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The Drinking Water State Revolving Fund

Financing America's Drinking Water

—A Report of Progress

Financing America's Drinking Water

The Environmental Protection Agency's (EPA) Drinking Water State Revolving Fund (DWSRF) program is a significant tool available to states to fund high-priority infrastructure projects and state and local activities needed to ensure the provision of safe and affordable drinking water. The DWSRF program is well on its way toward meeting the goal of helping to ensure that permanent institutions exist in each state to provide financial support for drinking water needs for many years to come. Through June 30, 2000:

- EPA has provided more than $2.7 billion in grants to all 50 states and Puerto Rico to capitalize revolving loan funds for infrastructure projects and to fund state and local activities.
- States have made close to 1,200 low-interest loans totaling more than $2.3 billion for needed drinking water infrastructure projects to meet public health and compliance objectives.
- Seventy-five percent of all loans have gone to small water systems.
- States have reserved $445 million for activities that support their drinking water programs, enhance the management ability of water systems, and protect sources of drinking water.

"As a result of this program, we now provide safer drinking water to over 2,000 people. We would not have gotten this far without the Drinking Water State Revolving Fund."

—Stan Bullard
Vice President of Camp Verde Arizona Water System which received a loan to address high arsenic levels in its drinking water source

A New Era in

Drinking Water Financing

Providing safe, clean drinking water to the 254 million people served by approximately 54,000 community water systems in the United States is an important goal of federal, state, and local officials. While our drinking water is among the safest in the world, the owners and operators of the nation's public water systems know that they must make significant infrastructure improvements to continue supplying safe drinking water to their customers. A 1995 EPA survey of drinking water infrastructure needs identified a 20 year need of more than $138 billion. Approximately one-quarter ($37.2 billion) of this total national need is for small systems, which serve up to 3,300 people.

Many public water systems, particularly small water systems, have difficulty obtaining affordable financing for infrastructure improvements. Recognizing this fact, Congress established the Drinking Water State Revolving Fund (DWSRF) program as part of the Safe Drinking Water Act (SDWA) Amendments of 1996. Congress authorized $9.6 billion in new federal grants to help ensure that the nation's drinking water remains safe and affordable. The DWSRF program was modeled, in part, after the Clean Water State Revolving Fund (CWSRF) program initiated in the late 1980s under the Clean Water Act. The CWSRF program has provided more than $30 billion in assistance from $18 billion in federal funds for projects addressing wastewater treatment and non-point sources of pollution.

EPA distributes DWSRF funds to each of the 50 states and Puerto Rico in the form of capitalization grants. To date,* EPA has awarded more than $2.7 billion in DWSRF grants for drinking water projects and state and local activities. States use the grants to capitalize revolving loan funds from which low-cost loans and other types of assistance are provided to eligible systems to finance the costs of infrastructure projects. States must provide matching funds equal to at least 20 percent of each grant. To date, state matching funds have added more than $540 million to the program. Loan repayments made by assistance recipients return to the revolving loan fund and provide a continuing source of financing for infrastructure projects.

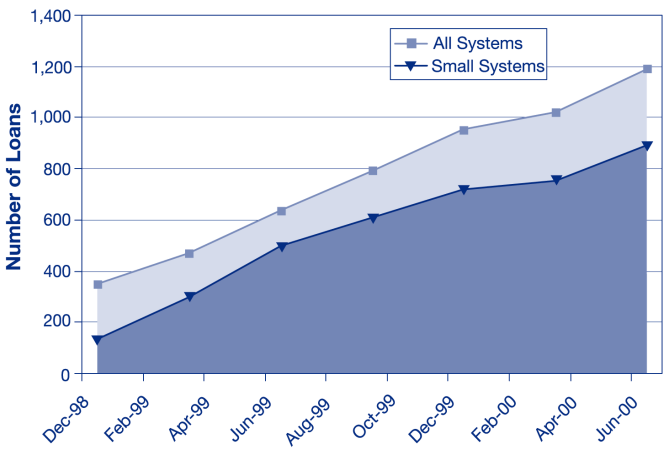
The 1996 SDWA Amendments also included new regulatory requirements and other provisions that emphasize comprehensive public health protection through preventing drinking water contamination problems. To give states the financial resources for this new emphasis, each state was given the flexibility to set aside up to 31 percent of its DWSRF grant to fund activities that support its drinking water program, enhance the managerial capabilities of water systems, and protect sources of drinking water.

*Data included in this report are from a wide variety of sources, including: DWSRF program information (through June 30, 2000); EPA's 1995 Drinking Water Infrastructure Needs Survey (EPA 812-R-97-001); and the Safe Drinking Water Information System (SDWIS) FY99Q4 Frozen Database (national data for community water systems).

Infrastructure Projects

States have loaned more than $2.3 billion to eligible water systems for projects ranging from the installation or upgrade of treatment facilities to the creation of new water systems needed to address public health concerns. Since the first loan was made to the Town of Williamsburg, Pennsylvania in April 1997, approximately 1,200 loans have been made. Seventy-five percent of these loans were made to small systems (40 percent of total assistance). More than one-third of the projects receiving loans have been completed, and communities nationwide are enjoying the benefits of a safer, more affordable supply of drinking water as a result.

DWSRF Loans Made



Eligible Systems and Projects

Publicly and privately owned community water systems and nonprofit noncommunity water systems can receive DWSRF funding. To focus on the needs of small systems, Congress required that states provide a minimum of 15 percent of their funds to systems serving 10,000 people or less. Most states have far exceeded this minimum requirement.

Eligible projects are those needed to maintain compliance with health-based standards or otherwise further the public health protection goals of the SDWA, such as installation and replacement of failing treatment and distribution systems. As EPA's survey of drinking water infrastructure needs showed, there is a tremendous need associated with drinking water projects throughout the country. In New York alone, more than 1,250 projects totaling $4.6 billion have been identified by systems that have indicated an interest in receiving funds. To ensure that the most critical infrastructure needs are met, each state has developed a priority system for funding projects. States must give priority to eligible projects that: (1) address the most serious risks to human health, (2) are necessary to ensure compliance with the requirements of

Eligible Project Categories

Treatment
- Projects to maintain compliance with regulations for contaminants that cause acute and chronic health effects.

Transmission and Distribution
- Installation or replacement of transmission and distribution mains.

Source
- Rehabilitation of wells or development of sources to replace contaminated sources.

Storage
- Installation or improvement of eligible storage facilities.

Consolidation
- Consolidation of water supplies if a water supply has become contaminated or if a system is unable to maintain technical, financial, or managerial capacity.

Creation of New Systems
- Creation of new community water systems to replace contaminated sources or to consolidate existing systems that have technical, financial, or managerial difficulties.

the SDWA, and (3) assist systems most in need on a per household basis. States rank the projects and then offer loans to those with the highest priority.

Flexible Financing Tools Promote Results

A wide range of tools to fund infrastructure projects are available to states through the DWSRF program. The most significant advantage of the DWSRF program is that it allows states to offer loans to water systems at below-market interest rates. The savings from lower interest rates can be significant for a community. For example, a water system receiving a $5 million loan at a 2 percent interest rate, as opposed to a 6 percent interest rate, would save $2.5 million over the course of its 20 year repayment period.

Using program assets as security, a state can also issue bonds to "leverage" its program. Over time, leveraging can generate a significant amount of additional funding for projects. More than ten states are using the assets of the program to leverage in their DWSRF programs so that they can meet the demand for financial assistance. For example, leveraging has enabled New York to make more than $460 million in loans while receiving only $200 million in federal grants, and Kansas has made more than $82 million in loans using its $45 million in grants.

Many systems serving disadvantaged communities are not able to afford even the low-interest rate loans made available through the DWSRF program and require additional assistance to complete a project. The DWSRF program provides states with additional flexibility to address these systems. A state may take an amount equal to 30 percent of its capitalization grant to provide additional loan subsidies (e.g., principal forgiveness, negative interest rate loans) to communities which are classified as "disadvantaged" based on affordability criteria developed by the state. A state may also extend loan terms for these systems to up to 30 years. Another method for making loans more affordable is to coordinate DWSRF funds with other sources of funding. Other federal financial assistance programs (e.g., the U.S. Department of Agriculture's (USDA) Rural Development program and the U.S. Housing and Urban Development's (HUD) Community Development Block Grant program) are available to assist water systems in addressing drinking water infrastructure needs. Many states also have their own assistance programs for drinking water improvements. Public water systems benefit from state DWSRF programs that have fostered cooperation with other funding sources because they get an affordable funding package that covers the total project costs. The DWSRF program and other funding programs benefit because coordination allows their funds to go further.

Financing Tools Available Through the DWSRF

- **Low-interest loans** between 0 percent and the market rate with a 20 year repayment period.
- **Refinance or purchase local debt** to reduce a community's cost of borrowing.
- **Purchase insurance** or **guarantee local debt** to improve credit market access or reduce interest rates.
- **Leverage program assets** by issuing bonds to increase the amount of funds available for projects.
- Provide **disadvantaged assistance** by taking an amount equal to 30 percent of a capitalization grant for loan subsidies or extending the repayment period to up to 30 years.

Project Highlights

The DWSRF program is playing a significant role in providing assistance to public water systems to ensure compliance with the SDWA and address the most serious risks to human health. The projects presented here show how states are making loans to help water systems meet the challenge of providing safe and affordable drinking water to all of their customers.

Funding Public Health and Compliance

A 1995 EPA survey of drinking water infrastructure needs found that $12.1 billion was needed to address current SDWA requirements. Approximately 84 percent of that need was for improved treatment for microbial contaminants regulated under the Surface Water Treatment Rule and the Total Coliform Rule. The remaining needs were associated with nitrates, which can cause acute health effects in children, and other contaminants such as radionuclides that pose chronic health risks. The following projects show how the DWSRF program is providing assistance to address these contaminants.

Scanning electron micrograph of Giardia lamblia. Giardia and other microbial contaminants can cause severe illness.

▼ Microbial contaminants

More than 167 million people receive drinking water from surface water sources such as rivers and lakes. Microbial contaminants such as *Giardia*, *Cryptosporidium*, and Coliform bacteria that can be present in surface water must be removed to ensure public health protection. These contaminants can lead to gastrointestinal illness and, in extreme cases, death. The Surface Water Treatment Rule requires filtration of surface water sources to remove microbiological contaminants. **Gold Beach, Oregon** received a $500,000 DWSRF loan to build a filtration plant to ensure that the surface water source for the town's drinking water meets the requirements of the Surface Water Treatment Rule. The new filtration plant also helped to ensure inactivation of *Giardia* which is common in coastal Oregon waterways. **Concord, New York** received a $47,713 DWSRF loan to replace a private water system that was vulnerable to microbial contaminants due to aging private septic systems in the area. The project involved building a new storage tank, pumping station, and distribution mains to ensure a safe and reliable water supply for the town's 100 residents.

▼ Nitrates

In some small rural communities, ground water is impacted by high nitrate levels as a result of agricultural practices or failing septic systems. High nitrate levels can cause serious health problems, especially for infants whose ability to absorb oxygen can be inhibited by nitrate (i.e., blue baby syndrome). In **Quartzite, Arizona**, DWSRF assistance was combined with other sources of funding to address ground water contaminated by failing septic systems. Quartzite's water system was under a Consent Order from the Arizona Department of Environmental Quality for high nitrate levels and was first on the state's priority list. The project, serving 2,000 people, will complete an extension of the town's distribution service to 85 percent of the community and consolidate more than

50 public water systems. Due to ongoing problems with high nitrate levels in the ground water, **Spivey, Kansas** received a $78,000 loan from the DWSRF program to extend pipelines and connect to a safe public water system to serve its 99 residents.

▼ Radionuclides

Radionuclides are man-made or natural elements that emit radiation. Radionuclides can increase the risk of cancer depending on the radionuclide a person is exposed to through drinking water consumption. In **Jackson, Nebraska**, DWSRF assistance was combined with other sources of funding to address municipal wells with high radionuclide levels (i.e., radium and alpha particles) that were in violation of the Nebraska Safe Drinking Water Act. The project involved installing a new well and constructing a new treatment plant. With 75 percent grant assistance, Jackson was able to afford the project and provide safe drinking water to its 230 residents.

Funding Disadvantaged Communities

To help meet the unique needs of economically distressed communities, states have the flexibility to establish disadvantaged community programs as part of their DWSRF programs. Through a disadvantaged community program, a state may provide additional subsidies such as principal forgiveness or extend loan repayment periods to up to 30 years. This additional assistance can make a substantial difference in terms of improving system compliance, getting needed projects underway, and maintaining affordable water service.

Several states have established programs for disadvantaged communities and many others have expressed interest in doing so.

▶ With a median household income of $19,712, the small coastal community of **Winter Harbor, Maine** qualified for disadvantaged assistance for much-needed infrastructure improvements to its water system. The community had created a water district by purchasing its system from a private owner. At the time of the purchase, the households served by the system were under a boil water order and the system was out of compliance with the Surface Water Treatment Rule, had a source of questionable quality, no filtration, and inadequate disinfection. The water system's rates were $300 per household per year which was substantially above the state's goal rate of $276 per year (based on 1.4 percent of median household income). The gap between the goal rate and the actual rate qualified Winter Harbor for maximum disadvantaged assistance. DWSRF assistance was combined with assistance from the Maine Rural Development Council to fund the construction of a new well, a pump station with treatment, a transmission line, and a storage tank. A $1.1 million loan from the DWSRF program included principal forgiveness for 75 percent of the requested loan amount, with the remaining loan amount at a 0 percent interest rate. Financial assistance made it possible for Winter Harbor to switch its water supply from a non-potable surface water source to a ground water source with adequate disinfection and storage while offering affordable rates to the community.

Funding Small Water Systems

Approximately 93 percent of community water systems are small systems, many of which serve fewer than 3,300 people. Almost one-half of these systems are privately owned. Small systems have certain characteristics that make compliance with minimum standards difficult without outside assistance. These characteristics include very small staff, extremely limited financial resources, and a small, widely-distributed customer base. These systems often need financial assistance to provide safe water to their communities, but find it difficult to obtain favorable interest rates when applying for loans to make infrastructure improvements. With its ability to offer low-interest rate loans, the DWSRF program is an important source of affordable funding for small systems.

With a DWSRF loan, an aging water system in Braddock Heights was abandoned and replaced with a new system

▶ Before receiving a DWSRF loan, the low-income community of **Mendon, Vermont,** which is home to approximately 100 year round residents, received untreated surface water from a system that had been on a boil water order since 1971. In 1988, EPA issued a final Administrative Order to the system requiring that corrective action be taken. Mendon applied for and received a loan that included disadvantaged assistance to extend a water main from the nearby city of Rutland to serve the community's homes. The disadvantaged assistance resulted in a $180,000 subsidy to the community, with the remaining loan amount at a 0 percent interest rate. The water main extension has been completed and is fully operational. Operations at the privately owned system serving **Braddock Heights, Maryland** were revoked by the Public Service Commission, and the Maryland Department of the Environment ordered Frederick County to take over the aging system. The Frederick County Water Authority received a $4.4 million DWSRF loan to design and build a new water treatment plant, storage tank, and distribution system for the community of about 350 homes. **Comfrey, Minnesota,** population 433, was one of the first cities included on the state's DWSRF priority list for improvements to its water treatment plant due to a copper exceedance problem. However, during the loan application process, the city was devastated by a series of tornadoes. All but 15 of the 250 homes were damaged, and most of the city's

infrastructure and municipal facilities were destroyed. Covering costs to replace the damaged infrastructure through traditional bond methods would have been very difficult since there was essentially no tax base remaining in the wake of the storms. As a result, the DWSRF program provided $575,262 in funding ($375,025 of it in principal forgiveness) for the needed drinking water infrastructure repairs. The project was an important part of the city's efforts to rebuild the community and protect public health.

Funding Consolidation to Improve System Capacity

Capacity development is an important part of the DWSRF program's focus on preventing contamination problems in drinking water. All systems receiving DWSRF program assistance must demonstrate that they have the technical, financial, and managerial capacity to ensure compliance with the SDWA over the long-term. When a public water system is unable to provide a safe and reliable supply of drinking water due to any number of problems with capacity, often the most economic and cost-effective solution is consolidation with neighboring systems. Consolidation may involve the construction of an entirely new system or the expansion of an existing system. Many state DWSRF programs give bonus points in their priority systems to projects that will consolidate systems.

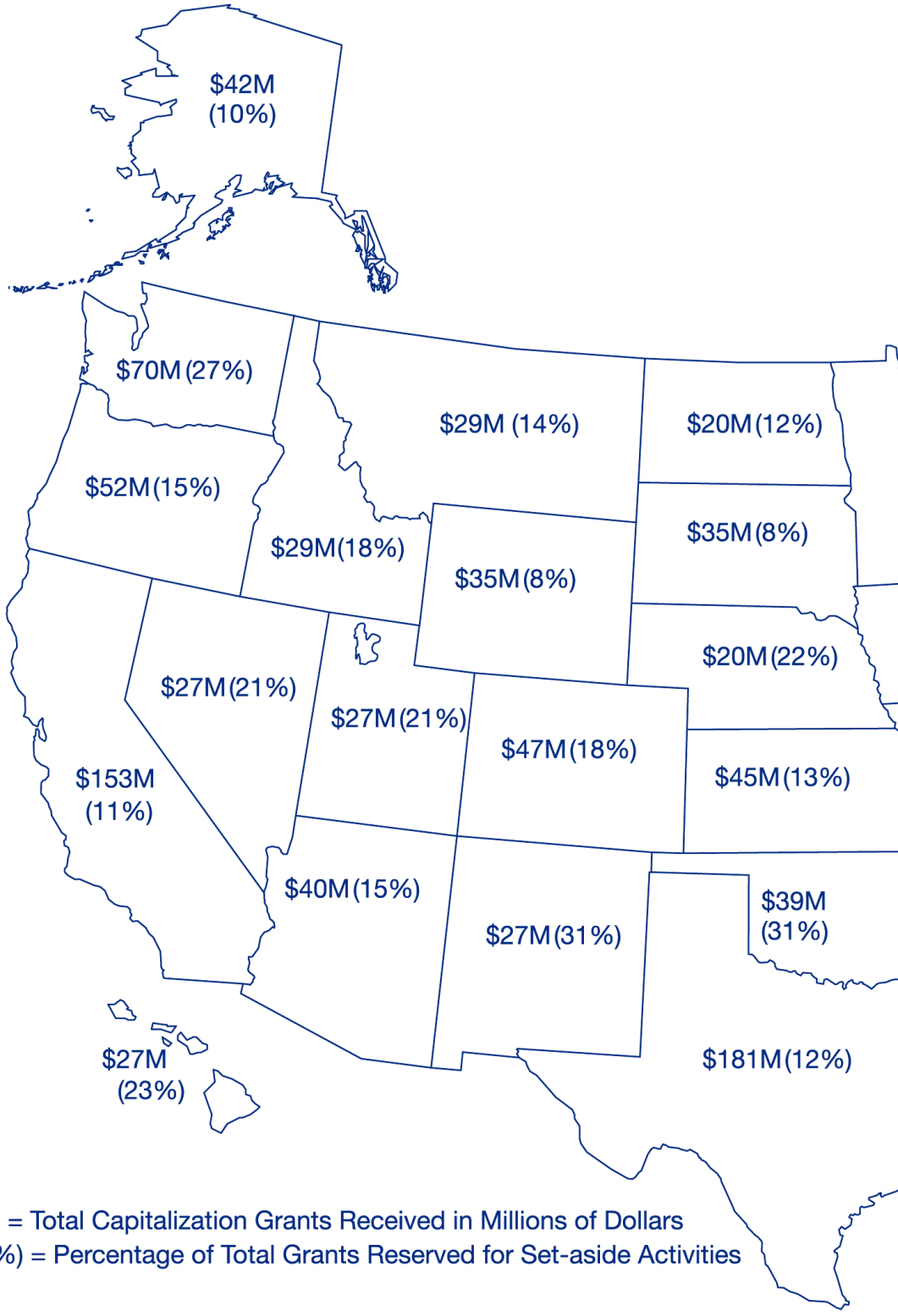
▶ In **Jefferson County, Florida,** initial interest in creating an area-wide drinking water system grew out of a request from a small private utility for an expansion of its service area. Area residents in the rural community served by private wells attended a series of meetings asking to be included in a new area-wide water system because over 400 samples from their wells tested positive for Coliform bacteria and the potential for surface runoff contamination caused genuine concern for disease outbreaks. In addition, leaking underground storage tanks had contaminated area aquifers with gasoline, and a chemical plant leak had contaminated an aquifer near one of the small communities. As a disadvantaged community, Jefferson County received a $6 million financial assistance package which included 85 percent in principal forgiveness from the DWSRF program and grant assistance from the USDA Rural Development program. The multi-community water system will provide safe, reliable drinking water to almost 900 families and will consolidate over 30 small, unreliable systems into one reliable system operated by a nonprofit cooperative at a monthly cost of about $25 per customer. **Ottowa County, Ohio** received a $21.2 million loan to consolidate seven public surface water treatment plants and more than 115 privately owned ground water systems that had significant problems with contamination. The new regional water system serviced by a 6 million gallon per day surface water treatment plant will provide water to approximately 23,000 people.

"This is a problem I have identified for many years and have been trying to take action to do something about ... (I) credit (Ms.) Couver and other community volunteers with helping build support for the new water system by spreading the word about contamination problems."

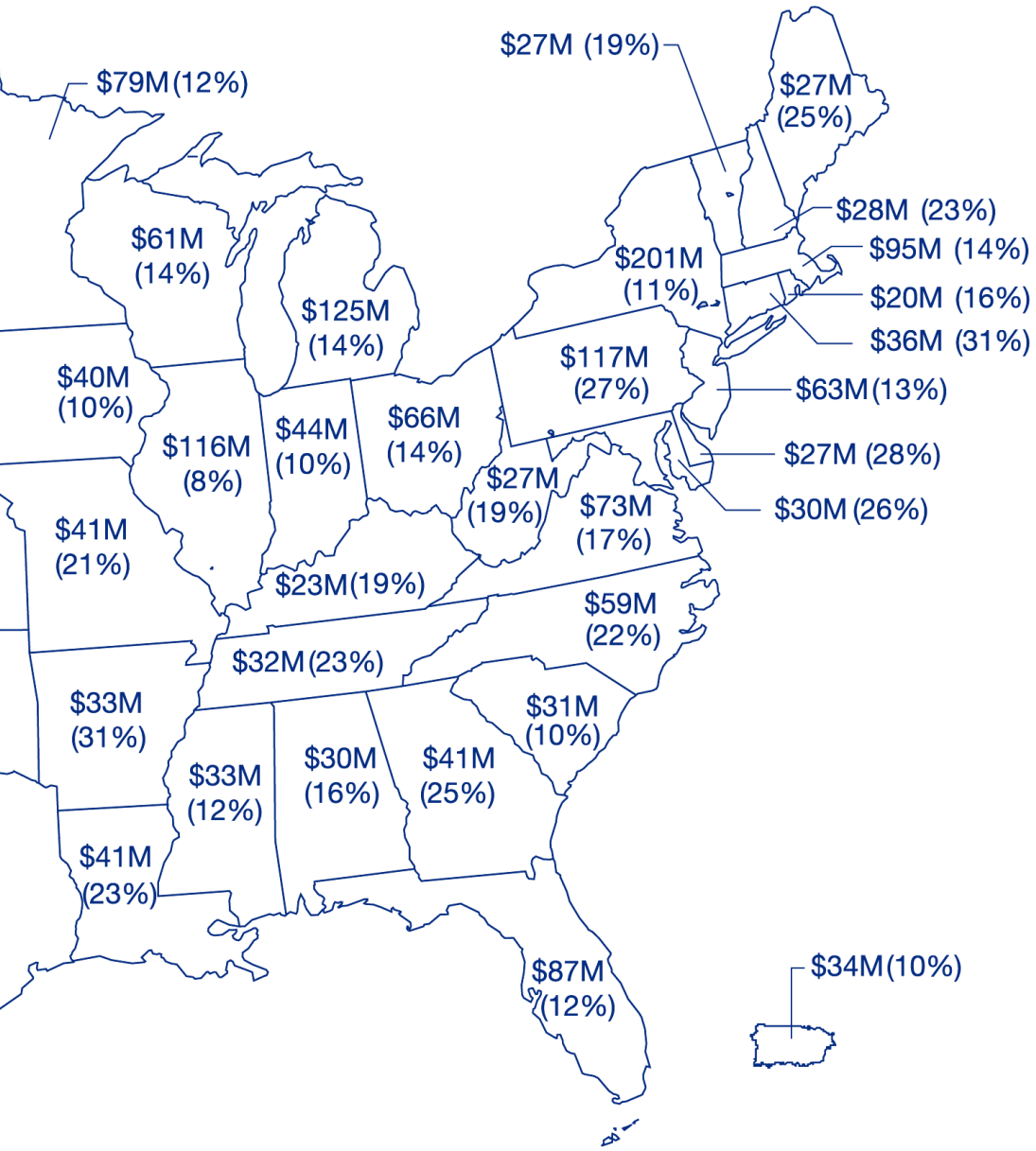
—Dan MacDonald
Jefferson County Health Department as quoted in the *Tallahassee Democrat*

State DWSRF Programs

(Based on data through June 30, 2000)



$ = Total Capitalization Grants Received in Millions of Dollars
(%) = Percentage of Total Grants Reserved for Set-aside Activities


$27M (19%)
$27M (25%)
$79M (12%)
$28M (23%)
$95M (14%)
$20M (16%)
$36M (31%)
$63M (13%)
$27M (28%)
$30M (26%)
$61M (14%)
$125M (14%)
$201M (11%)
$117M (27%)
$40M (10%)
$116M (8%)
$44M (10%)
$66M (14%)
$27M (19%)
$73M (17%)
$41M (21%)
$23M (19%)
$59M (22%)
$32M (23%)
$33M (31%)
$31M (10%)
$33M (12%)
$30M (16%)
$41M (25%)
$41M (23%)
$87M (12%)
$34M (10%)

Set-aside Activities

Each state has the flexibility to set aside up to 31 percent of its capitalization grant to conduct activities and establish and implement programs that place a strong emphasis on preventing contamination problems through source water protection and encourage better system operations through enhanced water system management. There are four general set-aside categories—each of which carries a limit on the amount of the capitalization grant that can be used for activities eligible under that category.

Although the need to address infrastructure projects through the revolving loan fund is great, all states have recognized the importance of preventative measures and have reserved a portion of their grants to conduct activities that support their drinking water programs. To date, approximately 16.5 percent ($445 million) of the total amount of funds that have been provided to states through capitalization grants ($2.7 billion) has been allocated to set-aside activities.

States are using set-asides to directly fund state programs, including managing the DWSRF. Approximately $55 million of the $106 million reserved for state program management activities is being used to support public water system supervision (PWSS) programs which must prepare to implement new regulations addressing contaminants in drinking water. States are also using funds to develop and implement new state programs required by the 1996 SDWA Amendments. For example, each state is required to develop or revise programs for the certification of drinking water system operators and to implement a capacity development program to ensure that new and existing systems demonstrate that they have the adequate technical, financial, and managerial capacity to operate safely.

The SDWA Amendments also require each state to assess potential sources of contamination at all public water systems within the state. Approximately $115 million of the $193 million reserved for local assistance activities is being used to delineate source water protection areas for public water systems and assess potential sources of contamination. States are also providing

Set-aside Categories and Eligible Activities	Maximum
Administration and Technical Assistance • Administer the DWSRF program and provide technical assistance to public water systems.	4%
Small System Technical Assistance • Provide technical assistance to small systems.	2%
State Program Management • Administer the state PWSS program. • Provide technical assistance through source water protection programs. • Develop and implement a capacity development strategy or an operator certification program.	10%*
Local Assistance and Other State Programs • Delineate and assess source water protection areas. • Provide loans to systems to acquire land or conservation easements. • Provide loans to systems to assist in voluntary, incentive-based source water protection measures. • Make expenditures to establish and implement wellhead protection programs. • Provide assistance to systems as part of a capacity development strategy.	15%**

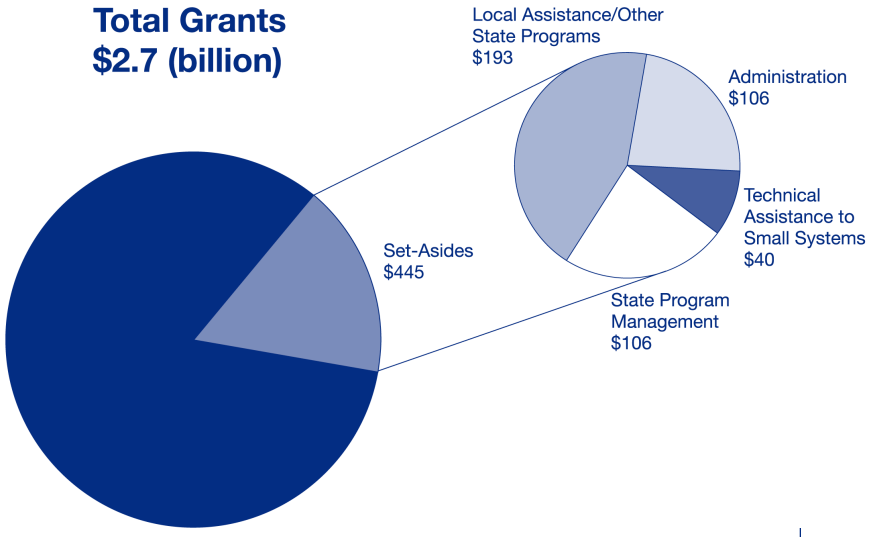
**States must provide a dollar-for-dollar match for expenditures made under this set-aside.*
***No more than 10% per activity per capitalization grant.*

direct assistance to systems to address source water protection by, for example, implementing wellhead protection measures to protect ground water sources of drinking water or by providing loans to water systems to acquire land or conservation easements to ensure that sources of drinking water are not impacted by land uses which could introduce contamination to the source.

States are also using set-asides to provide technical assistance to public water systems directly or through a third party. Much of this assistance is directed at small systems which have greater problems maintaining technical, financial, and managerial capacity. States have reserved $40 million for technical assistance activities that specifically target systems serving 10,000 people or less.

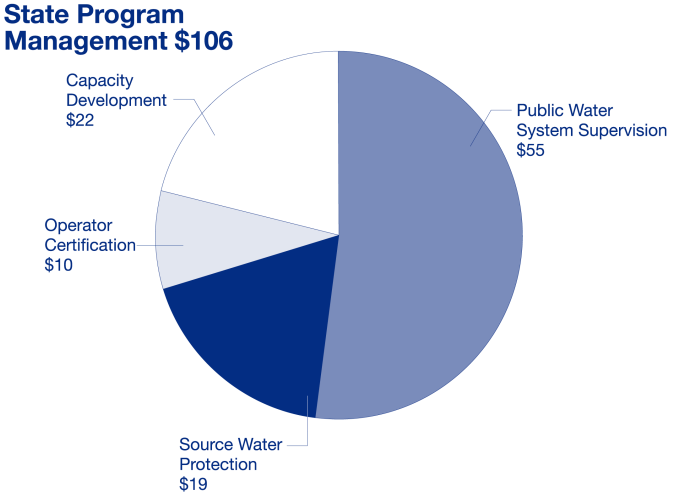
DWSRF Set-Asides

(in millions of $)



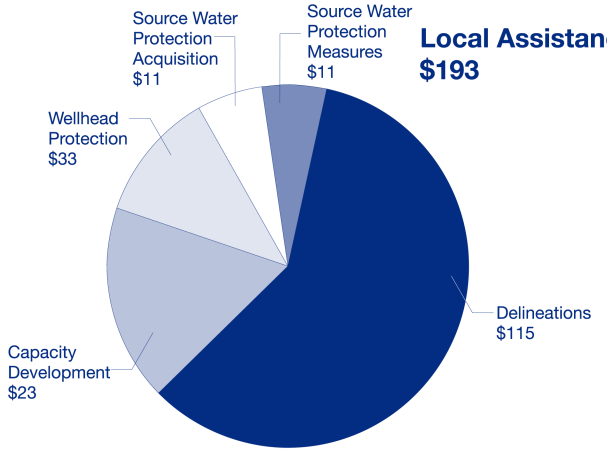
State Program Management Set-Aside

(in millions of $)



Local Assistance Set-Aside

(in millions of $)



Activity Highlights

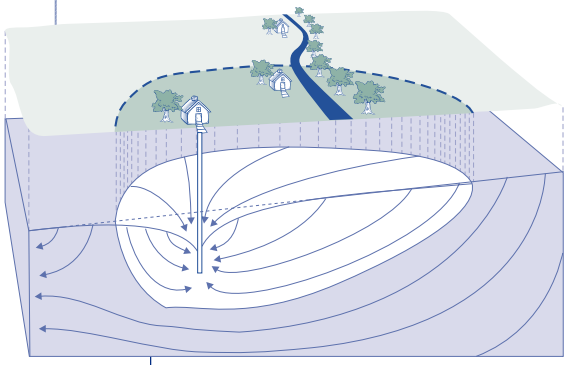
The DWSRF program offers states the flexibility to fund a wide range of activities using set-asides to help support their drinking water programs. Three areas in which states are focusing their efforts are: (1) addressing source water protection, (2) facilitating partnerships, and (3) enhancing the technical, financial, and managerial capacity of public water systems.

Addressing Source Water Protection

In the past, water suppliers generally directed their resources toward treating water from rivers, lakes, and underground sources before supplying it to the public as drinking water. However, there is a growing recognition that taking positive steps to manage potential sources of contamination and preventing pollutants from reaching sources of drinking water often can be more efficient and cost-effective than treating drinking water later.

Benefits of Source Water Protection

- ✔ Protects public health
- ✔ Offers common sense approach with an economic benefit
- ✔ Protects the environment



Each state has developed a comprehensive Source Water Assessment Program to assess the source of every public water system within the state. These assessments must identify the geographic areas that affect a drinking water system's supply, inventory potential contaminant sources within that area, and assess the susceptibility of the water system to contamination. States, water suppliers, and communities can then use the results of the assessments to protect their sources of drinking water.

▼ Implementing wellhead protection programs

Nearly 80 percent of community water systems use ground water for their primary source of supply. Wellhead protection promotes pollution prevention and management techniques to protect ground water sources of drinking water. **Ohio** has reserved more than $3.5 million to implement its wellhead protection program (WHPP). The state is using funds to delineate wellhead protection areas, assist public water systems in conducting potential contaminant source inventories, complete susceptibility analyses, disseminate assessment results, and promote implementation of protection activities as assessments are completed. Three of the other Great Lake states are also using funds to develop and implement WHPPs. **Michigan** has developed a program to ensure safe abandonment of wells, **Minnesota** is funding staff to work with community and noncommunity systems on their WHPPs, and **Wisconsin** is expanding education and outreach efforts to encourage systems to participate in the WHPP.

▼ Acquiring land and conservation easements

Some communities have found that an effective way to protect the quality of drinking water sources is to own or control land in upstream watershed or ground water recharge areas where development or other land activities could impair the quality of the drinking water source. Land acquisition and conservation easements can protect a water supply by preventing pollution-generating activities in critical areas and can provide other community benefits such as

preserving wildlife areas, enhancing recreational opportunities, and reducing flood damage. In **Maine**, the Auburn Water District and Lewiston Water Department received a loan for $570,000 to purchase 434 acres of land in the watershed of the "Basin," a small pond which drains directly into Lake Auburn, which serves as a source for the two water systems. The systems collaborated with the Lewiston-Auburn Watershed Commission and the Androscoggin Land Trust (ALT) and negotiated a joint easement under which the Commission will review the landowner's forest management plan to ensure that best management practices for water quality are used and ALT will share overall easement monitoring responsibilities. By protecting land around Lake Auburn, the water systems will be able to maintain water quality standards.

▼ **Implementing source water protection measures**

Protecting source water by preventing contamination is in the best interest of water systems. **California** has reserved more than $8 million from its capitalization grants to support loans to community water systems for source water protection projects that are directly related to protecting vulnerable water sources from contamination. Types of projects that may be funded include fencing cattle and other animals from sensitive areas, restricting public access to critical areas in protection areas, evaluating agricultural practices and educating on best management practices, installing signs at boundaries of zones or protection areas, and building structures to protect the source by diverting contaminated runoff.

Facilitating Partnerships

The provision of safe drinking water relies on the coordinated efforts of partners who can aid and benefit from each other. Partnerships allow states to conserve resources by working from an existing framework to provide immediate assistance rather than spending time developing new programs that may replicate other efforts within the state. Furthermore, through the consolidation of financial resources, partnerships increase the amount of assistance that states can provide to systems.

Benefits of Partnerships

- ✔ **Uses existing frameworks and expertise**
- ✔ **Leverages resources by combining funds with other agencies or organizations**

▼ **Partnering with colleges, universities, and extension services**

Continuing education is critical in ensuring that owners and operators of water systems are knowledgeable about the newest technologies and regulations affecting the water industry. **Pennsylvania** considers education to be so important that it requires each DWSRF borrower to submit a plan every five years during the period of loan repayment (generally 20 years) detailing the system's continuing education plans. Other mid-Atlantic states (**Delaware**, **Maryland**, **Virginia**, and **West Virginia**) also have established relationships with technical assistance providers at educational centers to provide continuing education credits for system operators.

▼ Partnering with existing technical assistance providers

In many states, there are organizations that have been providing technical assistance to small rural water systems and districts for years. State affiliates of the National Rural Water Association (NRWA) and Rural Community Assistance Programs (RCAP) offer a critical link in helping small utilities provide safe drinking water to their customers. **New Jersey** is working with the state's RWA and the state section of the American Water Works Association to develop an outreach program to help systems determine the best method of treatment, explain the DWSRF program, and help systems apply for DWSRF funding. In addition, many states (**North Dakota**, **Kansas**, and **Vermont** to name a few) are entering into contracts with their RWA and RCAP organizations to target assistance to small systems. An example of the type of activity that states are conducting in working with these providers is the funding of circuit riders who travel between water systems to provide technical assistance to operators. In **Georgia**, three circuit riders were funded through an ongoing contract with the state's RWA to help systems improve their technical and managerial ability to comply with state and federal drinking water regulations. The circuit riders made more than 640 field visits to water systems during state fiscal year 2000. Ninety-four percent of the visits were to systems serving fewer than 3,300 persons and 69 percent were to privately owned systems.

▼ Partnering with other agencies and environmental groups

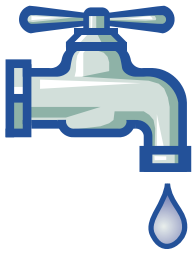
The activities that states must undertake to conduct source water assessments naturally lend themselves to developing partnerships. Some assessments require expertise that may not be readily available within a state's drinking water program to determine the susceptibility of source water to contamination in areas with complex geological conditions. Therefore, many states are partnering with the U.S. Geological Survey to provide assistance in completing the required assessments. Because implementing protection measures often begins at the local level, educating the public about the importance of drinking water protection is critical. **Pennsylvania** has awarded grants to local environmental outreach groups to develop and implement community education programs to promote source water protection.

Enhancing Technical, Financial, and Managerial Capacity

It is important to ensure that public water systems improve their technical abilities, managerial skills, and financial resources so that they can provide safe drinking water to the public consistently, reliably, and cost-effectively. By enhancing system operations and ensuring the capacity of public water systems, states can promote greater long-term compliance with the SDWA.

Benefits of Enhancing System Capacity

- ✔ **Promotes greater long-term compliance with safe drinking water standards**
- ✔ **Helps systems provide reliable safe drinking water in a cost-effective manner**



▼ Helping systems prepare for infrastructure improvements

Many state DWSRF programs have seen small systems drop out of consideration for loans because the systems have not done adequate planning to determine what type of project they need to undertake to improve their infrastructure. **Virginia** offers planning and design grants of up to $25,000 to rural, financially stressed community water systems serving up to 3,300 persons. The grants can be used to fund the preparation of preliminary engineering plans and specifications or to undertake similar technical assistance projects. **New Mexico** has developed a team approach using staff from the Environment Department, Finance Authority, regional Environmental Finance Center, and engineering consultants to better prepare small systems for projects. The state is helping systems that are targeted for assistance prepare preliminary engineering plans and specifications, conduct environmental reviews, and undertake similar technical assistance projects. The goal is that these funds will assist water system owners in preparing applications for assistance from the DWSRF program and other funding sources for infrastructure projects.

▼ Reducing the number of small water systems lacking capacity

Almost 60 percent of community water systems serve fewer than 500 people. These very small water systems often lack the economies of scale that come with a larger customer base to maintain adequate capacity. Several states are developing strategies to reduce the number of small systems by encouraging consolidation and regionalization of water systems. **Utah** is using set-aside funds to implement regional planning for small systems on a county-wide basis. As part of the regional planning process, recommendations are made to small systems to regionalize operations or to consolidate with neighboring systems as appropriate.

▼ Helping systems manage their money

Many small systems lack the resources to maintain adequate financial accounting systems and develop comprehensive business plans. Comprehensive business plans can be used to generate reliable information about costs and other issues needed to make sound decisions about a water system's future. **Virginia** is using funds to help small systems develop comprehensive business plans. The state has contracted with the Southeast Rural Community Assistance Project, Inc. (SE/RCAP) to provide hands-on assistance in developing business plans for existing waterworks, first targeting the high-priority, vulnerable systems.

Four Years of Progress

The past four years have seen considerable progress in getting the new DWSRF program up and running. States have done an impressive job in implementing their DWSRF programs. Over a short period of time they had to obtain legislative authority, develop priority systems for ranking projects, and begin identifying projects for funding. Their efforts are paying off, as demonstrated by the volume of loans that have been made and examples of high priority projects addressing public health protection that have been funded. While states have found that many small public water systems require significant amounts of assistance to get through the loan application process, they have been able to provide more than 75 percent of their loans to these systems. Public water systems are using DWSRF assistance to address much-needed projects that they may have postponed in the past due to a lack of affordable financing.

Set-aside funds are being used to help states develop and implement new programs required by the 1996 SDWA Amendments. States are using funds to complete source water protection assessments of public water systems and are looking to provide assistance to help systems address potential sources of contamination. The technical assistance that states are providing is helping public water systems improve their technical, financial, and managerial capacity and prepare them to receive DWSRF assistance to make infrastructure improvements.

Although the DWSRF program has contributed to the efforts to provide safe drinking water, both states and public water systems will face challenges in the future. The recognition that the quality of drinking water can be impacted by contamination from many different sources means that states will have to work closely with other governmental entities and private business

DWSRF Program At-A-Glance

(through June 30, 2000)

Total Funds Appropriated (Fiscal Year 1997-2000)	**$3.6 billion**
Total Capitalization Grants to States	**$2.7 billion**
Percentage of Total Grants Reserved for Set-aside Activities	**16.5% ($445 million)**
Total Loans Made to Systems	**1,200 loans ($2.3 billion)**
Percentage of Total Loans Awarded to Small Systems	**75% ($932 million)**

owners to ensure that measures are being put into place to prevent contamination. States will also need to commit additional resources to implement new regulatory requirements and to provide better outreach to water systems and the public as they work to ensure that all citizens have access to safe sources of drinking water. Public water systems will need resources to comply with existing and new regulations and maintain their ability to provide safe drinking water in the face of aging infrastructure, shifting populations, and availability of water.

The DWSRF program is a significant tool available to states and water systems to meet the challenges of the future. Addressing the issues and great needs associated with providing safe drinking water will require a committed effort on the part of federal, state, and local governments as well as private businesses.

Continued investment in the DWSRF program will help states and public water systems ensure that our drinking water is safe and affordable. Because every child in any community in America should be able to turn on the tap and enjoy a glass of safe, clean drinking water.

Where to go for more information about the DWSRF program

Visit the EPA Office of Ground Water and Drinking Water website at www.epa.gov/safewater/dwsrf.html to find –

Policy and Guidance Documents ~ Fact Sheets ~ Reports ~ Funding Information ~ EPA & State Contacts ~ Links to State Programs

or

Contact the Safe Drinking Water Hotline at 1-800-426-4791