION

The National Rural Water Association (NRWA) is a nonprofit organization dedicated to training, supporting, and promoting the water and wastewater professionals, who serve small communities across the U.S. Overall, the NRWA aims to strengthen state associations that focus on clean water access.

The NRWA provides training and technical assistance through 50 affiliated State Rural Water Associations that currently have over 31,000 utility system members. Rural Water training and technical assistance covers every aspect of operating, managing, and financing water and wastewater utilities.

The NRWA has a portfolio of federally funded programs to support and build capacity at small and rural water and wastewater systems across the nation.

Contact Information for NRWA team leaders can be found here. More specific contact information for state rural water association partners can be found on each association's website.

RURAL COMMUNITY ASSISTANCE PARTNERSHIP

The Rural Community Assistance Partnership (RCAP) Incorporated works to increase access to water and economic opportunity in rural America. The RCAP is a national network of nonprofit t partners working to provide technical assistance, training, resources, and support to rural communities across every state, the U.S. territories, and tribal lands. Through RCAP's regional partners, more than 350 technical assistance providers build long-term, trusted relationships with thousands of communities across the country. For more information, visit www.rcap.org.

RCAP regional partner offices provide services to communities directly. To contact the relevant RCAP regional partner office, reach out via the links below:

Rural Community Assistance Corporation (RCAC)—The Western RCAP
Serving Alaska, Arizona, California, Colorado, Hawaii, Idaho, Nevada, New Mexico, Oregon, Utah, and Washington

RCAP Solutions (RSOL) – The Northeastern and Caribbean RCAP
Serving all six New England States and New York, New Jersey, Pennsylvania, Puerto Rico, and the U.S. Virgin Islands

Midwest Assistance Program (MAP) – The Midwest RCAP
Serving Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, and Wyoming

Southeast Rural Community Assistance Project (SERCAP) – The Southeastern RCAP
Serving Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, and Virginia

Communities Unlimited (CU) – The Southern RCAP
Serving Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas

FEDERAL EMERGENCY MANAGEMENT AGENCY

FEMA provides nonfinancial, direct technical assistance to help prevent disaster damage, build community resilience, and sustain successful mitigation programs. The agency works with communities to further explore and better understand their specific needs for TA and provides support to requesting communities for up to 36 months. FEMA's website linked above features summaries of requested direct technical assistance examples. These testimonials serve to inform constituents about FEMA's capabilities. To reach FEMA, contact the relevant regional office. A list of FEMA offices and contact information is available here.

Appendix B: Step 2

Often small and overburdened or underserved communities are unaware of funding opportunities or lack the capacity to develop competitive funding applications. This has precluded such communities from applying for grants and loans in the past. To help ensure that small and underserved communities are better able to access funding and achieve successful implementation, it is critical that leaders of small and disadvantaged communities dedicate ample time and resources to predevelopment. Implementation involves communication, coordination, capacity consultation, and climate-focused discussion to make certain that communities are aware of project and capital options available to them. This process of formulating an approach and gathering information about funding sources, technical assistance entry points and streamlined service, public-private partnerships, project development, off-the-shelf solutions, technology innovation, and efficiencies is critical.

According to EPA:

Predevelopment activities, although only accounting for a small percentage of total costs, have considerable influence on which projects move forward, where and how they will be built, who will fund them, and who will benefit from them. Yet in light of fiscal constraints, state, local, and tribal governments tend to focus scarce resources on constructing and developing conventional projects and addressing pressing needs, thereby underinvesting in predevelopment for the longer term.

Greater attention to predevelopment could yield a range of benefits—for example, providing the opportunity to develop longer-term, more innovative, and more complex infrastructure projects and facilitating assessment of a range of financing approaches, including P3s. Additional investment in predevelopment costs may also enable state, local, and tribal governments to use innovations in infrastructure design and emerging technologies, reduce long-term costs to infrastructure project users, and provide other benefits, such as improved environmental performance and resilience to the impacts of climate change.[5]

The Bipartisan Infrastructure Law invests more than $50 billion through EPA's already successful water infrastructure programs, allocating $5 billion to addressing emerging contaminants in disadvantaged communities. Specifically, it bolsters the Water Infrastructure Improvements for the Nation grant program, which awards funding to states, territories, and tribes to aid public water systems with Safe Drinking Water Act requirements. Eligible projects under this grant include activities related to infrastructure work, technical, managerial, and financial capacities.

USDA Rural Development provides further assistance in the forms of the Special Evaluation Assistance for Rural Communities and Households (SEARCH) grants and Water and Wastewater Predevelopment Planning Grants (PPGs). These grants are available to small, financially distressed communities with populations lower than 2,500 and 10,000 residents respectively and help pay for feasibility studies, preliminary design, and technical assistance with predevelopment planning.

Appendix C: Step 3

EPA created the Small Systems Compliance Technology List (SSCTL) as a tool to help small drinking water systems understand and control the risks related to pollutants in their water. Small systems can use the SSCTL, a publicly accessible library of treatment technologies and analytical techniques, to adhere to drinking water laws.

EPA has small system research developmental tools and technological approaches that aim to help lower costs while providing potable water. The Drinking Water Treatability Database (DTB) is one resource that gives drinking water utilities, first responders, treatment process designers, regulators, and others access to referenced information from thousands of literature sources. The site includes over 25 utility-used treatment processes, including bench-, pilot-, and full-scale studies of surface, ground, and laboratory waters. Transparent and versatile cost models for drinking water treatment plants are also available, specially designed for the purpose of estimating national costs of drinking water regulations.

EPA provides hand-on simulation applications for Chloramine Formation and Decay, Breakpoint Chlorination, and Free Chlorine and Cyanuric Acid curve estimations and drinking water system stability measurements. Additionally, engineers are able to access the EPANET and the Environmental Technologies Design Option Tool (ETDOT) for system design evaluation. The EPANET is used to create and size new water infrastructure, retrofit existing infrastructure, optimize tank and pump operations, and investigate water quality problems. Emergency preparedness is another feature as the EPANET can be used for contamination threats and security resilience evaluation. The ETDOT is a suite of software models that engineers can similarly use to evaluate system designs that involve granular activated carbon or ion exchange resins for the removal of contaminants, including PFAS, from drinking water and wastewater.

Also, the recently passed Community Disaster Resilience Zones Act of 2022 requires FEMA to regularly update data that defines natural hazard risk factors across the U.S., from flooding and extended droughts to wildfires and extreme heat, which will determine communities most in need. Under the act, the president can provide financial, technical, or other assistance to an eligible entity that plans to perform a resilience or mitigation project within, or that primarily benefits, a Community Disaster Resilience Zone.

EPA's Clean Water Technology Center (Tech Center) is also committed to supporting access to reliable, affordable, and resilient wastewater infrastructure that protects human health and water quality. The Tech Center provides resources and services to help communities of all sizes build their capacity to become more sustainable by adopting innovative and alternative wastewater technologies that address local water challenges. The Searchable Clearinghouse of Wastewater Technology (SCOWT) was created by the Tech Center. The SCOWT is an information-sharing platform that provides resources on the cost-effectiveness and performance of innovative, alternative, and reuse wastewater technologies for both centralized and decentralized systems. It compiles accurate and objective research to support technology adoption, with a focus on small, midsize , and underserved communities.

Another resource is the Effective Utility Management Program (EUM), which takes a broad look at all aspects of water sector system sustainability, from product quality to customer satisfaction. It is supported through the

collaboration of EPA and professional associations across the water sector. The Rural and Small Systems Guidebook and Workshop in a Box: Sustainable Management of Rural and Small Water and Wastewater are EUM materials geared toward supporting small communities as discussed in this short video.

Congress further authorized an EPA clean water competitive grant program for nonprofit organizations to provide technical assistance to rural, small, and tribal communities in the American Water Infrastructure Act of 2018. The Rural, Small, and Tribal Technical Assistance (RST TA) providers deliver targeted technical assistance and training to rural, small, and tribal municipalities and wastewater treatment systems to protect public health and safeguard the environment. The RST TA providers serve an important role in helping (1) ensure that rural, small, and tribal communities that have difficulty in securing public funding receive the help they need to access resources to support infrastructure improvements and (2) support rural, small, and tribal wastewater treatment systems—centralized and decentralized—build their technical, managerial, and financial capacity to operate their systems well and maintain compliance.

Appendix D: Step 4

Accessing funding, technical assistance, financial assistance, partnerships, research, science, and technology can seem like a distant prospect for small and disadvantaged communities. Nevertheless, there are government agencies and non-governmental organizations that offer resources and stand ready to partner with communities to help them achieve their water infrastructure priorities. Appendix D identifies EPA partners and programs; this section highlights other government and non-governmental programs.

The following are national associations, institutions of higher education, and non-governmental organizations that provide valuable technical resources, peer-to-peer learning, and training for water and wastewater systems:

ORGANIZATION NAME	PHONE	EMAIL
American Water Works Association	(303) 794-7711	etssupport@awwa.org
Moonshot Missions	(202) 256-1981	info@moonshotmissions.org
National Association of Clean Water Agencies	(202) 833-2672	info@nacwa.org
Penn Water Center	(215) 898-2786	watercenter@sas.upenn.edu
Water Environment Federation	(800) 666-0206	csc@wef.org

Additional Organizations:

COBANK

CoBank is a financial services company that is part of the U.S. Farm Credit System and is collectively owned by cooperatives, agribusinesses, rural public utilities, and other farm credit associations. The company provides loans and financial services to nonprofits, municipalities and districts to expand and improve the supply of safe drinking water and waste disposal, upgrade equipment or perform maintenance, and assist with emergency fund reserves, among other water access-related projects. CoBank offers numerous financial solutions so that projects can be tailored to its partners' specific needs.

In addition to financing solutions, CoBank offers a knowledge-sharing program where its team of economists and analysts provide information on agriculture, rural infrastructure, and other relevant areas for the benefit of customers and partners.

To contact CoBank water team members, the following information is below.

CONTACT NAME	PHONE	EMAIL	STATES
Chris Shaffner	(303) 740-6525	cshaffner@cobank.com	National
John DeLuca	(303) 694-5958	jdeluca@cobank.com	CO, KS, MN, MO, NE, OK, TX, UT
Bryan Ervin	(303) 740-4377	ervinb@cobank.com	HI, AK
Michael Griffiths	(303) 740-6479	Mgriffiths@cobank.com	AL, GA, FL, KY, LA, MS, TN, WV
Bentley Hodges	(303) 793-2139	Bhodges@cobank.com	AR, AZ, CA, ID, MT, ND, NM, NV, OR, SD, WA, WY
Julia McCusker	(303) 694-5858	mccuskj@cobank.com	CT, DE, IA, IL, IN, MA, MD, ME, MI, NC, NH, NJ, NY, OH, PA, RI, SC, VA, VT, WI

WATER FINANCE EXCHANGE

The Water Finance Exchange (WFX) works with federal agencies, state governments, communities, philanthropic organizations, and the financial sector to secure financing, ideas, and expertise for water infrastructure development in underserved communities. The organization focuses primarily on infrastructure rather than pumps and pipes as it believes infrastructure supports economic growth and is essential to public health and environmental necessities. In addition to helping communities secure financing, the WFX provides technical expertise and assistance to update infrastructure in a low-cost, efficient manner.

The WFX says that $1 trillion is needed to address the necessary updates to the U.S.' crumbling water infrastructure. It supports communities with innovative financing solutions, comprehensive technical assistance partnerships, state water and wastewater infrastructure workshops, and other regional solutions.

The WFX is actively soliciting information about communities that need water infrastructure updates as early deal candidates. To apply for funding, communities are encouraged to send an inquiry to Josh Clements, the organization's senior program director, at Jclement@waterfx.org. WFX will contact parties of interest to continue the initial screening process.

WATER FUNDERS

With over $100 million committed to transformational, water-related solutions, as part of a four-year, $150 million Water Campaign, the Water Funders aim to leverage multiples of that funding from other public and private partners to improve the way water is managed for people and the environment. Key initiatives of the program include mobilizing investment in sustainable water solutions, filling critical water data gaps, and building strategic water communications infrastructure.

Interested parties can contact the organization via an online portal here.

Appendix E: Step 5

Engaging and convening with tribal, state, territorial, and local government partners, stakeholders, the regulated community, and the public is essential before, during, and after implementing any water infrastructure project. **When starting a project using government grants, specifically those accounting for environmental justice, consider this guidance from the following organizations:**

THE U.S. CONFERENCE OF MAYORS WATER COUNCIL

The U.S. Conference of Mayors Water Council provides a forum for local governments to share information on water technology, management methods, operational experience, and financing of infrastructure development, including public-private partnerships . The Mayor's Water Council also monitors and responds to federal legislation that affects the delivery of municipal water services. The conference consists of mayors from the more than 1,400 cities with a population of more than 30,000 residents.

ASSOCIATION OF STATE DRINKING WATER ADMINISTRATORS

The ASDWA was formed in 1984 to address a growing need for state water administrators to have national representation. The group is a respected voice for state primacy agents engaging with EPA, Congress, and other federal organizations. ASDWA's aim is to ensure that states obtain the federal funding they need to invest in and repair clean water systems.

Further resources on stakeholder planning can be found through the National Conference of State Legislatures and local chambers of commerce, among others. When starting a project using government grants, specifically those accounting for environmental justice, consider examining the following resources —

NATIONAL ASSOCIATION OF CLEAN WATER AGENCIES

The National Association of Clean Water Agencies (NACWA) is a leading advocate for legislative, regulatory, and legal initiatives relating to clean water access. The NACWA also serves as a technical resource for water management and works with public water agencies of all sizes across the country. Notably, it works with communities to lower the cost of clean water and guides administrators on how they can do more with less. On top of this, the group lobbies in support of federally subsidized low-income rate assistance and other policies to help lessen the burden of low-income consumers.

ENVIRONMENTAL JUSTICE GOVERNMENT-TO-GOVERNMENT PROGRAM

EPA has received significant funding for environmental justice, including $2.8 billion in grant funding for the Environmental and Climate Justice block grant program. The Environmental Justice Government-to-Government (EJG2G) program, formerly known as the State Environmental Justice Cooperative Agreement program, provides funding to eligible entities to work with underserved communities to improve public health and the environment. The program, which has a history dating back to the late '90s, has expanded eligibility to include state, tribal, local, and territorial governments, as well as U.S. territories and Freely Associated States. The purpose of the program is to support and/or create model government activities that lead to measurable environmental or public health results in communities disproportionately burdened by environmental harms and risks.

FIVE STAR AND URBAN WATERS RESTORATION PROGRAM

The Five Star and Urban Waters Restoration Program seeks to improve the stewardship and restoration of coastal, wetland, and riparian ecosystems across the country. The program prioritizes on-the-ground habitat restoration, education and training activities, and partnerships with diverse community groups to achieve measurable ecological, educational, and community benefits. The program has a history of funding over 1,000 projects in 50 states and U.S. territories, leveraging more than $81 million in other funds or donated services with $25 million in grants.

FLOOD MITIGATION ASSISTANCE

The Flood Mitigation Assistance (FMA) program is a competitive grant program that provides funding to states, local communities, and federally recognized tribes and territories to reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program. Funding recipients are chosen based on their project ranking, eligibility, and cost-effectiveness. To be eligible for certain types of nonemergency disaster assistance, including funding for hazard mitigation assistance projects, state, local, tribal, and territorial governments are required to develop and adopt hazard mitigation plans. The program focuses on underserved communities with challenges in meeting the Benefit-Cost Analysis requirement for accessing funding through Hazard Mitigation Assistance grant programs.

WHITE HOUSE GUIDANCE

In May 2022, the Biden-Harris administration released a permitting action plan for new infrastructure projects. The plan aims to accelerate permitting by encouraging cross-agency coordination and reducing bottlenecks, establishing clear timelines and goals, ensuring early stakeholder engagement, improving agency responsiveness, and sufficiently equipping agencies to improve environmental and community outcomes. The recent White House guidance notes that the Fixing America's Surface Transportation Act (FAST-41), approved in the Bipartisan Infrastructure Law, applies to federally reviewed water projects and defers some of its counsel to the new act. The FAST-41 process aims to improve early consultation, increase transparency in the publication of timetables, and increase accountability by ensuring that there is adequate consultation and reporting on projects. Water projects that are subject to federal review should consider the recently implemented FAST-41 Act.

In addition, the White House Council on Environmental Quality's Economic Justice and Climate Screening Tool (CEJST) will be an important step in the process. The CEJST provides ZIP code-based data on local water quality and can help certain communities receive additional funding. EPA's EJ Screening and Mapping Tool also provides similar information.

The CEJST is a critical component of the president's historic environmental justice commitments in Executive Order 14008, including the Justice40 Initiative— a commitment to deliver 40% of the overall benefits of federal clean water investments to small and disadvantaged communities.

Appendix F: Step 6

Improving water infrastructure is necessary for communities to respond more effectively ahead of the next crisis. We need a new generation of water systems that not only meet the physical demands of a modern economy but also withstand the unpredictable blows of extreme weather events and other national crises. Resilience and pre-disaster mitigation are good public policy, which is good for the environment and the economy.

Existing FEMA programs like its Building Resilient Infrastructure and Communities initiative are available to provide support to communities as they tackle mitigation projects. FEMA was authorized by the Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act to provide capitalization grants to states, eligible federally recognized tribes, Puerto Rico, and the District of Columbia to proffer financial assistance for local governments to reduce risks from natural hazards and disasters.

As climate change threatens essential drinking water, wastewater, and stormwater infrastructure, local leaders must account for the effects of climate change and enhance the resilience of critical infrastructure by making efforts to reduce community risks, catalyze more coordination and integration, and facilitate innovation through public-private partnerships.

Inclusion of the private sector's technical and practical expertise in identifying risks and implementing solutions has the potential to mobilize capital and leverage public investments in the latest innovations and technologies of water infrastructure. Funding these efforts reduces the risk of future losses by optimizing the capabilities of companies to prepare for, respond to, and recover from disasters and climate impact.

Numerous officials involved in resilience should coordinate to align priorities and strategies to integrate with regional resilience plans. Coordination must occur among the relevant federal energy, small business, and water agencies to ensure the appropriate selection of effective predisaster mitigation projects, alignment with existing disaster recovery and post-disaster efforts, current and future workforce needs and capabilities, and integration with various funding sources. Developmental program ventures—like those offered by the American Association of Civil Engineers and the American Council of Engineering Companies—is one such tool that could be used to align priorities between public leaders, businesses, and citizens related to the challenges and solutions to water infrastructure.

Appendix G: Current Policy and Funding Landscape Chart

POLICY	FUNDING MECHANISM and TIMELINE(S)	ELIGIBILITY
Clean Water State Revolving Fund (CWSRF)	Loan, refinance, purchase, or guarantee of local debt and purchase of bond insurance. Applications for FY 2024 projects are due spring 2023. Applications for fiscal year 2025 projects are due fall 2023.	Entities: Public and private projects that are part of the state's Comprehensive Management Plan (Section 320). Projects: Construction of publicly owned treatment works, national estuary program projects, decentralized wastewater treatment systems, water conservation, watershed pilot projects, energy efficiency, water reuse, security measures at publicly owned treatment works, and technical assistance.
Drinking Water State Revolving Fund (DWSRF)	Loans, refinancing, purchasing, guaranteeing local debt, and purchasing bond insurance. Applications for fiscal year 2024 projects are due spring 2023. Applications for fiscal year 2025 projects are due fall 2023.	Entities: Existing privately owned and publicly owned community water systems and nonprofit noncommunity water systems, new community water systems that represent cost-effective solutions to existing public health problems. Projects: Facilities treatment, rehabilitation, installation and replacement of pipes, rehabilitation of wells, installation of water storage tanks, interconnection of water systems, and construction of water systems.
Water Infrastructure Finance and Innovation Act (WIFIA)	Loans or Letters of Interest may be submitted beginning September 6, 2022.	Entities: Local, state, tribal, and federal government entities, partnerships and joint ventures, corporations and trusts, and Clean Water and Drinking Water SRF programs. Additionally, the State infrastructure financing authority WIFIA (SWIFIA) program is exclusively for State infrastructure financing authority borrowers. Projects: Projects eligible for the Clean Water and Drinking Water SRF, enhanced efficiency projects at drinking water and wastewater facilities, brackish or seawater desalination, drought prevention, and acquisition of property.
WIIN Grant: Small, Underserved, and Disadvantaged Communities Grant Program	Grant (approximately $25.8 million). Project/budget periods are no more than three years. Prior to applying for their allotments, states must submit draft work plans to their respective EPA regions. Application submission for the 2022 grant ended in June. The dates for the 2023 edition have not been published yet.	Entities: U.S. states, the District of Columbia, territories, and tribes within the U.S. Projects: Infrastructure work, technical, managerial, financial capacity-building activities, and activities necessary for a state to respond to a contaminant.
Rural Utilities Service Water and Environmental Programs (WEP)	Loans, grants, and guarantees.	Entities: Each program has its own requirements; however, the general rule is that funding is only for rural communities with populations of 10,000 or less. Projects: Construction of drinking water and waste disposal systems. WEP has over 10 different programs designed to fund communities in need of assistance expanding across the 50 states.
Water & Waste Disposal Loan & Grant Program (USDA)	Loans and grants.	Entities: Most state and local governmental entities, nonprofit organizations, and federally recognized tribes. Projects must be located in rural communities with populations of 10,000 or less.

		Projects: Funds may be used to finance the acquisition, construction, or improvement of drinking water sourcing, treatment, storage, and distribution, sewer collection, transmission, treatment and disposal, Solid waste collection, disposal and closure, Storm water collection, transmission and disposal.
Rural Utilities Water & Waste Disposal Technical Assistance & Training Grants (USDA)	Technical Assistance Grants.	Entities: Nonprofits that have the proven ability, background, experience, and capacity to provide TA or training on a national, regional, or state basis. Projects must be located in rural communities with populations of 10,000 or less. Projects: Identify and evaluate solutions to water problems related to source, storage, treatment, distribution, collection, treatment, and disposal. Provide technical assistance and training to improve management, operations, and maintenance of water and waste disposal systems.
Emergency Community Water Assistance Grants (USDA)	Grants.	Entities: Most state and local governmental entities, nonprofit organizations, and federally recognized tribes. Projects must be located in rural communities with populations of 10,000 or less. Projects: This program helps eligible communities prepare or recover from emergencies that threaten the availability of safe, reliable drinking water.
Solid Waste Management Grants (USDA)	Grants.	Entities: Public bodies, nonprofits, federally recognized tribes, and academic institutions. Projects: Evaluate current landfill conditions to identify threats to water resources, provide technical assistance or training to enhance the operation and maintenance of active landfills, provide technical assistance or training to help communities reduce the amount of solid waste coming into a landfill, and provide technical assistance or training to prepare for closure and future use of a landfill site.
Grants for Rural and Native Alaskan Villages (USDA)	Grants.	Entities: Rural Alaskan villages, State of Alaska for the benefit of a rural Alaskan village or hub. Projects must be located in rural communities with populations of 10,000 or less. Projects: This program helps remote Alaskan villages provide safe, reliable drinking water and waste disposal systems for households and businesses.
Water & Waste Disposal Predevelopment Planning Grants (USDA)	Grants.	Entities: Most state and local governmental entities, nonprofit organizations, and federally recognized tribes. Projects must be located in rural communities with populations of 10,000 or less. Projects: This program helps eligible low-income communities plan and develop applications for proposed USDA Rural Development water or waste disposal projects.
Special Evaluation Assistance for Rural Communities and Households Grant (USDA)	Grants.	Entities: Most state and local governmental entities, nonprofit organizations, and federally recognized tribes. Projects must be located in rural communities with populations of 2,500 or less.

		Projects: This program helps eligible low-income communities pay predevelopment planning costs, including feasibility studies to support applications for funding water or waste disposal projects, preliminary design and engineering analysis, and technical assistance for the development of an application for financial assistance.
OneRD Guarantee (USDA)	Guaranteed Loans.	Entities: Public bodies, federally recognized tribes, nonprofit organizations. Rural areas with populations of 50,000 or less based on the latest decennial census of the U.S. and not in the urbanized area contiguous and adjacent to that city or town. Projects: Construct or improve facilities' drinking water, sanitary sewers, solid waste disposal, and storm water disposal facilities.
U.S. Army Corps of Engineers Investments for Disadvantaged Communities	Grants (approximately $800 million).	Entities: Disadvantaged communities in need of assistance because of a humanitarian crisis. Projects: Supply chain resilience, flood mitigation, and coastal storm damage protection.
Community Facilities Technical Assistance and Training Grant Program (USDA)	Grants.	Entities: Public and private entities and nonprofit organizations. Projects: Construction or upgrade of essential community facilities. Projects seeking to recover communities from the COVID-19 pandemic, advance equity, and combat climate change are receiving priority points under the Biden -Harris administration.
EPA Technical Assistance Grant (TAG) Program	Initial grant up to $50,000.	Entities: Communities from a selection of nine different EPA regions across the U.S. Projects: EPA provides funding to community groups to contract their own technical advisor for the interpretation and explanation of technical reports, site conditions, and EPA's proposed cleanup proposals and decisions.
HUD Community Development Block Grants	Formula-based grants.	Entities: Principal cities of Metropolitan Statistical Areas, other metropolitan cities with populations of at least 50,000, qualified urban counties with populations of at least 200,000, and states and insular areas. Projects: Acquisition of real property, relocation and demolition, rehabilitation of residential and nonresidential structures, construction of public facilities and improvements, activities relating to energy conservation and renewable energy resources, and provision of assistance to profit-motivated businesses to carry out economic development.
Justice40 Initiative	The initiative provides resources for any grant, staffing costs, or direct spending or benefits to individuals for a covered program in a Justice40 category.	Entities: Disadvantaged communities that are particularly threatened or affected by pollution. Projects: Projects related to climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, remediation and reduction of legacy pollution, and clean water and wastewater infrastructure.

Farm Credit System Co-Bank	Lines of credit, term project financing, refinancing, and municipal notes and bonds.	Entities: Nonprofit organizations, municipalities, and districts. Projects: Creation, improvement, and expansion of safe drinking water and waste disposal; maintenance; purchase of vehicles; wells, drill, and pipeline replacement; repainting of water towers; and savings for emergencies.
FEMA Public Assistance Grant Program	Grants.	Entities: U.S. states, federally recognized tribal governments, including Alaska Native villages and organizations as long as they are not privately owned, U.S. territories, local governments, and certain private nonprofit (PNP) organizations. Projects: Cost-effective hazard mitigation measures for disaster-damaged facilities and restoration of disaster-damaged facilities to their pre-disaster design and function, including applicable codes and standards.

Appendix H: Veolia Case Study Continued

Veolia has developed an initiative to provide an opensource training platform for water and wastewater treatment certifications, Veolia Academy. These classes could be useful for disadvantaged communities that want to hire local talent but need a cost-effective way to train them how to manage their water and wastewater utilities.

The Veolia Academy is an online training platform developed by Veolia employees for employees and the general public. The goal of the Veolia Academy is to become the premier ecological training in the U.S. Owing to its industry experts and utility operations experience from around the globe, Veolia has created training programs that will help operators gain the knowledge needed to attain certification and become best-in-class operators.

Partnerships and PPPs model:

Veolia has been able to bring real change and improvements to communities through partnerships that leverage private dollars to serve the public.

- In Louisiana, Veolia's public-private partnership with the Sewerage & Water Board of New Orleans has delivered strong environmental compliance, while hardening infrastructure against future storms.
- In Rialto, California, about 50 miles inland from Los Angeles, our partnership for water and wastewater services has provided $172 million for infrastructure improvements.
- In Nassau County, New York, just east of New York City, our partnership has cleaned up the wastewater that gets released into the Atlantic Ocean, while reducing the county's operating costs and preparing for future hurricanes. When Hurricane Sandy hit in 2012, Nassau's main treatment plant was swamped. But when another huge storm hit, the new gates and berms built kept the water out.
- When they are done right, P3s work for everyone. Government keeps control of its assets, private investment dollars are unlocked, and customers are protected.

Endnotes

[1]While the majority of the water infrastructure funding in the IIJA supports improvements at large municipal systems, it does expand the use of federal funds for off-the-shelf solutions such as point-of-use/point-of-entry (POU/POE) water treatment systems. The bill modified EPA's Small, Underserved, and Disadvantaged Communities Grant Program to allow states to use those EPA grant funds on POU/POE devices. Assuming all notes are accurate.

[2] https://crsreports.congress.gov/product/pdf/IF/IF11193

[3] https://crsreports.congress.gov/product/pdf/R/R46892

[4] https://www.epa.gov/waterfinancecenter/financial-technical-assistance-and-tools-water-infrastructure#partners

[5] https://www.hud.gov/sites/documents/BAINFRARESGUIDEMAY2015.PDF

U.S. Chamber of Commerce