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# DRINKING WATER

## Key Aspects of EPA's Revolving Fund Program Need to Be Strengthened



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<b>Abstract</b> Given the size and significance of the DWSRF program,the 1996 amendments and EPA s implementing regulations include provisions to develop tools,such as information systems,performance reviews,and financial audits,to help EPA monitor the states implementation of the DWSRF program and evaluate program effectiveness.For example,when EPA promulgated its DWSRF regulations,it established a national information management system (NIMS)to better assess the DWSRF program,monitor state progress,and provide assistance in the agency s annual reviews of state programs.EPA also set up a process whereby its regional offices annually assess key aspects of state DWSRF programs: achievement of state program goals and objectives;compliance with grant agreements and applicable statutory provisions,such as funding priorities; and the program s financial status.To determine the adequacy of the financial controls in the DWSRF program,EPA s regulations provide that states may voluntarily agree to conduct annual independent audits that cover the financial statements,internal controls,and compliance with applicable requirements.States that do not conduct their own audits are subject to periodic audits by the EPA Office of Inspector General (OIG)		
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## Abbreviations

DWSRF	Drinking Water State Revolving Fund
EPA	Environmental Protection Agency
NIMS	National Information Management System
OIG	Office of Inspector General
PER	Program Evaluation Review



United States General Accounting Office  
Washington, DC 20548

January 24, 2002

The Honorable W. J. (Billy) Tauzin  
Chairman, Committee on Energy and Commerce  
House of Representatives

The Honorable Paul E. Gillmor  
Chairman, Subcommittee on Environment  
and Hazardous Materials  
Committee on Energy and Commerce  
House of Representatives

The Environmental Protection Agency's (EPA) most recent national survey of drinking water infrastructure needs estimates that \$150.9 billion will be needed over the next 20 years to repair, replace, and upgrade the nation's 55,000 community water systems to protect public health.<sup>1</sup> To help communities finance the infrastructure projects needed to comply with federal drinking water regulations and protect public health, the Congress established the Drinking Water State Revolving Fund (DWSRF) program in 1996. So far, states have cumulatively received over \$4 billion to establish revolving loan funds to finance improvements at local drinking water systems. On an annual basis, DWSRF appropriations account for about 10 percent of EPA's budget at current funding levels.

Under the 1996 amendments to the Safe Drinking Water Act (SDWA), EPA is required to conduct an assessment of water systems' capital improvement needs every 4 years. To this end, EPA developed a survey to collect data on the nature and cost of infrastructure improvements needed at local water systems. EPA designed its survey to provide a high level of precision for the estimated drinking water infrastructure needs. Specifically, EPA set precision targets such that its national and state-level estimates would have a 95 percent likelihood of falling within 10 percent of the actual need.

To establish the DWSRF, the 1996 amendments authorized \$9.6 billion, to be appropriated through 2003. In its annual budgets, EPA requests appropriations to capitalize the states' funds and then makes specific

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<sup>1</sup>*Drinking Water Infrastructure Needs Survey: Second Report to the Congress*, EPA 816-R-01-004, Office of Water (February 2001).

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allotments, or capitalization grants, to each state for that purpose. The states use the grants to make low-interest loans to their local water systems for improvements that are needed to comply with federal drinking water regulations and protect public health. As the loans are repaid, the states' funds are replenished, enabling them to make loans to other eligible drinking water projects. To help meet the needs of communities that qualify as "disadvantaged," states may extend loan repayment periods or use an amount equal to up to 30 percent of their annual capitalization grants to provide additional subsidies to these communities, such as offering principal forgiveness.

Given the size and significance of the DWSRF program, the 1996 amendments and EPA's implementing regulations include provisions to develop tools, such as information systems, performance reviews, and financial audits, to help EPA monitor the states' implementation of the DWSRF program and evaluate program effectiveness. For example, when EPA promulgated its DWSRF regulations, it established a national information management system (NIMS) to better assess the DWSRF program, monitor state progress, and provide assistance in the agency's annual reviews of state programs. EPA also set up a process whereby its regional offices annually assess key aspects of state DWSRF programs: achievement of state program goals and objectives; compliance with grant agreements and applicable statutory provisions, such as funding priorities; and the program's financial status. To determine the adequacy of the financial controls in the DWSRF program, EPA's regulations provide that states may voluntarily agree to conduct annual independent audits that cover the financial statements, internal controls, and compliance with applicable requirements. States that do not conduct their own audits are subject to periodic audits by the EPA Office of Inspector General (OIG).

Concerned about the adequacy of federal, state, local, and private resources to meet local drinking water infrastructure needs, you asked us to examine three aspects of the DWSRF program: (1) the accuracy of EPA's needs assessment estimate; (2) the extent to which states use the optional provision for assisting disadvantaged communities; and (3) EPA's efforts to monitor states' implementation of the DWSRF program. To address the first objective, we analyzed certain aspects of the methodology that EPA used to derive its drinking water needs estimate, specifically the impact of sampling on the estimate's precision. For the second objective, we surveyed all 50 states to determine how states use DWSRF funds to assist disadvantaged communities. For the third objective, among other things, we conducted a content analysis of the reports on EPA's Program Evaluation Reviews (PER)—one of the

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principal oversight tools that EPA uses to monitor the states' compliance with DWSRF program requirements.

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## Results in Brief

EPA has taken a number of steps to validate the data included in its \$150.9 billion estimate of the nation's drinking water infrastructure needs, such as conducting site visits to selected systems and asking states to review supporting documentation. However, EPA and other users of the needs assessment cannot get a sense of the estimate's accuracy—how closely the estimate reflects actual needs—until EPA calculates and reports the estimate's level of precision. Although EPA set a target for the precision of its estimate, without calculating the level of precision actually achieved, EPA cannot determine whether it met, or fell short of, this target. Because the survey's results influence the level of congressional appropriations for the DWSRF and, more importantly, form the basis for EPA's allotment of these funds to the states, we are recommending that EPA calculate and report the level of precision actually achieved in its recent needs assessment, and determine what implications, if any, its findings have on the methodology used to conduct future needs assessment surveys.

Thirty-one states have established programs as part of their DWSRF to assist disadvantaged communities, according to the results of our 50-state survey. Of the states with programs, 21 provided about \$94 million in special subsidies—mainly principal forgiveness—and 23 offered extended loan terms. While criteria for defining disadvantaged communities vary, states typically use some measure of household water rates relative to a community's median household income. In addition, states reported that other factors, such as concerns about depleting the fund and the availability of assistance from other federal and state sources, influenced their decisions to offer DWSRF assistance to disadvantaged communities.

EPA is not taking full advantage of the oversight tools that are currently available to monitor states' implementation of the DWSRF program. First, EPA is using its national drinking water information management system to develop financial management and other measures to monitor state progress and support the agency's review of state programs; however, until these draft measures are finalized and consistently applied, their utility as an oversight tool is limited. Second, the untimely and inconsistent preparation of PER reports—one of EPA's principal oversight tools—hamper its ability to use the reports to identify common or recurring problems. Finally, gaps in the financial audit coverage, and a limited review of the audits that are performed, hamper EPA's ability to



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fully assess the financial condition of the states' DWSRF programs. We are recommending several actions to improve EPA's use of available oversight tools to monitor states' implementation of the DWSRF program.

We provided a draft of our report to EPA for its review and comment. EPA generally agreed with our recommendations and offered technical clarifications, which we incorporated, as appropriate. In addition, we restated the basis for our recommendation for EPA to calculate and report the level of precision actually achieved in its needs assessment survey.

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## Background

EPA is required to conduct an infrastructure needs assessment every 4 years to estimate the future capital investment needs of drinking water systems eligible for DWSRF assistance.<sup>2</sup> EPA's assessment is designed to include "infrastructure needs that are required to protect public health, such as projects to preserve the physical integrity of the water system, convey treated water to homes, or ensure continued compliance with specific Safe Drinking Water Act regulations."<sup>3</sup> EPA's most recent needs survey estimates that \$150.9 billion will be required from private and public sources over the next 20 years to finance drinking water infrastructure projects. About 80 percent of the total need (\$119.7 billion) is linked to projects involving the installation, upgrade, and replacement of the basic infrastructure needed to deliver safe drinking water to the public. The rest of the need—\$31.2 billion, or about 20 percent—will go to projects directly associated with regulatory compliance, including \$21.9 billion for compliance with existing regulations and \$9.3 billion related to proposed or recently issued regulations, such as those for arsenic and radon.

While the smallest water systems represent over 80 percent of all community water systems, they account for only about 22 percent of the total estimated infrastructure needs. In contrast, the largest water systems represent about 2 percent of the community systems and account for the nearly 44 percent of total needs. Figure 1 shows infrastructure needs, by system size.

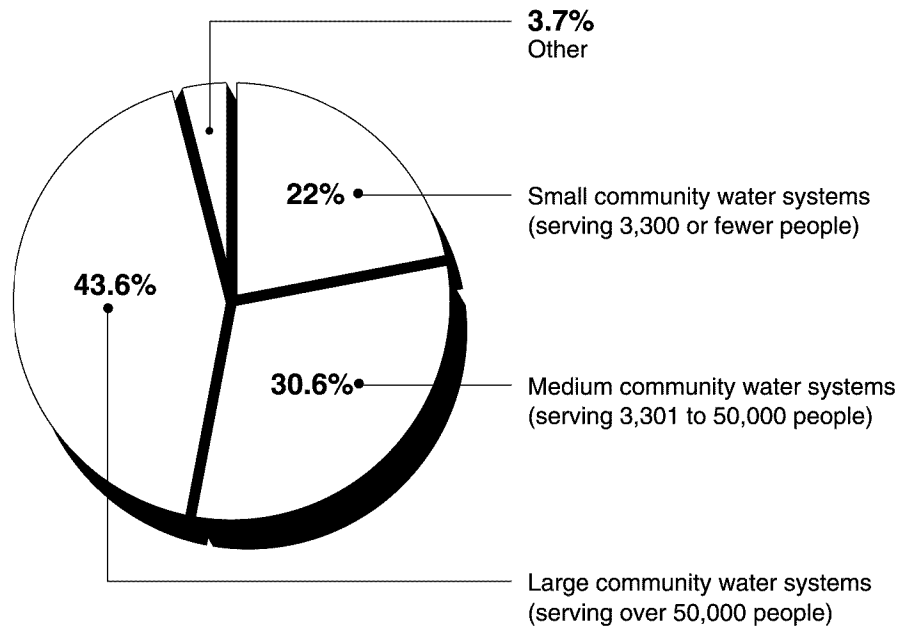
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<sup>2</sup>Eligible systems include community water systems and not-for-profit noncommunity water systems. Community water systems serve at least 25 people or 15 connections year-round. Noncommunity water systems serve at least 25 people for more than 60 days but less than year-round.

<sup>3</sup>*Drinking Water Infrastructure Needs Survey Second Report to Congress*, p. 11.

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**Figure 1: Distribution of Estimated Infrastructure Needs, by System Size**



Notes: The analysis does not include the costs associated with proposed or recently promulgated Safe Drinking Water Act regulations, which are estimated to be \$9.3 billion in total.

The "Other" category includes the needs associated with not-for-profit noncommunity water systems and American Indian and Alaska Native Village systems.

Source: *Drinking Water Infrastructure Needs Survey Second Report to Congress*, U.S. Environmental Protection Agency (February 2001), p.12.

Subsidized loan assistance is an integral part of the DWSRF program in that the interest rates that states offer to local water systems must be at or below the current market rate.<sup>4</sup> In addition, the Congress has authorized states to use an amount equal to up to 30 percent of their DWSRF capitalization grants to provide additional subsidies to communities that meet state-defined affordability criteria and thus qualify as "disadvantaged."<sup>5</sup> States with disadvantaged community programs may opt

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<sup>4</sup>According to EPA, the weighted average interest rate of DWSRF loans in 2001 was 2.4 percent, or about 3 percent less than the market rates reported by the states.

<sup>5</sup>The 1996 amendments to the Safe Drinking Water Act defined the term "disadvantaged community" to mean the service area of a public water system that meets affordability criteria established by the state.

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to forgive a portion of the loan principal or issue a loan at a negative interest rate. States also have the option of extending the loan repayment period from the standard 20 years to up to 30 years, provided that the repayment period does not exceed the expected design life of the project.

The 1996 amendments and EPA's regulations contain provisions that address EPA's role in ensuring that states effectively implement the DWSRF program. For example, when EPA promulgated its DWSRF regulations, it established an information management system to collect specific information on how states' DWSRF moneys are being spent. EPA also set up a process whereby its regional offices annually (1) assess the success of the states' performance of activities identified in their intended use plans<sup>6</sup> and other reports submitted to EPA and (2) determine compliance with requirements in the law, applicable regulations, and the grant agreement. To determine the adequacy of the financial controls in the DWSRF program, the 1996 amendments required EPA to periodically audit state loan funds. Accordingly, EPA's regulations mandate state compliance with the provisions of the Single Audit Act.<sup>7</sup> EPA's regulations further provide that states may voluntarily agree to conduct annual independent audits that cover financial statements, internal controls, and compliance with applicable requirements. States that do not conduct their own independent audits are subject to periodic audits by the EPA Office of Inspector General (OIG).

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## Level of Precision Needed to Assess the Accuracy of EPA's Estimate

EPA has taken a number of steps to ensure the validity of the information in its needs estimate, such as conducting site visits to selected systems and asking states to review supporting documentation. However, while the agency set a target for the precision of its estimate, it did not determine how close it came to actually achieving its target. As a result, EPA and other users of the needs assessment cannot get a sense of the extent to

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<sup>6</sup>By law, states must file annual "intended use plans" that provide detailed information on the projects to be assisted, the criteria for distributing the assistance, the financial status of the fund, and other information.

<sup>7</sup>The Single Audit Act, as amended in 1996, established the concept of replacing multiple grant audits with one audit of a recipient, as a whole. A single audit is an organization-wide audit that focuses on the recipient's internal controls and its compliance with laws and regulations governing federal awards. Auditors determine which federal programs to include in the scope of a single audit based upon the level of federal expenditures and risk. At a minimum, the audit will cover all of the major programs receiving significant funding unless the auditor deems the programs to be low-risk.

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which EPA's estimate reflects actual needs, particularly with regard to how the total needs are apportioned among the 50 states.

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### EPA Took Steps to Validate Its Data, but Did Not Calculate or Report a Level of Precision When Estimating the Nation's Drinking Water Infrastructure Needs

EPA has taken a number of steps to ensure that the information it collected about infrastructure needs at local water systems—and the cost of addressing those needs—was accurate. For example, EPA sent a questionnaire to large and medium-sized systems to collect information on capital projects needed to protect the public health. EPA surveyed 100 percent of the largest water systems (defined, for this purpose, as those serving populations of more than 40,000) and a statistical sample of medium-sized systems, which amounted to about one-third of the systems serving populations between 3,300 and 40,000. According to EPA's report to the Congress,<sup>8</sup> the water systems were asked to

- describe each project and provide documentation explaining why it is needed;
- indicate whether the project would address a current or future need, involves installing new or rehabilitating existing infrastructure, and is triggered by a SDWA regulation; and
- provide a cost estimate along with related documentation or the project's design capacities so that EPA could use a model to estimate the costs.

For the smallest water systems, EPA decided that collecting data through site visits by trained water systems specialists would provide better information than using the questionnaire approach, because small systems generally lack the data and personnel to complete a questionnaire of this type. EPA selected a statistical sample of about 600 small water systems for these site visits.

In addition to the documentation requirements, EPA arranged for each questionnaire response to be reviewed by cognizant state officials to ensure that systems thoroughly identified and correctly documented their needs. In its February 2001 report to the Congress, EPA reported that about 14 percent of the 86,057 projects submitted had been eliminated because the documentation criteria had not been met or the project appeared to be ineligible for DWSRF assistance.<sup>9</sup>

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<sup>8</sup>*Drinking Water Infrastructure Needs Survey Second Report to Congress*, p. 58.

<sup>9</sup>*Drinking Water Infrastructure Needs Survey Second Report to Congress*, p. 23.

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In the case of the large and medium-sized systems, EPA obtained information from a sufficient number of systems to estimate infrastructure needs on a state-by-state basis. However, EPA officials explained that the agency did not have the resources to send specialists to enough small systems to get an accurate picture of needs on a state-level basis. Specifically, EPA estimated that it would have to conduct site visits at approximately 22,000 small water systems to collect enough data to estimate needs on a state-by-state basis. Therefore, EPA used the results from its site visits to small systems to calculate a national-level estimate of small system infrastructure needs and then apportioned the total among the states on the basis of each state's small systems, categorized by population served and type of water source.

In conducting its needs assessment, EPA's goal was to provide "statistically precise" estimates of the infrastructure needs in each state. For the large and medium-sized systems, which typically comprise the majority of a state's needs, EPA set a precision target of plus or minus 10 percent, at the 95 percent confidence level. The target represented a 95 percent likelihood that the actual or "true" need for a particular state fell within 10 percent of the amount estimated. Similarly, for the small water systems, the precision target of the national-level estimate was set at plus or minus 10 percent, at the 95 percent confidence level.

In an effort to assess the accuracy of EPA's needs estimate, we performed a limited review of the methodology EPA used to derive its drinking water needs estimate, particularly the impact of sampling on the estimate's precision, and determined that EPA probably did not achieve the intended level of precision. We found some indications that the actual level of uncertainty, or sampling error,<sup>10</sup> was higher than EPA's target, possibly by a considerable amount. For example, although EPA was able to use data from its 1995 survey in determining the sample size for its 1999 survey, use of these data biased its calculations. Specifically, the agency's approach did not account for the fact that it extensively used average costs estimated from models when calculating its sample size.<sup>11</sup> The practice of

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<sup>10</sup>Sampling error is a measure of the amount of uncertainty that exists about the true cost when costs are estimated from a sample of systems rather than from data collected from all systems.

<sup>11</sup>For example, in its current needs assessment, EPA had to rely on modeling—and substituted the average costs generated by the models—for 67 percent of the capital projects identified in its needs survey, including over 80 percent of the projects associated with small water systems. Modeling was necessary because project-specific documentation was not available in many instances.

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using average costs understated the extent that costs varied from one system to the next. Furthermore, estimating highly variable costs typically requires a larger sample size than is required in situations with limited cost variability. Therefore, EPA's sample sizes were probably too small, and it is likely that EPA did not collect data from enough systems to achieve its precision target.

Another indication that EPA did not meet its precision target specifically concerns the estimate for small system needs. Even though EPA's technical experts believed that a simple random sample<sup>12</sup> would be required to achieve the intended precision target, EPA deviated from this sampling methodology in two important ways. First, taking into account the prohibitive travel costs associated with visiting 600 randomly selected systems located throughout the country, EPA instead used statistical sampling to select 100 geographical areas and then chose six systems within each area. Although an acceptable approach, such a statistical sampling technique can require a considerably larger sample size than when simple random sampling is used to achieve the desired level of precision. However, EPA did not increase its sample size to account for the change in sampling technique, which could have adversely affected the sampling error. Second, based on recommendations from an advisory workgroup,<sup>13</sup> EPA intentionally selected at least one area in each of the 50 states, Puerto Rico, and the U.S. Virgin Islands. Such geographical constraints had the potential to increase the sampling error, thereby reducing the level of precision of EPA's estimate.

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## EPA's Needs Assessment Serves as the Basis for DWSRF Allotments to the States

The 1996 amendments to the Safe Drinking Water Act require EPA to use the results of its most recent needs assessment survey to allocate the amount of each state's annual DWSRF allotment. According to EPA, its periodic surveys are intended to provide statistically precise estimates of need for each of the states. Then, EPA allocates the DWSRF funds on the basis of each state's share of the total national need, except that each state receives a minimum share of 1 percent.

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<sup>12</sup>In a simple random sample, each system has an equal chance of being included in the sample.

<sup>13</sup>The workgroup consisted of state, American Indian, Alaskan Native Village, Indian Health Service, and EPA representatives.

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Although EPA has calculated and reported the actual precision levels for other surveys, EPA officials told us that doing so for the drinking water needs assessment would not be worthwhile, because it would not affect the allocation of DWSRF funds to the states. In addition, according to an EPA official responsible for managing the periodic needs surveys, EPA has already invested approximately 4 years and \$3.6 million to implement its most recent assessment and summarize the results. The official said that calculating the actual precision of the cost estimates would cost at least an additional \$30,000 to \$40,000. Moreover, actually achieving the precision target could further increase the agency's costs, depending on how many additional site visits were needed. However, a number of leading survey research associations advocate for the calculation and reporting of the precision level to fully inform users of a sample's limitations.<sup>14</sup> Furthermore, by knowing the precision level of the estimate a user can better judge the estimate's accuracy. Given EPA's investment in the survey thus far—and the billions of dollars that will ultimately be allotted to the states—the benefits of determining the estimate's precision level appear to outweigh the projected costs.

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## States Have Made Limited Use of the Optional DWSRF Provision to Assist Disadvantaged Communities

According to the results of our 50-state survey, 31 states have established programs as part of their DWSRF to assist disadvantaged communities. Of these 31 states, 21 provided about \$94 million in special subsidies—mainly principal forgiveness—and 23 offered extended loan terms through December 31, 2000.<sup>15</sup> While criteria for disadvantaged communities vary, states typically use some measure of household water rates relative to a community's median household income. In addition, several factors influence states' decisions to offer DWSRF assistance to disadvantaged communities, such as concerns about depleting the fund and the availability of assistance from other federal and state sources.

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<sup>14</sup>The American Association for Public Opinion Research, "in the spirit of upgrading current survey practice," has promulgated a list of best practices that includes reporting a measure of each estimate's precision along with the estimate, rather than reporting only the statistic itself. In addition, the Council of American Survey Research Organizations' code of standards and ethics requires that estimates of sampling error be calculated and "available."

<sup>15</sup>We used this date because, as part of our analysis, we compared the states' subsidies to disadvantaged communities with the amount of the states' capitalization grants. At the time that we issued our 50-state questionnaire, the most recent information available on state capitalization grants was as of December 31, 2000.

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## Thirty-One States Offer DWSRF Assistance to Disadvantaged Communities

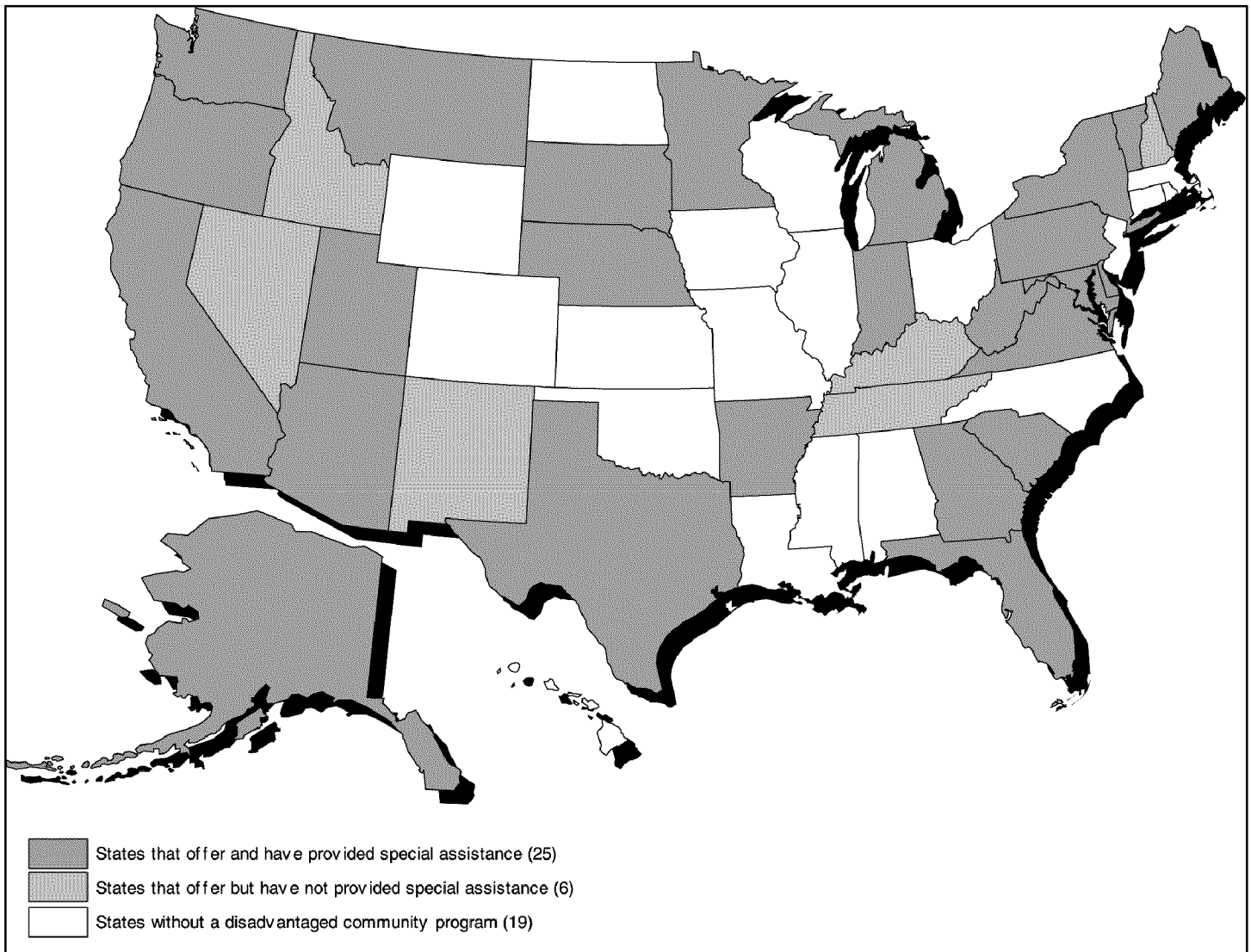
Thirty-one states have adopted a disadvantaged community program and offer assistance in the form of loan subsidies—that is, forgiving a portion of the loan principal or issuing a loan at a negative interest rate—or extended loan terms.<sup>16</sup> As of December 31, 2000, 25 of these states had actually provided assistance to qualified communities. Three of the 19 states that did not have disadvantaged community programs reported plans to offer such assistance as part of their DWSRF programs within the next 3 years. Figure 2 shows DWSRF assistance to disadvantaged communities, by state.

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<sup>16</sup>States may extend the loan repayment period from the standard 20 years to up to 30 years, provided that the repayment period does not exceed the expected design life of the project. While an extended loan term makes financing a project more affordable to a community by reducing the amount of monthly payments, it is not considered a loan subsidy.



**Figure 2: Assistance to Disadvantaged Communities Under the DWSRF Program, by State**



Note: Colorado, Ohio, and Rhode Island reported that they plan to adopt disadvantaged community programs within the next 3 years.

Source: GAO's survey of 50 state drinking water programs.

**Most States with Disadvantaged Community Programs Offer Principal Forgiveness or Extended Loan Terms**

Most states that have a disadvantaged community program offer principal forgiveness or extended loan terms for capital improvement projects. States rarely offer negative interest rate loans to disadvantaged communities because, according to state DWSRF officials, they find this option difficult to explain to local communities and difficult to administer. Table 1 shows the type of assistance available to disadvantaged communities, by state.

**Table 1: Types of Assistance Offered to Disadvantaged Communities, by State, through December 31, 2000**

State	Number of loan agreements with one or more types of assistance	Principal forgiveness	Negative interest rate loans	Extended loan terms
Alaska	10	x		
Arkansas	7			x
Arizona	1	x	x	x
California	10	x		x
Delaware	1	x		x
Florida	20	x		x
Georgia	21		x	
Idaho	0	x		x
Indiana	10			x
Kentucky	0			x
Maryland	2	x		x
Maine	17	x		x
Michigan	3	x		x
Minnesota	5	x		
Montana	2			x
Nebraska	17	x		x
New Hampshire	0	x		
New Mexico	0	x		x
Nevada	0			x
New York	8	x		x
Oregon	9	x		x
Pennsylvania	9			x
South Carolina	1			x
South Dakota	4			x
Tennessee	0	x		x
Texas	6	x		x
Utah	4	x		
Virginia	19	x		x
Vermont	16		x	x
Washington	4			x

State	Number of loan agreements with one or more types of assistance	Principal forgiveness	Negative interest rate loans	Extended loan terms
West Virginia	8			x
<b>Total</b>	<b>289</b>	<b>19</b>	<b>3</b>	<b>26</b>

Note: As indicated in the table, six states (Idaho, Kentucky, New Hampshire, New Mexico, Nevada, and Tennessee) had not provided assistance as of December 31, 2000. These states had no loan agreements that included assistance to disadvantaged communities. In addition, of the four states that offer both principal forgiveness and extended loan terms, Arizona, Delaware, and Michigan had offered only extended loan terms, while California had used only principal forgiveness.

Source: GAO's survey of 50 state drinking water programs.

Some states limit the amount of loan subsidies they provide to disadvantaged communities. For example, 11 states have established caps on the amounts of their loan subsidies, such as \$500,000 per project or 50 percent of the project costs. Another eight states offer principal forgiveness only in cases when extending the loan term to 30 years does not make the cost of a project affordable to the community. For example, any water system in California that qualifies for assistance as a disadvantaged community automatically receives a loan at 0 percent interest and with a term extended to 30 years. If, under those conditions, the system's rates still exceed 1.5 percent of the community's median household income, then the state will offer principal forgiveness—but only if the system is publicly owned. Two of the three states that offer negative interest rate loans reduce the interest rates on individual project loans incrementally until a community's water rates reach some type of affordability threshold. For example, the Vermont DWSRF program reduces the interest rate on a project loan by one-tenth of 1 percent until a community's water rates reach an affordable level (as defined by the state), but the interest rate may not fall below negative 3 percent.

In addition to loan subsidies and extended loan terms, many states offer disadvantaged communities special interest rates that are less than the interest rates available to other DWSRF applicants.<sup>17</sup> According to our survey results, 20 states offer specially reduced interest rates as low as 0 percent to disadvantaged communities. In addition, four states that currently do not have disadvantaged community programs offer specially reduced interest rates to communities with "higher needs."

<sup>17</sup>The standard DWSRF interest rate offered to loan applicants varies by state, but must be at or below the current market rate.

Under the 1996 amendments to the Safe Drinking Water Act, the Congress authorized states to use an amount equal to up to 30 percent of their DWSRF capitalization grants to provide additional subsidies to communities that qualify as “disadvantaged.” To get a rough estimate of the magnitude of states’ use of loan subsidies, we compared the capitalization grants received by the states as of December 31, 2000, and the amount of loan subsidies the states had provided within the same time period. We found that of the 14 states that had provided loan subsidies,<sup>18</sup> only Maine came close to reaching the 30 percent cap. Table 2 shows the amount of each state’s loan subsidies as a percentage of its capitalization grants through December 31, 2000.

**Table 2: Percentage of DWSRF Capitalization Grants Used for Subsidies to Disadvantaged Communities, by State, through December 31, 2000**

<b>State</b>	<b>Subsidies to disadvantaged communities as percentage of total DWSRF capitalization grants</b>	<b>Total DWSRF capitalization grants to states</b>	<b>Amount of DWSRF subsidies to disadvantaged communities</b>
Maine	23	\$27,238,300	\$6,339,289
Virginia	19	73,037,100	14,127,005
Alaska	16	49,381,100	7,821,000
Florida	15	109,896,800	16,483,691
Georgia	13	57,015,200	7,544,010
Vermont	11	34,900,900	3,921,000
Nebraska	9	27,409,100	2,567,414
New York	5	200,542,700	9,752,935
Utah	4	34,900,900	1,315,000
Texas	3	239,616,900	7,280,235
Minnesota	3	79,283,000	2,195,983
California	2	317,600,600	6,729,021
Oregon	0.48	52,075,600	250,000
Maryland	0.46	37,888,610	175,000
<b>Total</b>		<b>\$1,340,786,810</b>	<b>\$86,501,583</b>

Source: GAO’s analysis of EPA data and GAO’s survey of 50 state drinking water programs.

<sup>18</sup>Although 21 states offer subsidy assistance in their disadvantaged community programs, only 14 states have actually forgiven a portion of the loan principal or reduced the loan interest rate below zero percent.

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## State Criteria for Disadvantaged Community Assistance Vary

Under the DWSRF program, states have the flexibility to develop their own criteria to define a disadvantaged community. States with disadvantaged community programs typically use some measure of household water rates relative to the community's median household income to qualify a community as "disadvantaged." This approach allows the state to assess the impact of capital project debt on the community's water rates and measure the project's affordability. Of the 31 states with a disadvantaged community program, 27 have adopted criteria that consider local water rates, often in conjunction with a community's median household income. For example, seven states have determined that a community qualifies as "disadvantaged" if its water rates are at least 1 percent of its median household income.<sup>19</sup> Another 11 states have established thresholds for local water rates ranging from 1.25 to 2 percent of median household income. The remaining nine states use different thresholds depending on the community's median household income or a formula that considers other factors.

Twenty-one states use median household income as a criterion in determining whether communities qualify as disadvantaged.<sup>20</sup> Of these 21 states,

- 14 required a community's median household income to be at or below the median income for the state to be considered disadvantaged and 4 other states compare local household income with the median income for the county;
- 9 offered assistance to disadvantaged communities only if the local median household income is no higher than 80 percent of the state or county median. In seven states, a community is eligible for assistance if the local median income is equal to—or, in one case, 90 percent of—the median household income for the state;
- In Michigan and Nebraska, a community can qualify for assistance with a median household income as high as 120 percent of the state's median income, provided that the system is publicly owned and its water rates exceed the state's affordability threshold; and

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<sup>19</sup>According to EPA's report *National-Level Affordability Criteria Under the 1996 Amendments to the Safe Drinking Water Act* (Aug. 31, 2000), the average American household typically spends 0.7 percent of its income on water.

<sup>20</sup>The state of Utah also has an income-based criterion, but the state uses the median adjusted gross income rather than household income.

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- 19 considered both median household income and water rates in their definition of disadvantaged communities.

In addition to the financial criteria, some states have other qualifications that a community must meet before becoming designated as disadvantaged. For example, in 11 states only publicly owned water systems are eligible for loan subsidies; privately owned water systems, such as mobile home parks, are not eligible for such assistance. Four states indicated that a community's drinking water must pose a significant public health risk to the residents for the community to be eligible for special assistance. In two states, a water system must serve a small community to qualify as a disadvantaged community.<sup>21</sup>

In the course of our review, we noted that while many states offer a wide variety of DWSRF disadvantaged community programs, only a handful of states have made an attempt to estimate the universe of water systems that met state-defined criteria for disadvantaged communities. Using the data provided in EPA's national sample of small water systems, we attempted to estimate the number of systems that might qualify for disadvantaged assistance. (See app. I for details.)

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### Several Factors Influence States' Decisions to Adopt Disadvantaged Community Programs

As part of our questionnaire, we asked the states to report reasons why they had chosen not to adopt a DWSRF program for disadvantaged communities. Of the 19 states without disadvantaged community programs, we found that

- 16 states cited concerns about maintaining the corpus of the fund or the long-term viability of the fund as a major (12) or moderate (4) reason for not establishing a disadvantaged community program;
- 14 states cited the fact that their DWSRF program already offers loans at below-market interest rates as a major (9) or moderate (5) reason for not offering additional assistance to disadvantaged communities; and
- 12 states cited the availability of other federal or state programs to address the needs of disadvantaged communities as a major (5) or moderate (9) reason for not providing assistance through the DWSRF.<sup>22</sup>

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<sup>21</sup>Arizona defines a small community as one with a population of 10,000 or less. Virginia defines a small community as one with a population of 3,300 or less.

<sup>22</sup>Our responses do not add to 12 because some states cited the availability of both federal and state funding as reasons for not using their DWSRF to assist disadvantaged communities.

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Non-DWSRF financing from other federal and state sources is available to help disadvantaged communities, and many states coordinate with these sources to help disadvantaged communities secure the funding they need. According to the state drinking water officials we interviewed, disadvantaged communities often receive a combination of DWSRF and non-DWSRF funding to finance their drinking water projects. For example, the Department of Agriculture's Rural Utilities Service and the Department of Housing and Urban Development's Community Development Block Grant program provide grants and loans for activities such as drinking water and wastewater projects, planning, and technical assistance. These programs target rural and/or low-to-moderate income communities.

In addition to federal programs, many states sponsor their own grant or loan programs. In our survey, more than half the states indicated that they provided some type of financial assistance for drinking water projects. Six of the 19 states without disadvantaged community programs had state grant or loan programs intended specifically to help economically distressed communities finance drinking water improvement projects. We recently reported that states sponsored over \$9 billion in grants and loans for drinking water and/or wastewater infrastructure improvements from fiscal year 1991 through fiscal year 2000.<sup>23</sup> Most of the assistance was generally available, but some assistance was specifically targeted at economically distressed communities.

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## EPA Is Not Taking Full Advantage of Its Oversight Tools to Monitor the States' Implementation of the DWSRF Program

As part of its ongoing effort to monitor states' implementation of the DWSRF program, EPA has developed a national information management system to track states' use of DWSRF funds. While EPA is using the system to develop financial management and other measures, until these measures are consistently applied during performance reviews of state DWSRF programs, their utility as an oversight tool is limited. Furthermore, problems with the timely and consistent preparation of PER reports—one of EPA's principal oversight tools—hamper its ability to use the reports to identify common or recurring problems among the states. Finally, gaps in the financial audit coverage, and a limited review of audits that are performed, affect EPA's ability to fully assess the financial condition of the states' DWSRF programs.

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<sup>23</sup>*Water Infrastructure: Information on Federal and State Financial Assistance* (GAO-02-134, Nov. 30, 2001).

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## EPA Could Make Better Use of Its Information System to Monitor State Performance and Provide Information on Overall Program Effectiveness

EPA designed its drinking water national information management system (NIMS) to better assess the DWSRF program, monitor state progress, and provide assistance in the agency's annual reviews of state programs. The NIMS database contains a variety of information on the amount and status of DWSRF moneys, the states' progress in getting funds to local communities, the types of assistance being provided, and other information. Currently, EPA's information system can produce 83 standard reports on various aspects of the DWSRF program. For example, NIMS can report the amount of assistance by system size and type of project, such as the construction of treatment or storage facilities, construction of distribution systems, or land acquisition, as well as the amount of assistance provided to small water systems. EPA requires states to submit information annually on their use of DWSRF funds, and updates NIMS accordingly.<sup>24</sup> NIMS can produce reports showing information on an annual or cumulative basis, aggregate information on a state-by-state basis or by EPA region, and provide customized reports.

EPA's NIMS database and the reports that it can generate provide a useful national perspective on the DWSRF program in terms of the amount and type of assistance that states provide to local communities. For example, EPA can use NIMS data to determine the cumulative amount of DWSRF assistance as a percentage of the funds available since the program's inception. EPA can also provide cumulative reports on the pace of the DWSRF program in getting assistance out to local communities, including such information as project starts, project disbursements, projects completed, and loan principal repayments.

While useful in many ways, NIMS has some limitations in monitoring state progress. In particular, the system was not designed to monitor the extent that states comply with statutory spending restrictions. According to EPA officials, NIMS was designed to track the states' overall program activity using funds from multiple sources, including capitalization grants, state matching funds, and other sources, such as loan repayments. They also noted that designing a system capable of tracking compliance with the spending restrictions would be difficult and unworkable because of the timing of the movement of funds in the program. For example, states can receive annual grants over a 2-year period and may obligate funds from one grant to projects over a period of several years.

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<sup>24</sup>Currently, the system contains information covering the period from July 1, 1997, through June 30, 2001.



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In addition to tracking some elements of state progress, NIMS provides useful information that EPA regional officials can use when conducting their annual performance evaluations of state DWSRF programs. However, officials in 7 of the 10 regions said that they used the system either on a very limited basis or never used it at all, primarily because more timely information was readily available from other sources. EPA headquarters officials pointed out that NIMS is relatively new; the initial data collection took place during the late summer of 2000 and the final data were not available for oversight purposes until November 2000. The officials said that they would now start working with regional officials to make greater use of the information system in their annual state performance evaluations.

In April 2001, DWSRF program managers at EPA headquarters drafted financial management and other measures that rely on NIMS data to track the progress of the program. The financial management measures address the following aspects of state DWSRF programs:

- progress in committing funds to projects (such as loan assistance as a percentage of funds available);
- pace of construction (such as disbursements as a percentage of assistance provided); and
- the extent that DWSRF moneys are being recycled (such as principal repayments as a percentage of assistance provided).

The success of this effort, however, hinges on the regional offices making greater use of NIMS. In addition, the agency is currently using the draft measures for internal management purposes only. However, until these measures are consistently applied during performance reviews of state DWSRF programs, their utility as an oversight tool cannot be assessed. Furthermore, by limiting these measures to internal use, they cannot be used by others outside EPA to assess the program's overall effectiveness.

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## EPA's Annual Evaluations of State DWSRF Programs Are Not Timely or Consistent

According to EPA officials, in addition to the regular day-to-day contacts with state DWSRF staff, the annual program evaluation reviews of state DWSRF programs serve as one of the agency's principal oversight tools. Among other things, the objectives of the annual review are to evaluate (1) a state's success in achieving the goals and objectives outlined in its intended use plan and other reports submitted to EPA; (2) how well a

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state's DWSRF program is achieving the intent of applicable statutory provisions, such as funding projects in accordance with identified priorities;<sup>25</sup> (3) a state's compliance with the conditions of its capitalization grant agreements; and (4) the financial status of a state's DWSRF. However, we found that many reviews were not timely or consistent in terms of their scope or documentation.

EPA's regional offices are responsible for conducting annual reviews of state DWSRF programs. According to EPA's guidance, such reviews should (1) include an on-site visit to meet with state program managers and review pertinent records and a written report to document the results of the review and (2) culminate in a written report. The guidance also states that the reviews should take place within "a reasonable time period" following receipt of a state's biennial report.<sup>26</sup> While there is no definitive requirement for the timing of the annual reviews, EPA program managers said that the regional offices are expected to prepare a report documenting the results of the review within 90 days of the site visit to a state.

To evaluate the timeliness of EPA's state performance evaluations, we focused on two key elements: (1) the preparation of final reports within 90 days of the site visits and (2) the requirement that reviews be conducted annually. We found the following:

- Of the 47 states for which the EPA regional offices had prepared reports on their annual reviews, 60 percent of the reports were issued late, and EPA's regional offices exceeded the 90-day time limit by about 4 months, on average. In six states, the reports were over 9 months late. Limited staffing is one of the major reasons that the reports are not completed on time, according to regional officials. In addition, officials from three EPA regions told us that the reports were delayed to allow time for concerns discovered during on-site reviews to be resolved with the states.

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<sup>25</sup>Under the 1996 amendments, states must give priority, to the maximum extent practicable, to funding projects that (1) address the most serious risk to human health, (2) are necessary to ensure compliance with the requirements of the Safe Drinking Water Act, and (3) assist systems most in need, on a per household basis, according to a state's affordability criteria.

<sup>26</sup>This schedule applies in the years that a biennial report is due. EPA's DWSRF guidance indicates that the review should be conducted on approximately the same date in the "off years" when a biennial report is not due.

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- As of October 2001, EPA officials have not prepared evaluation reports for New Jersey, Utah, or Wyoming. In New Jersey, EPA officials said that regional officials visited the state every 6 months and covered many of the elements that would otherwise be addressed in a formal review. In Utah and Wyoming, regional officials made site visits to conduct the annual reviews during July and December 1999, respectively, but never issued reports. EPA headquarters officials told us that regional officials did not issue a report for Utah's program and instead issued a Notice of Noncompliance, which covered the deficiencies identified during the review.<sup>27</sup> In the case of Wyoming, regional officials said that they wanted to conduct a second, follow-up review before issuing a final report, but had encountered scheduling difficulties over the past 22 months.
  - In 10 states, EPA regional officials did not issue PER reports during calendar year 2000, although reporting was resumed the following year. In 11 more states, the most recent performance evaluation reports were issued more than a year ago and, as of October 1, 2001, they were late by about 9 months, on average. According to several EPA regional officials, they did not prepare evaluation reports on an annual basis because of staffing constraints.
  - Although the reporting has not been timely, EPA has conducted annual, on-site reviews in most states. We found four states—Alaska, Michigan, Oregon, and Wyoming—that have not received an on-site performance evaluation within a year of the previous one. As of October 1, 2001, the time elapsed since the last review in these states ranged from 15 to 30 months.

In conducting a content analysis of the 47 available PER reports, we found inconsistencies in their scope and documentation. According to EPA-issued guidance to assist its regional offices,<sup>28</sup> an annual review should consider the legal, managerial, technical, financial, and operational capabilities of the applicable state agency to effectively administer the DWSRF. The guidance states that the regional offices should evaluate state adherence to 17 certifications and assurances that are required of a state to receive a capitalization grant. For example, regional officials are

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<sup>27</sup>Two problems identified in the Notice of Noncompliance were slow progress in committing loan funds and inadequate staffing levels. EPA headquarters officials told us a visit was made during 2000, and a draft PER was provided to the state in April 2001. Officials say that the problems have now been resolved, but the draft has not been finalized, based on a management decision.

<sup>28</sup>*Annual Review Guide Drinking Water State Revolving Fund*, U.S. Environmental Protection Agency, March 1999.

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expected to check that the state has provided adequate personnel and other resources to effectively operate and manage the program, met matching requirements, and complied with applicable laws and regulations. In addition to these federal program assurances, the guidance calls for an evaluation of other aspects of a state's DWSRF program during an annual review. For example, in terms of general program management, regional officials should assess the eligibility of the DWSRF assistance as it pertains to the recipients, types of projects, and types of financial assistance provided. Similarly, within the general category of financial management, regional officials are expected to check on the adequacy of the financial statements and internal controls, the timeliness of deposits into appropriate fund accounts, the use of funds for set-aside purposes, and other items.

In total, the guidance identifies about 50 specific elements that should be covered in an annual review. EPA recognizes that every element does not require an in-depth review each year and gives its regional offices the flexibility to tailor their reviews as appropriate. Specifically, the guidance states: "Each year the review may be targeted toward specific program aspects that have not previously or recently been reviewed in-depth or have proven to be problematic in the past. This will allow the region to concentrate its efforts on program aspects that require attention."<sup>29</sup> In terms of documenting the annual reviews, EPA's guidance states that, at a minimum, the reports should include sections on purpose, background, scope, observations, and recommendations.

One of the major problems we identified in reviewing EPA's performance evaluation reports was that they often had no clear or specific description of what was and was not covered in the annual review. For example, in 15 reports, the scope of the review was reported only in terms of a state fiscal year and a list of the project files reviewed. Another 15 reports described the scope in very general terms and noted only the broadest categories of review, such as "financial management."<sup>30</sup> As a result of the inadequate scope descriptions and wide variation in the level of detail with which regional officials summarized their observations, we often could not determine what was covered in the review or what regional officials

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<sup>29</sup> *Annual Review Guide Drinking Water State Revolving Fund*, p.12.

<sup>30</sup> Although we found a total of 29 reports that described the scope in very general terms, 14 of these reports used a checklist approach or organized the report in such a way that its users could infer which specific program elements were covered in the annual review.

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concluded about each aspect. More specifically, when the reports were silent regarding certain program elements, we could not determine whether the reason was that the elements were reviewed and found to be satisfactory or not reviewed at all.

EPA officials from headquarters and regional offices offered a variety of explanations for the inconsistencies in the documentation of the state performance evaluations. For example, some officials viewed the program evaluation reports principally as a tool to assist the states, rather than as a means of helping EPA to evaluate overall program effectiveness. These officials told us that it is unnecessary for the written reports to contain detailed information because the findings are conveyed to the states orally. Officials from some regional offices indicated their reluctance to include concerns in a written report if the concerns had already been brought to the attention of the state and resolved. We also heard that staffing and time constraints hampered the ability of regional staff to document their reviews more thoroughly and, in some instances, this meant reporting findings on an exception basis. However, using the latter approach when the scope of the review is unclear makes it impossible to determine whether some program elements were reviewed and found to be satisfactory or simply not reviewed.

A key DWSRF program manager at EPA headquarters generally concurred with our observations, noting that one of the agency's areas of concern has been the timeliness and quality of the regions' annual reviews and the resultant performance evaluation reports. In May 2001, the managers developed a regional review strategy for annually reviewing the regional offices' performance in implementing their oversight responsibilities.<sup>31</sup> Among other things, these reviews would cover the (1) documentation of regional observations, findings, and general oversight activities; (2) adequacy of staffing and resource allocations for regional oversight; and (3) adequacy of annual reviews of state DWSRF programs, including an assessment of the timeliness and completeness of the region's performance evaluation reports. While initiating the regional reviews is a positive step, other actions may be warranted to improve the usefulness of the annual state reviews both in assisting the states and as a tool for evaluating overall program effectiveness. At this time, EPA has no centralized system for tracking the timeliness of the annual reviews or

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<sup>31</sup>As of October 2001, headquarters officials had completed their reviews and issued draft reports for 2 of the 10 regional offices.

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performance evaluation reports by its regional offices, identifying common or recurring problems among the states, or monitoring the status of their corrective actions.

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### Gaps in Audit Coverage Limit EPA's Ability to Assess State Programs' Financial Condition

In accordance with the 1996 amendments to the Safe Drinking Water Act, EPA's implementing regulations contain provisions directed to "ensure the financial integrity of the DWSRF program." Under the amendments, for example, EPA was required to periodically audit the states' DWSRF funds. In addition, EPA was required to publish guidance and regulations to ensure, among other things, that the states (1) commit and expend funds as efficiently as possible and (2) use accounting, audit, and fiscal procedures that conform to generally accepted accounting principles. EPA's regulations further provide that states may voluntarily agree to conduct annual independent audits that cover financial statements, internal controls, and compliance with applicable requirements. States that do not conduct their own audits are subject to periodic audits by OIG. EPA's regulations also specify that states provide detailed financial statements presenting the financial status of the DWSRF in their biennial reports to EPA.

EPA relies primarily on its OIG to assess the adequacy of the DWSRF program's financial controls. To facilitate the process, officials from EPA's program offices and OIG developed an audit strategy for the DWSRF program.<sup>32</sup> According to our discussions with these officials, the key elements of the DWSRF audit strategy are

- conducting audits in states that did not perform their own;
- reviewing the quality of the independent audits done by the states; and
- developing OIG guidance for the conduct of DWSRF audits.

As of September 2001, EPA has yet to fully implement its audit strategy. First, the Inspector General did not audit the eight states that (1) had not voluntarily agreed to conduct an independent audit or (2) did not have a

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<sup>32</sup>In November 1996, after a year of discussions with EPA's Office of Water and Office of Wastewater Management, the Inspector General and the program offices reached agreement on an audit strategy for the Clean Water State Revolving Fund Program. Following the authorization of a DWSRF and discussions with EPA's Office of Ground Water and Drinking Water and others, the audit strategy was revised to include the DWSRF program about a year later.

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Single Audit that was considered the equivalent of an independent audit.<sup>33</sup> Second, the Inspector General reviewed the audit quality of only 7 of the 24 audits submitted by states for fiscal year 2000. Finally, the Inspector General has not issued guidance on conducting DWSRF audits; officials from EPA's regional offices believe such guidance would benefit them as well as the states.

The Inspector General is now in the process of scheduling audits in states where no audit has been conducted; the first is underway in the state of Washington, and EPA plans to issue its final report on that state in February 2002. Inspector General officials told us that they prioritize the states to be audited according to the resources available to conduct the audits and the Inspector General's experience with the states in question. They also consider other criteria, including the amount of time that has elapsed since the state's Clean Water State Revolving Fund was audited and whether the Clean Water and Drinking Water funds are managed by the same state agency.

Both EPA and OIG officials told us that auditing states where DWSRF programs had never been audited any sooner would not have been cost-effective because of the relatively low level of the loan activity in the states' DWSRF programs during its early years. In addition, the Inspector General's Western Audit Division, which is responsible for conducting and reviewing audits in both the Clean Water State Revolving Fund and DWSRF programs, has only four staff to devote to this effort. OIG officials told us that because the Clean Water funds have been in existence much longer, and are much larger, than their DWSRF counterparts, they take priority as a result.

In an effort to track the status of independent audits of states' DWSRF programs, an OIG official recently developed a spreadsheet to collect information on (1) when the audit reports were submitted and (2) the scope of the audit reports. Specifically, the spreadsheet was designed to track whether the audits covered the elements that, according to EPA's regulations, should be included:

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<sup>33</sup>Ten states have not completed an independent audit: Hawaii, Missouri, Nevada, New Hampshire, Oregon, South Carolina, Tennessee, Texas, Utah, and Washington. According to EPA officials, however, Hawaii is now in the process of conducting its first independent audit. In addition, Inspector General officials determined that the financial review done in conjunction with the Single Audit Act in Texas was sufficiently detailed to make it an acceptable substitute for an independent audit.

- an auditor’s opinion on the DWSRF program financial statements;
- reports on internal controls; and
- reports on compliance with applicable statutory, regulatory, and general grant requirements.

The spreadsheet lists audit reports for 32 states, of which 24 covered fiscal year 2000, 7 covered fiscal year 1999, and 1 covered fiscal year 1998. Table 3 provides a summary of the spreadsheet data.

**Table 3: Scope of Independent Audit Reports Submitted to Inspector General**

Key elements of independent audit	Status as determined by Inspector General				Total
	OK	No or none	Disclaimer	Marginal	
Financial statements	31			1	32
Internal controls	28	3		1	32
Compliance	20	3	9		32

Legend:

“OK” means that the auditor’s opinion on the financial statements or the auditor’s report on internal controls was adequate or that the auditor’s report contained an opinion on compliance.

“No or none” means that the auditor did not provide an opinion on internal controls or compliance.

“Disclaimer” means that the auditor’s report contained a disclaimer stating that compliance was not an objective of the audit.

“Marginal” means that auditor’s opinion or report did not contain enough information and was, therefore, marginally acceptable.

Source: EPA’s Office of Inspector General.

Based on data contained in the OIG spreadsheet, some of the independent audits were limited in scope or less than adequate in reporting on some of the elements. For example, three states did not provide a report on internal controls or compliance.

In addition to checking the extent that the 32 state audit reports covered the three elements described in EPA’s regulations, OIG officials conducted a more detailed review for 10 of these reports for audit quality.<sup>34</sup> OIG officials told us that although it would be desirable to check more reports for audit quality, checking audit quality was a lesser priority than getting states to voluntarily conduct independent audits and making sure that these audits covered the elements.

<sup>34</sup>Over the past 8 to 10 months, OIG officials reviewed seven audit reports covering state fiscal year 2000, two covering state fiscal year 1999, and one for state fiscal year 1998.



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DWSRF program and OIG officials acknowledge that EPA does not have a process for ensuring that (1) the state and the cognizant regional officials are informed of any concerns about audit coverage or quality or (2) corrective action is taken. Such coordination between program and OIG officials is necessary because, according to program officials, they do not systematically monitor the status of the states' independent audits. DWSRF program officials noted that resource constraints limit their ability to review the audits themselves, and as a result, they increasingly rely on the OIG to review audits and assess their quality. For example, one regional official we interviewed reported having no available financial staff to review state DWSRF programs, and an official from another region stated that budgetary constraints limited the amount of time he could spend reviewing DWSRF financial documents.

The Inspector General has not developed guidance for the conduct of DWSRF audits. Officials from several of the regional offices we contacted told us that such guidance would be beneficial to DWSRF program auditors. However, according to one OIG official, the development of such guidance has been delayed until the office can incorporate any insights it gains from conducting its own audits at the states—audits which are now just in the planning stages. Although the OIG originally scheduled the DWSRF audit guidance to be completed in fiscal year 2001, it now expects to have the guidance available for the states and other interested parties during fiscal year 2002. In the meantime, OIG officials noted that other guidance is available, such as the Inspector General's Comprehensive Audit Guide for the Clean Water State Revolving Fund, the OMB Circular A-133 compliance supplement,<sup>35</sup> and model DWSRF financial audit statements.

In addition to guidance, better coordination and information sharing are needed between the DWSRF program office and OIG staff. Officials from four regional offices told us that they were unaware of the Inspector General's planned audit schedule and, in one instance, expressed concern that they had not been consulted about which states should receive priority. In addition, although we found some indications that either

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<sup>35</sup>The OMB Circular A-133 (issued pursuant to the Single Audit Act, P.L. 98-502, and the Single Audit Act Amendments of 1996, P.L. 104-156) sets forth standards for obtaining consistency and uniformity among federal agencies for the audit of states, local governments, and non-profit organizations expending federal awards. A compliance supplement was issued to this circular in March 2000 to address specific DWSRF reporting requirements.

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headquarters or regional officials had requested assistance from the Inspector General as a result of problems or concerns identified during annual reviews, OIG officials did not receive copies of the regional performance evaluation reports on a regular basis. These reports sometimes contain indications of problem areas, such as poor cash management or inadequate staffing levels, which could be useful in helping the Inspector General to identify and prioritize candidates for closer scrutiny, such as checking the quality of states' independent audits. Similarly, although the OIG spreadsheet on the status of state audits was intended only for internal use, regional officials might have benefited from knowing about gaps in audit coverage or other limitations when they prioritized, and determined the scope of, state performance evaluations.

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## Conclusions

EPA has laid the groundwork for its DWSRF program. It must now safeguard program funds through prudent oversight and good management to ensure the long-term viability of the DWSRF program and the availability of this major source of infrastructure financing for generations to come.

EPA's estimate of the nation's drinking water infrastructure needs has far-reaching implications. First, it influences the level of congressional appropriations for the DWSRF program. Second and more importantly, EPA uses this estimate to guide the agency's annual allocation of DWSRF funds to the states. Although EPA has taken steps to validate the data to instill confidence in the estimate and its subsequent allotments to the states, the precision of the estimate is unknown. Until EPA calculates and reports the level of precision in its needs assessment survey it does not know how close the estimate comes to reflecting the nation's true needs.

Measuring the overall effectiveness of a program as complex as the DWSRF is not an enviable task. EPA has an opportunity while the program is maturing to use the oversight tools at its disposal to diagnose the program's overall health and prescribe remedies as needed. However, EPA is not making the most out of these tools. Without finalizing and applying its financial management measures, bringing greater consistency to its annual review process, and monitoring audit coverage and quality, EPA does not have all the information it needs to monitor the states' implementation of the program or assess the program's overall effectiveness.

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## Recommendations for Executive Action

To get a better sense of the accuracy of EPA's estimate, we are recommending that EPA calculate and report the level of precision actually achieved in its recent needs assessment, and determine what implications, if any, its findings have on the way future needs assessment surveys are conducted.

To improve EPA's oversight of the DWSRF program and its ability to assess overall program effectiveness, we recommend that the EPA Administrator take the following steps:

- finalize and consistently apply financial management and other program measures to assist in the annual review of state performance and make them available outside EPA, so that others can assess the overall effectiveness of the program;
- improve the timeliness of and require greater consistency in the scope and documentation of the annual program evaluations, so that the results of the evaluations can be systematically reviewed to identify broad-based problems that may require national solutions;
- conduct independent audits in the states where no audits have been done, track and evaluate the quality of audits performed by others, and complete financial audit guidelines for the DWSRF program; and
- facilitate the exchange of audit findings and program evaluation results between DWSRF program and OIG officials.

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## Agency Comments

We provided a draft of this report to EPA for its review and comment. EPA's Office of Water and Office of Inspector General provided comments, which we have included in appendixes III and IV of this report, respectively. Overall, EPA agreed with our findings and recommendations. Although EPA indicated that it would revisit the issue of calculating actual precision levels in the design of its 2003 survey, our recommendation called for more specific action. Namely, we recommended that EPA calculate and report the level of precision for its 1999 needs assessment and determine the implications, if any, it has on how the 2003 survey is conducted. Knowing the level of precision actually achieved will help EPA and other users of the needs assessment get a sense of how closely the estimate reflects actual needs. EPA also provided technical clarifications, which we incorporated, as appropriate.

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## Scope and Methodology

To conduct our work, we interviewed officials in EPA's Office of Ground Water and Drinking Water and Office of Wastewater Management where we obtained and reviewed relevant legislation, regulations, guidance, reports, and other documents. We also interviewed DWSRF officials in each of EPA's 10 regional offices and officials from the Office of the Inspector General at EPA headquarters and offices in Sacramento and San Francisco, California, and in Denver, Colorado. Finally, we conducted a nationwide survey of key drinking water officials in the 50 states.

To address the first objective, we conducted interviews with officials in EPA's Office of Ground Water and Drinking Water and their technical advisers about EPA's needs assessment survey, the particular methodologies used to estimate the cost of needed drinking water facility improvements over the next 20 years, and how those estimates were used to allot moneys to the states. We reviewed available documentation on the statistical sampling and estimation methods used in the EPA survey as well as the documentation describing EPA's data collection and quality control procedures. We also developed and conducted a survey of all 50 states' drinking water officials to ascertain the magnitude of the disadvantaged community need and the extent to which states were using the DWSRF program to address that need. We obtained responses from all 50 states. As part of our survey of state officials, we asked officials to indicate whether each of the small systems in EPA's needs assessment sample qualified as a disadvantaged system. We used this information to estimate the number of disadvantaged small systems in the 50 states. (See app. I.)<sup>36</sup>

To examine EPA's efforts to evaluate program effectiveness, we obtained information on the data elements and standard reports within EPA's national information management system for the DWSRF program and interviewed headquarters and regional officials regarding their use of the system and its limitations. To assess the timeliness of the annual review process, we obtained information on the submission dates for the states' biennial reports, the dates that regional offices conducted annual reviews

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<sup>36</sup>In developing our estimate, we used the weights assigned by EPA to each of the systems included in its needs assessment sample. We did not independently verify the accuracy of these weights. The weight assigned to a system indicated the number of small systems nationwide that the system represented. Thus, the sum of the weights of all sampled systems represents all small systems in the 50 states. Similarly, by totaling the weights assigned to the sampled systems that the states identified as being disadvantaged, we could develop an estimate of the number of disadvantaged systems among the 24,342 systems represented by the responses to our survey.

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of state DWSRF performance, and the dates that the evaluation reports were issued. We reviewed EPA's guidance on the annual review process, along with the most recently completed performance evaluation report for each state, and evaluated the scope and content of the reports relative to EPA's guidance. We obtained the views of headquarters and regional DWSRF officials on the purpose of the annual review process and the evaluation reports and the reasons for differences in the timing, scope, and documentation of the reviews. To examine EPA's strategy for ensuring the financial integrity of the DWSRF program, we interviewed EPA program and Inspector General officials about their roles and responsibilities. We also obtained information on the Inspector General's efforts to monitor the quality of the states' independent audits and to conduct audits in the states that lacked audits of their own. Finally, we reviewed excerpts from EPA's Strategic Plan as well as annual performance measures developed for the DWSRF program to assess the agency's use of results-oriented performance measures.

We conducted this review from October 2000 through November 2001 in accordance with generally accepted government auditing standards.

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As we agreed with your office, unless you announce its contents earlier, we plan no further distribution of the report until 30 days from the date of this letter. We will then send copies to the EPA Administrator and make copies available to others who request them.

If you, or your staff, have questions about this report, please call me on (202) 512-3841. Contributors to this report are listed in appendix V.



John B. Stephenson  
Director, Natural Resources  
and Environment

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# Appendix I: Efforts to Determine the Universe of Water Systems Eligible for DWSRF Disadvantaged Assistance

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Because providing additional loan subsidies to disadvantaged communities can affect the extent that states' revolving funds are replenished, we were interested in finding out what proportion of the nation's community water systems qualified as disadvantaged communities and would thus be eligible to receive special assistance. EPA officials told us that they had never tried to estimate the number of water systems that qualified for such assistance. Furthermore, only 3 of the 50 states responding to our survey made attempts to develop such estimates. As part of our review, we tried to use EPA's needs assessment—and its statistical sample of small water systems in particular—as a vehicle for estimating the number of systems that were potentially eligible.

As part of a 50-state survey on DWSRF assistance for disadvantaged communities,<sup>1</sup> we asked the states with disadvantaged community programs to report whether they had estimated the number of water systems that would meet state-established criteria for a disadvantaged community. According to our summary of their responses, only 3 of the 31 states with programs made some attempt to develop such estimates, while the remaining 28 had not. When asked why they had not estimated the number of disadvantaged communities, 18 states reported that they did not have the data needed to determine whether particular systems meet the disadvantaged criteria until they actually applied for DWSRF assistance. Under EPA regulations, states may provide assistance to communities that meet the state's definition of "disadvantaged" or which the state expects to qualify as disadvantaged as a result of the project. Thus, while the number of systems that currently meet a state's definition might be relatively easy to estimate, determining the number of additional systems that would fall into the disadvantaged category because of the high cost of a project, for example, would require a case-by-case analysis. Other reasons that states gave for not developing an estimate included insufficient resources (five states) and the fact that getting such information was not a need or priority for the state (five states).

Two of the three states that had estimated the number of their disadvantaged systems generally did so by using a shortcut method designed to project the magnitude of need. For example, Kentucky reached its estimate that about 320 systems, or 43 percent of the community water systems in the state, could be considered disadvantaged

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<sup>1</sup>A copy of the questionnaire with a summary of the states' responses is included in appendix II.

by comparing water rates as a percentage of median household income. However, according to state officials, the data on water rates were about 5 years old. New Mexico came up with a rough estimate of 500—about 63 percent of the state’s 795 community water systems—on the basis of the percentage of disadvantaged systems that had already applied for DWSRF assistance. Utah was the only state to develop an estimate by applying its own criteria for disadvantaged communities.<sup>2</sup> The state determined that 112 communities, or about 25 percent of the state’s 449 community water systems, would qualify for the additional subsidies available to the disadvantaged.

In an effort to develop our own national estimate of the number of disadvantaged communities, we started with same statistical sample of small water systems that EPA had selected for its infrastructure needs assessment because, according to EPA officials, the vast majority of systems serving disadvantaged communities are likely to be small systems.<sup>3</sup> (Among other problems, small water systems often lack the economies of scale that make infrastructure projects more affordable at larger systems.) In addition, having the statistical sample meant that we would be able to project the results to the universe of small systems and obtain a national estimate.

As part of our 50-state questionnaire, we identified the specific systems included in EPA’s sample—from 5 to 34 systems in each state—and asked the states to determine which ones they would consider to be disadvantaged communities. When states were able to apply their own criteria, we asked them to determine whether each system initially qualified as disadvantaged or became disadvantaged as a result of the additional costs needed to improve it. States without specific criteria—or states with criteria that did not apply—were asked to use GAO surrogate criteria.<sup>4</sup>

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<sup>2</sup>To be considered “disadvantaged” in Utah, a community’s median adjusted gross income must be equal to or less than 80 percent of the state’s median adjusted gross income.

<sup>3</sup>In total, 591 of the systems in EPA’s sample were located in the 50 states. The others were in Puerto Rico and the U.S. Virgin Islands.

<sup>4</sup>For the purpose of this analysis, we established surrogate criteria; to qualify as “disadvantaged,” a community’s water rates would have to exceed 1.4 percent of its median household income.

In total, we obtained information on a portion of EPA’s sample representing 24,334 systems, or nearly 55 percent of the 44,373 small community water systems in the United States. On the basis of EPA’s sample and the states’ determinations, we estimated that 6,925 systems, or about 28 percent of the 24,334 small systems reflected in the results of our survey, qualified as “disadvantaged.”<sup>5</sup> However, the high non-response rate associated with this analysis precluded us from obtaining information on the systems representing the remaining 45 percent of the universe. As a result, we could not determine whether the actual percentage of systems that would qualify as disadvantaged matched our findings. Specifically, we had no way of determining whether the systems for which we had information were systematically different from those systems for which we lacked information in a way that would make the percentage of disadvantaged communities higher or lower than what would be found in the universe as a whole.

Our effort met with limited success for several reasons. The primary reason was that some states did not have the information necessary to readily make a determination about a system’s disadvantaged status or they lacked the time and resources to collect the information for us. Also, as noted earlier, EPA did not determine the level of uncertainty, or sampling error, in its needs estimate. Because of EPA’s sampling strategy, traditional methods for estimating sampling error cannot be used, and developing an accurate measure of the precision of any estimate for small systems would prove challenging at best. As a result, we cannot draw any conclusions about the precision of our estimate of water systems that qualify for assistance to disadvantaged communities.<sup>6</sup>

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<sup>5</sup>Another way of looking at this is to compare the number of systems estimated to be disadvantaged (6,925) with the total number of small systems (44,373). Using this approach, we could conclude that the minimum percentage of “disadvantaged” systems would be about 16 percent.

<sup>6</sup>EPA’s requirement that systems from every state, Puerto Rico, and the U.S. Virgin Islands be included in its sample of small water systems complicated the calculation of the sampling error in the needs estimate for these systems. For example, to use the appropriate statistical formulas for calculating sampling error, EPA’s sample would have to have included systems from at least two geographical areas within each state or territory. However, at least 10 states or territories had only one geographical area from which systems were sampled. Although statisticians have developed a way to approximate sampling error when this situation occurs, using it requires each state with only one geographical area to be grouped with a “similar” state. Thus, assumptions must be made about which states are similar, and criteria for making such assumptions were not readily available.



# Appendix II: GAO's Survey of State Drinking Water Officials Regarding Assistance to Disadvantaged Communities



## United States General Accounting Office Survey of State Drinking Water Officials Regarding Assistance to Disadvantaged Communities

### Introduction

The U.S. General Accounting Office has been asked by the Congress to review the Drinking Water State Revolving Fund (DWSRF) program. As a part of this review, we are conducting a survey of all 50 states to collect information on the nature and extent of assistance provided to disadvantaged communities.

The Congress is interested in using the information obtained through this survey as it conducts oversight hearings on the effectiveness of the DWSRF in addressing infrastructure needs at the nation's community water systems.

### Instructions

Per our discussion with you, we are providing this list of questions. In addition, we would like to discuss your responses with you over the telephone in June. We will contact you for an appointment. Please fax or mail your responses to the address provided below prior to our discussion.

When answering these questions, please consult and coordinate with the appropriate staff members in your state regarding the funding and program operations of the DWSRF program.

The survey asks general questions regarding how your state assists community water systems determined to be disadvantaged. In addition, the survey includes some specific questions about the small community water systems that EPA visited in your state when completing its 2000 Drinking Water Infrastructure Needs Survey. (We will supply the Public Water System identification codes for these systems.) We plan to conduct additional analysis with the data collected for these water systems.

Because the majority of disadvantaged community water systems are small, for the purposes of this survey, we have defined 'small' as serving less than 3,300 persons.

Throughout the questionnaire, we will be using the term disadvantaged. Under the DWSRF program, states have the option of using up to 30 percent of their federal capitalization grants to provide loan subsidies, such as

principal forgiveness or negative interest loans, to communities that meet state-defined criteria for disadvantaged. In addition, states may extend the repayment loan terms from 20 years to up to 30 years, provided that the term of the loan does not exceed the expected design life of the project.

Please mail or fax your completed responses to:

Teruni Rosengren  
U.S. General Accounting Office  
10 Causeway St. - Room 575  
Boston, MA 02222  
Fax # (617) 565-5909

If you have any questions, please contact:

Teruni Rosengren  
(617) 565-7538  
Email: [rosengrent@gao.gov](mailto:rosengrent@gao.gov)

Anna Kelley  
(617) 565-7499  
Email: [kelleya@gao.gov](mailto:kelleya@gao.gov)

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**Appendix II: GAO's Survey of State Drinking  
Water Officials Regarding Assistance to  
Disadvantaged Communities**

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**Definition of Disadvantaged**

1. Does your state DWSRF have a program to assist disadvantaged community water systems? (*Check one*) (N=50)

1. [31] Yes → Please send us a copy of your state's definition of disadvantaged.

2. [19] No → (*Go to Question 4*)

2. Is your state's definition of disadvantaged the same as the affordability criteria that your state uses to prioritize projects for EPA Safe Drinking Water Act funding, or is it different? (*Check one*) (N= 32)<sup>1</sup>

1. [21]<sup>2</sup> Same as state's affordability criteria

2. [12] Different than state's affordability criteria

ID: \_\_\_\_\_

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<sup>1</sup> Of the 31 states with disadvantaged programs, only 29 states have definitions of a disadvantaged community. Three states without programs have disadvantaged definitions.

<sup>2</sup> There are 33 responses because 1) while Indiana and Tennessee have no clear definition of disadvantaged, the states answered "same as affordability criteria", 2) Nevada has a definition of disadvantaged but answered it had no affordability criteria with which to compare its definition.

Alaska's definition was included because it was used in the past to qualify applicants for principal forgiveness, even though Alaska DWSRF has opted not to provide principal forgiveness to future applicants.

**Appendix II: GAO's Survey of State Drinking Water Officials Regarding Assistance to Disadvantaged Communities**

**Type of Assistance Offered**

3. Currently, what type of DWSRF assistance does your state offer? For each type of assistance your state offers, please indicate the extent to which such assistance has actually been provided (e.g., the total number of agreements that included this type of assistance made by your state's DWSRF and the total amount of principal forgiven) from the beginning of your state's DWSRF program through December 31, 2000.

Type of Assistance Offered to Disadvantaged Communities	Is assistance offered? (Check one for each type of assistance)		Total Number of Agreements that Included this Type of Assistance through December 31, 2000	
	Yes	No		
1. Principal forgiveness	19	31	108	Total Amount of Principal Forgiven as of December 31, 2000 <b>\$ 70,656,159.00</b>
2. Negative interest rate loans	3	47	37	Total amount of subsidy for negative interest rate loans, as of December 31, 2000 <b>\$ 11,465,010.00</b>
3. Extended loan terms of up to 30 years	25	25	129	

4. If your state does not currently offer any DWSRF assistance to disadvantaged communities (e.g., principal forgiveness, negative interest rate loans, and/or extended loan terms up to 30 years), what are the state's reasons? (Check one for each reason.)

Reason	Major Reason	Moderate Reason	Minor Reason	Not a Reason	Not applicable
1. Concerns about maintaining the corpus of the fund (or concerns about the long term viability of fund)	25	7	3	14	1
2. Concerns about ability of disadvantaged communities to repay loans	5	5	8	26	6
3. Concerns that systems may lack the financial, managerial, and technical capacity to maintain compliance	5	4	14	21	6
4. State's DWSRF already offers low interest rate loans	16	10	5	14	5
5. Availability of State programs or other state funding sources to address the needs of disadvantaged communities	10	6	6	9	19
6. Availability of other Federal programs or funding sources to address the needs of disadvantaged communities	7	15	8	16	4
7. Concerns about administrative burden with providing financial assistance to disadvantaged communities	5	3	4	31	7
8. Other 1 (Please specify)	27	1			
9. Other 2 (Please specify)	6				

**Appendix II: GAO's Survey of State Drinking Water Officials Regarding Assistance to Disadvantaged Communities**

5. If your state does not currently offer assistance to disadvantaged communities, does it plan to do so in the next 3 years? *(Check one)*

1. [3] Yes

2. [16] No

6. Listed below are small community water systems that were visited in EPA's Year 2000 Infrastructure Needs Survey. For each of these communities, please indicate if each would have been considered a disadvantaged community according to your state's DWSRF definition. If your state does not have a definition or you cannot apply its definition, please provide the system's average annual household water user cost as a percentage of its median household income (MHI).

- If your state has a definition, please answer columns (B) and (C) for each community water system.
- If your state does not have a definition or cannot apply its definition, please provide the information requested in column (D) for each community water system.

(A) Small community water system included in EPA's Drinking Water Infrastructure Needs sample by: PWS ID Name	(B) Does the system currently qualify as a disadvantaged system according to the state's definition (or the definition above) <i>(Check one for each community water system)</i>	(C) If the system does not currently qualify as a disadvantaged system, would the additional costs needed to improve it, qualify the system as disadvantaged? <i>(Check one for each community water system)</i>	(D) If your state does not have a definition or you cannot apply its definition, what is the community water system's average annual household water user cost as a percentage of its median household income (MHI)? <i>(Enter percentage)</i>
[n=591 waster systems] [N= 44,373 water systems] all numbers in the next columns are weighed numbers.	1. [4,872] Yes 2. [13,186] No → <i>(Go to column C)</i>	1. [446] Yes 2. [7,833] No 3. [298] N/A-currently qualifies	0.003 % to 7.18 % of MHI

**Appendix II: GAO's Survey of State Drinking  
Water Officials Regarding Assistance to  
Disadvantaged Communities**

**General Information**

7. Based on your most currently available data, in total, how many community water systems does your state have? *(Enter number)*

55,086 community water systems

The above data is current as of what date?

01/2001 to 07/2001  
(Month/Year)

8. Based on your most currently available data, how many small community water systems, that is serving less than 3,300 persons, does your state have? *(Enter number)*

44,973 small (serving less than 3,300 persons)  
community water systems

9. Has your state estimated the total number of community water systems that are disadvantaged by your state DWSRF program's definition? *(Check one)*

1. [3] Yes → How many disadvantaged community systems are in your state? *(Enter number)*

932 disadvantaged community water systems

2. [29] No → What is the reason(s) your state has not determined the number of disadvantaged systems in your state?

3. [18] *Not applicable because state does not have a definition of disadvantaged*

**COMMENTS**

10. Please provide below (or on an additional sheet) any comments that you have about the DWSRF program or assistance to disadvantaged communities.

States' comments are reflected in Appendix I.

11. In case we need to follow-up on responses, what are the name, title, agency, phone number, and e-mail address of the person completing this questionnaire?

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Agency: \_\_\_\_\_

State: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_

Email address: \_\_\_\_\_

*Thank you very much for your help!*

# Appendix III: Comments from EPA's Office of Water



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

January 17, 2002

OFFICE OF  
WATER

John B. Stephenson  
Director, Natural Resources and the Environment  
General Accounting Office  
Washington, DC 20548

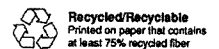
Dear Mr. Stephenson:

Thank you for the opportunity to review the proposed General Accounting Office (GAO) Report; *Drinking Water: Key Aspects of EPA's Revolving Fund Need to be Strengthened*. We understand that GAO staff faced a significant challenge in working to understand the Drinking Water State Revolving Fund (DWSRF) program and the related Drinking Water Infrastructure Needs Survey (DWINS). We appreciate the information in the report and will give full consideration to your recommendations. Our detailed comments are outlined below.

Your first charge was to examine the accuracy of the Drinking Water Infrastructure Needs Survey (DWINS). As you know, EPA went to great lengths to improve the accuracy of the 1999 survey over the initial 1995 survey by requiring extensive documentation for the over 86,000 reported needs and costs, conducting site visits to small systems, and performing quality assurance reviews of the responses to the survey questionnaire. These factors are the basis for the Agency's confidence in the survey's estimates. The Agency's design of the survey was affected by the budget and our desire to focus on reducing reporting bias through site visits. EPA agrees that the calculation of confidence limits would confirm whether the survey met its precision targets. We will revisit that issue in the design of the 2003 survey.

Your second charge was to determine the extent to which states have used the disadvantaged assistance provision. We have no comments on your findings in this area as they agree with information we have collected through our information system.

Your third charge was to examine EPA's efforts to monitor implementation of the DWSRF program. We agree with your findings and are in the process of implementing many of the practices to which you refer in your recommendations. It is important to point out that while the national program was in its fifth year during the course of your study, it was still relatively early given that many states did not receive federal funds until the end of the program's second year. During the first few years of implementation, EPA was focused on helping state programs get started. The Agency's intent was to move from a start-up phase to an assessment phase in the fifth and sixth year of the programs, when most states would have fully implemented their programs.



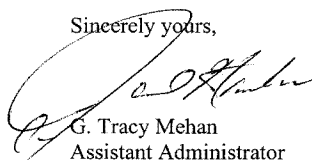
The report addresses EPA's slow development of financial indicators for use in assessing state programs and insufficient use of data in the program's information system in conducting annual reviews. EPA made a deliberate decision to delay development of its information system until after initial program start-up so that the Agency and states would have a better idea of what information would be important for program operation and management. The first collection of data was not finalized until late 2000. In the early years of the program, the highly variable nature of the data makes it difficult to apply financial indicators. The indicators become useful and relevant when the data have a more historical basis. EPA intends to work with its State/EPA SRF work group to refine and finalize the draft financial indicators during FY 2002. The Agency will similarly work towards finalizing programmatic measures of progress.

Similarly, full implementation of our audit program was delayed until states showed full activity in their revolving funds (i.e., were receiving repayments). The Office of the Inspector General's plans for FY 2001 were somewhat delayed due to two extensive audits of state Clean Water SRF programs that took longer than anticipated, but our offices still consider the program to be on track for FY 2002. EPA is pleased that 42 states have elected to conduct independent audits for their DWSRF programs as a best management practice.

The report also addresses the annual reviews that EPA's regional offices conduct of each state DWSRF program. These reviews typically include an on-site visit and a written report to document the results of the review. We accept your recommendations regarding ways to improve the quality and timeliness of these reviews, and intend to work closely with our regional staff in the coming months to determine solutions to the issues you identified in your investigation.

I appreciate the opportunity to coordinate with your staff on this project and look forward to the final report. Should you need additional information or have further questions, please contact me or Cynthia C. Dougherty, Director of the Office of Ground Water and Drinking Water at (202) 564-3750.

Sincerely yours,



G. Tracy Mehan  
Assistant Administrator

# Appendix IV: Comments from EPA's Office of Inspector General



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 10 2002

THE INSPECTOR GENERAL

John B. Stephenson  
Director, Natural Resources and the Environment  
General Accounting Office  
Washington, DC 20548

Dear Mr. Stephenson:

Thank you for the opportunity to respond to the General Accounting Office draft report entitled, *Drinking Water: Key Aspects of EPA's Revolving Fund Oversight Need to be Strengthened*. We accept the recommendations in the report and believe that the Office of Inspector General's (OIG) current strategy will fully meet the recommendations.

The key element of our strategy is to ensure that states without Drinking Water State Revolving Fund (DWSRF) audits are examined by the OIG at least every three years. Currently, eight states require OIG audits by the end of fiscal 2003. We will add additional resources to our state revolving fund audit group to ensure that we meet our goal.

The additional resources will also ensure that we issue the DWSRF audit guide by the end of fiscal 2002. We will continue to evaluate the quality of audits performed by others.

Should you need additional information or have further questions, please contact me or call Mr. John T. Walsh, Acting Assistant Inspector General for Audit, at 202-260-4959.

Sincerely,

A handwritten signature in black ink, appearing to read "Nikki L. Tinsley".

Nikki L. Tinsley  
Inspector General



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# Appendix V: GAO Contact and Staff Acknowledgments

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## GAO Contact

Ellen M. Crocker (617) 565-7469

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## Staff Acknowledgments

Karen Kemper, John Johnson, Lynn Wasielewski, Emma Quach, Karen Bracey, Teruni Rosengren, Anna Kelley, Luann Moy, Jonathan McMurray, and Karen Keegan made key contributions to this report.

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