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DRINKING WATER

Safe Drinking Water Act Reauthorization Issues

Statement for the record by
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GAO/T-RCED-96-35

Mr. Chairman and Members of the Committee:

We appreciate the opportunity to discuss issues related to S. 1316, the bill being considered by the Committee to reauthorize the Safe Drinking Water Act. Over the past several years, rapidly escalating costs and increasingly serious implementation problems have affected the drinking water program, particularly as it impacts individual water systems and the states charged with overseeing them. The proposed reauthorization bill contains various provisions that deal with these important issues. During the 1990s, GAO has reported on many of these issues at the request of the Congress.[1]

Our statement today highlights some of the key findings in our completed work relating to (1) various managerial, technical, and preventive approaches to dealing with water systems' compliance problems; (2) state resources needed to oversee the implementation of the drinking water program; and (3) financing infrastructure needs. We have included comments on relevant sections of the proposed reauthorization bill as appropriate.

In summary, Mr. Chairman, we have reported the following:

- States employ a variety of strategies to help water systems comply with drinking water requirements, including providing programs to certify and train water system operators; performing comprehensive inspections, called sanitary surveys, of systems' design, operation, and maintenance; protecting water sources to prevent contamination; approving alternative technologies suitable for small water systems; and determining the viability of systems and their need for restructuring. While each of these approaches can be effective in reducing compliance and oversight costs, our work has identified a number of implementation problems at some states and barriers affecting states' ability to take full advantage of these approaches. For example, quality assurance and pollution prevention activities, such as comprehensive inspections of water systems, operator certification and training, and wellhead protection, could keep problems from occurring and thus have the potential to reduce compliance and oversight costs; however, we found that states' implementation of these activities is sometimes ineffective and that competing demands for limited resources have forced many states to restrict their efforts.

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[1]For a complete list of GAO's reports on drinking water, see app. I.

- Because funding has not kept pace with the program's expanding requirements, in 1992 the Environmental Protection Agency (EPA) attempted to help states deal with their resource problems by (1) setting priorities within the program and (2) giving the states 5 years to build sufficient capability to meet all requirements. The effect of this strategy, however, was to force states to pursue national priorities--generally overseeing the implementation of new regulations on contaminants--while curtailing traditional quality assurance activities. In addition, EPA also faced the possibility of withdrawing responsibility for the program from at least eight states because of shortfalls in their program implementation. Recognizing that states' resource shortages will not be eliminated within the 5-year period as envisioned in the 1992 strategy, EPA is revising its guidance on priorities and has initiated an effort to reevaluate and streamline drinking water regulations. While these steps will not be sufficient to eliminate the resource shortages, they will make more effective use of the funds that are available.

- The proposed use of state revolving funds capitalized with federal appropriations for financing public water systems is an approach similar to the State Water Pollution Control Revolving Fund (SRF) program under the Clean Water Act, which we found to be a step toward more efficient government investment in wastewater treatment facilities. Our review of EPA's experience with this program also provides some insights into potential problems with implementing SRFs for financing improvements to public water systems under the Safe Drinking Water Act. We found that the SRF program will not generate enough funds to close the tremendous gap between wastewater treatment plant needs and the available resources. We also found that restrictions on the purchase of land and the allowable length of loan terms have made it difficult for some communities, particularly small communities, to take advantage of assistance under the SRF program. Additionally, small communities have received a disproportionately small share of SRF moneys because of difficulties in (1) competing with larger communities for loans and (2) repaying loans at any interest rate.

BACKGROUND

The Congress enacted the Safe Drinking Water Act in 1974 to protect the public from the risks of contaminated drinking water. Under the act, EPA is required to establish (1) drinking water standards or treatment techniques for contaminants that could adversely affect human health and (2) requirements for monitoring the quality of drinking water supplies and for ensuring the proper

operation and maintenance of public water systems. The act also authorizes EPA to grant primary enforcement authority for the drinking water program, commonly referred to as "primacy," to states that meet certain requirements. All states except Wyoming have assumed primacy for their drinking water programs and receive grants from EPA to help pay for the oversight of water systems and for other program responsibilities. The states received grants of $70 million during fiscal year 1995.

From 1974 to 1986, EPA regulated 23 contaminants in drinking water. In 1986, the Congress enacted sweeping amendments that, among other things, significantly increased the number of contaminants to be regulated. Specifically, EPA was required to set drinking water standards for 83 contaminants within 3 years and, after publishing a list of other candidates for regulation, set standards for at least 25 contaminants on the list every 3 years, beginning in 1991. As of October 1995, EPA had adopted standards for 84 contaminants.[2] Many water systems already bearing significant costs just to implement existing regulations will be hard pressed to implement additional requirements, according to EPA, state, and industry officials. According to EPA's estimates, water systems' annual compliance costs--the costs of monitoring water quality, installing treatment facilities or processes to meet EPA's standards, operation and maintenance, and reporting--will reach $1.4 billion in 1995.

While increases in the number of regulated contaminants and the costs of meeting drinking water requirements affect all water systems, small water systems have felt the greatest impact. Systems serving 3,300 people or fewer account for 87 percent of all community water systems and often lack the financial and technical resources to meet the requirements. Small systems have particular difficulty because of their small customer base and, in some instances, water rates that do not recover the full costs of operations. These conditions affect small systems' ability to provide adequate treatment facilities, pay for qualified operators, maintain the system infrastructure, adhere to required water quality testing and reporting requirements, and take timely corrective action when found in violation.

STATES CAN USE SEVERAL APPROACHES TO HELP WATER SYSTEMS COMPLY WITH DRINKING WATER PROGRAM'S REQUIREMENTS

States employ a variety of approaches to help water systems comply with drinking water requirements, including providing

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[2]As a result of a court order, standards for three contaminants (aldicarb, aldicarb sulfone, and aldicarb sulfoxide) have not taken effect.

programs to certify and train water system operators; performing comprehensive inspections, called sanitary surveys, of systems' design, operation, and maintenance; protecting water sources to prevent contamination; and approving alternative technologies suitable for small water systems. The most comprehensive approach used by some states to enhance compliance involves assessing the "viability" of water systems--the financial, technical, and managerial capacity of systems to comply with current and future requirements--and developing a strategy for restructuring nonviable systems through management and/or ownership changes (e.g., consolidation with larger water systems) so that these systems have the resources to meet the program's requirements.

In a series of reports issued over the past several years, we have examined each of the approaches cited above and found that they can be effective in reducing both compliance and oversight costs. However, we also identified a number of implementation problems at some states and barriers that affected the states' ability to take full advantage of these approaches. In addition, limited resources have forced many states to reduce quality assurance activities in favor of other priorities.

Operator Certification and Training

Operator certification and training programs are intended to ensure that water systems are operated and maintained by qualified individuals and that the systems comply with federal and state drinking water regulations. EPA officials believe that states should be required to implement operator certification programs for all water systems. However, there is no national operator certification program or federal requirement for states to have such programs themselves.

System operators' lack of knowledge about drinking water requirements and proper system operations is a key reason for compliance problems among small water systems. Moreover, as we concluded in 1990,[3] some violations are probably going undetected because of sampling errors by water system operators. EPA and state program managers told us that they were concerned about the sampling techniques used by small system operators and the accuracy of test results. For the most part, these managers attributed potential problems to the inadequate training of operators and the lack of full-time operators or the high turnover of operators at

[3]Drinking Water: Compliance Problems Undermine EPA Program as New Challenges Emerge (GAO/RCED-90-127, June 8, 1990).

small water systems. In addition, in a 1992 report[4] on compliance with requirements for notifying the public when violations of drinking water requirements occur, we noted that operators of small systems are more likely to be uninformed about many drinking water requirements, the time frames for implementing new requirements, and subsequent public notification requirements.

While nearly all states do have some type of operator certification requirements, our 1991 testimony[5] noted that there is considerable variation in the scope and content of these programs. For example, states frequently limit the application of certification requirements on the basis of the water systems' size, the treatments used, or the source of the supply. An April 1991 study by EPA found that at least 15 states exempted some systems serving populations of 500 or fewer from having certified operators.[6] Such exemptions are significant because over 60 percent of the nation's community water systems serve 500 people or fewer. We found that some states exempt small water systems from operator certification requirements because (1) the requirements are considered unnecessarily burdensome and (2) the smallest systems are often operated by part-time employees or volunteers and cannot attract or pay for an operator who meets all of the qualifications.

The proposed reauthorization bill addresses these concerns by providing incentives for water systems to have certified operators and for states to strengthen their certification programs. One provision would require water systems to have certified operators as a condition of receiving assistance from the proposed SRF for these systems. In addition, if a water system that has received such assistance does not comply with the requirement to have a certified operator, the bill would authorize EPA to either withhold SRF moneys from the applicable state or require repayment of an amount equal to the amount of the assistance provided to the water system. While EPA would provide guidance to assist states in implementing operator certification requirements, for states that

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[4]Drinking Water: Consumers Often Not Well-informed of Potentially Serious Violations (GAO/RCED-92-135, June 25, 1992).

[5]Observations on Compliance and Enforcement in EPA's Drinking Water Program (GAO/T-RCED-91-47, May 10, 1991).

[6]According to an official in EPA's Office of Groundwater and Drinking Water, the agency has not conducted any more recent studies. In addition, an official of the Association of Boards of Certification, an organization that assists states with environmental certification programs, believes that state certification requirements have not changed significantly over the past few years.

have obtained primacy, the authority to prescribe the appropriate level of training for certification rests solely with them.

Sanitary Surveys

Sanitary surveys[7] can be one of the most effective tools that states can use to help ensure compliance with drinking water regulations and to identify and correct problems before they become serious, according to our 1993 report.[8] EPA recommends that surveys be performed at least every 3 years and that they cover all components of water systems--including the systems' sources of water, facilities and equipment, and operations and maintenance--to determine the systems' adequacy for producing and distributing safe drinking water. In our 1993 report, which summarized the results of a nationwide questionnaire and our review of 200 sanitary surveys conducted in four states, we found the following:

- Sanitary surveys were often deficient in how they were conducted, documented, and/or interpreted. Specifically, 45 states omitted one or more of the key components or operations, such as inspections of the water distribution system or reviews of water system operators' qualifications. Additionally, some states did not require documentation of the items inspected or of the survey results.

- In the four states we visited, there were recurring problems with water systems' equipment and management, particularly among small systems. States' questionnaire responses confirmed that problems associated with system infrastructure are largely found among smaller systems. Our detailed review of the four states' sanitary surveys also showed that regardless of a system's size, the deficiencies previously detected frequently went uncorrected.

While drinking water officials at all levels agree on the importance of sanitary surveys, 23 of the 50 states reported that the frequency with which they conduct sanitary surveys had declined over the past few years. Among the reasons the states cited were the need to perform higher-priority work required by the Safe

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[7]EPA defines a sanitary survey as an on-site review, evaluation, and/or inspection of the water source(s), facilities, equipment, operations, and maintenance of a public water system for the purpose of determining its adequacy for producing and distributing safe drinking water.

[8]Drinking Water: Key Quality Assurance Program Is Flawed and Underfunded (GAO/RCED-93-97, Apr. 9, 1993).

Drinking Water Act, primarily overseeing the implementation of new regulations on contaminants; staff shortages; and financial constraints.

While the proposed reauthorization bill does not directly address the issue of sanitary surveys, it does address the underlying resource constraints that affect their use. The bill would provide for a substantial increase in the funding for states' administration of drinking water programs, from $70 million in fiscal year 1995 to $100 million annually through 2003, and states may use some of these funds for sanitary surveys.

Wellhead Protection

In 1993, we reported that the most cost-effective approach to protecting groundwater sources used for drinking water is to prevent their contamination.[9] Cleaning up contaminated drinking water can cost millions of dollars and take many years, and obtaining alternative water supplies can also be very costly. The 1986 amendments to the Safe Drinking Water Act called for each state to develop a wellhead protection program by 1989 to protect surface and subsurface areas surrounding public drinking water wells from contamination.[10] Among other things, each program was required to specify the roles and duties of state and local governments and public water systems, define wellhead protection areas, identify potential sources of contamination within each area, and describe managerial approaches to be used to protect water supplies. However, states have been slow to develop and implement these programs.

At the time we reported on the wellhead protection program in 1993, only 26 states had approved programs; as of October 1995, 38 states had approved programs. EPA and state officials identified a severe shortage of funds as the primary reason for the slow progress as well as (1) opposition at the local level against states' enactment of land-use controls[11] and (2) a general lack of

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[9]Drinking Water: Stronger Efforts Needed to Protect Areas Around Public Wells From Contamination (GAO/RCED-93-96, Apr. 14, 1993).

[10]The wellhead protection program is directed at water systems that use groundwater as a source of drinking water. About 80 percent of the 57,000 community water systems obtain their supply from groundwater sources. The remaining water systems use surface water sources, such as lakes and rivers, for their drinking water supply.

[11]Land-use controls generally place restrictions on the types of facilities or activities that may be located within a designated wellhead protection area. In addition, facilities already operating within designated areas are subject to stringent

public awareness about the vulnerability of drinking water to contamination and about the need to protect wellhead areas.

The proposed reauthorization bill would establish a "source water protection partnership" program, covering both groundwater and surface water systems, in which states would be required to delineate protection areas for community water systems' water sources within 5 years from the date of enactment and, to the extent practicable, conduct assessments to determine the vulnerability of the water sources to contamination. The bill also authorizes states to establish a petition process whereby individual water systems may request technical assistance from their states in developing a partnership among the owners and operators of the systems, governments, and other persons in protection areas. Among other things, the partnership would develop recommendations for voluntary and incentive-based strategies for the long-term protection of their water sources. Additionally, the bill would allow states to use a portion of the proposed SRF moneys to administer water protection programs, provide to small communities technical assistance on protecting water sources, and finance the acquisition of land or a conservation easement for the purpose of protecting the sources from contamination. Making financial assistance available to support state programs and local water protection projects is consistent with our finding that the primary reason for the slow progress in the existing wellhead protection program is a shortage of resources.

Approval of Alternative Technologies

A number of lower-cost alternative technologies are available to small water systems that are unable to afford the full-scale treatment facilities used by larger systems. For example, some drinking water contaminants can be removed using pre-engineered "packaged treatment" plants that are assembled in a factory, mounted on skids, and transported to treatment sites virtually ready to use. Some small systems have successfully used these alternatives to meet their treatment needs at an affordable cost. In a 1994 report,[12] we cited one case in which a small water system in Connecticut saved $1 million by installing two packaged treatment plants instead of building a larger, full-scale treatment plant to serve its 3,000 customers. Our report concluded, however, that relatively few small systems have been able to take advantage of alternative technologies because several barriers impede their widespread use:

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monitoring and reporting requirements.

[12]Drinking Water: Stronger Efforts Essential for Small Communities to Comply With Standards (GAO/RCED-94-40, Mar. 9, 1994).

- A lack of reliable information on the cost and performance of alternative technologies makes it difficult for officials of small systems and state regulators to evaluate whether the technologies are affordable and will meet regulatory requirements. State officials told us that while some data are available from equipment manufacturers, the information is not always adequate for assessing performance under site-specific conditions.

- Some alternative technologies are too complex for operators of small systems to properly operate and maintain.

- EPA has been involved in a number of efforts to collect needed cost and performance data and make alternative technologies more accessible to small water systems. However, because of the agency's limited resources and other factors, we found that these efforts have met with limited success.

The proposed reauthorization bill contains several provisions that deal with the problems we identified regarding the use of alternative technologies at small water systems. For example, at the time EPA promulgates drinking water regulations, the agency would also be required to identify treatment technologies that are feasible when the costs for small water systems are taken into consideration. The bill also authorizes EPA to collect information on the performance of commercially available technologies for small systems and to establish at least five centers to provide research, training, and technical assistance for small water systems. These provisions address our findings on the need for reliable information on the performance of alternative technologies appropriate for small systems.

Viability and Restructuring Programs

While the use of alternative technologies and the quality assurance and pollution prevention programs described earlier offer some hope for helping small community water systems, they fall short of a comprehensive solution, largely because sufficient resources are not available to help the thousands of systems in need of support. Our March 1994 report noted that EPA and the states are increasingly recognizing that the heart of the noncompliance problem lies with the sheer volume of small water systems that lack the capacity to remain in compliance with drinking water regulations over the long term. Accordingly, several states have turned toward viability programs and restructuring strategies to provide a more comprehensive solution. Viability programs, in general, are designed to (1) assess water systems' ability to consistently meet current and prospective regulatory requirements and (2) determine the best solution for

bringing nonviable systems into compliance. Restructuring is the adoption of management and/or ownership changes--through mergers or consolidations, for example--that help systems address program responsibilities and increased costs.

We found that viability and restructuring programs have the potential to improve compliance with drinking water requirements and help relieve the significant resource constraints experienced by the states' drinking water programs. According to EPA, approximately 50 percent of the nation's small water systems are located within the Census Bureau's metropolitan statistical areas[13] and are potential candidates for physical consolidation or shared management arrangements. While consolidation of nonviable systems is not always feasible, many EPA, state, and industry officials we interviewed believe it may be the best option for bringing these systems into compliance while at the same time reducing the states' oversight workload.

Although restructuring and viability programs seem promising, our 1994 review showed that few states have been successful in these efforts thus far. Unfortunately, while such programs offer states a way to reduce their own long-term costs by reducing the number of problem systems they must oversee, the states lack the resources needed in the near term to develop and implement these programs. In addition, we found that states have difficulty obtaining from state legislatures the authority needed to implement such programs. We also found that the formula EPA uses to allocate drinking water program grants may serve as a disincentive to consolidation because, in general, the formula is weighted so that the states with more water systems receive more funding.

The proposed reauthorization bill would address many of the issues we raised by requiring states to develop and implement a strategy to assist water systems in acquiring and maintaining the financial, technical, and managerial capacity to meet drinking water requirements. States would be allowed to use a portion of the moneys received for the proposed SRF for this purpose and for providing technical assistance on the restructuring or consolidation of small water systems. The bill would also allow SRF moneys to be used for projects that will facilitate the consolidation of water systems and would prohibit assistance to water systems that lack the financial, technical, and managerial capacity to ensure compliance or that have a history of violations. Another provision of the bill would require EPA to withhold a

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[13]A metropolitan statistical area contains a core area with a large population nucleus--currently defined as a city or urbanized area with at least 50,000 inhabitants--together with adjacent communities having a high degree of economic and social integration with that core.

percentage of a state's SRF allocation, beginning in fiscal year 1999, if the state fails to obtain authority to ensure that new water systems demonstrate the capacity to comply with all drinking water regulations in effect, or likely to be in effect, when the systems commence operation. Finally, the proposed bill (1) authorizes funding for a network of university-based environmental finance centers to provide training and technical assistance to state and local officials in developing the capacity of water systems and (2) establishes a national clearinghouse to collect and disseminate information on capacity development.

STATES LACK SUFFICIENT RESOURCES TO OVERSEE PROGRAM IMPLEMENTATION

States' drinking water programs are responsible for a variety of activities, including oversight of water systems' compliance with drinking water requirements, enforcement, technical assistance, sanitary surveys, etc. However, even before the new requirements of the 1986 amendments to the Safe Drinking Water Act began to take effect, states were unable to implement basic elements of their drinking water programs. Since that time, the situation has deteriorated. As we reported in 1993,[14] the states have received relatively modest increases in their federal drinking water program grants despite vastly increased oversight responsibilities. Using a resource-needs model developed by EPA and the Association of State Drinking Water Administrators, EPA estimated, on the basis of combined federal and state spending of $142 million and program needs of $304 million, that the gap between states' program needs and the available resources was approximately $162 million in 1993.[15]

To assist states with their funding difficulties, EPA issued a strategy in June 1992 to set "short-term" priorities in the drinking water program. This strategy would allow both EPA and the states to focus limited resources on what the agency considered to be the highest priorities first, while giving the states time to "build resources" in order to fully implement the program after a period of up to 5 years. In a 1992 report,[16] we concluded that while it was understandable that EPA would attempt to establish

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[14]Drinking Water Program: States Face Increased Difficulties in Meeting Basic Requirements (GAO/RCED-93-144, June 25, 1993).

[15]Technical and Economic Capacity of States and Public Water Systems to Implement Drinking Water Regulations: Report to the Congress, EPA, Office of Water (810-R-93-001, Sept. 1993).

[16]Drinking Water: Widening Gap Between Needs and Available Resources Threatens Vital EPA Program (GAO/RCED-92-184, July 6, 1992).

priorities among the program's requirements, the strategy shifted resources away from quality assurance activities, such as sanitary surveys, that promote compliance by water systems and that have traditionally formed the backbone of states' programs. We also concluded that it was unrealistic to assume that states could build sufficient resources to fully implement the drinking water program's requirements by the end of the 5-year period.

Shortly after the 1992 guidance on priorities was issued, it became clear that a number of states were having difficulty even maintaining base-level programs, let alone building capacity to fully implement all of the program's requirements. At least eight states faced the withdrawal of primacy because of their failure to adopt new regulations on contaminants or maintain adequate staffing levels. Our 1993 report noted that concerns about the states' ability to maintain adequate programs, given their financial constraints, led EPA to identify the primacy issue as a "material weakness" under the Federal Managers' Financial Integrity Act. The target date for completing corrective action on this material weakness is 1997.

Recognizing that the states' resource shortfalls will not be eliminated during the 5-year time frame as envisioned in its earlier strategy, EPA is revising its 1992 guidance on priorities for state programs. Among other things, the new draft guidance incorporates minimum requirements for states' technical assistance and sanitary survey programs, including a requirement for following up on identified deficiencies. Additionally, the draft guidance allows states some flexibility in adjusting national priorities to reflect state-specific public health priorities. EPA has also initiated an effort to reevaluate and streamline its regulations to help bring program costs more in line with resources. These initiatives will help make more effective use of the funds that the states are devoting to environmental protection. However, under the existing statute, new responsibilities--in the form of additional regulated contaminants--will continue to be added to the program and will be addressed at the expense of other important activities, often to the detriment of the overall program. As we noted in March 1994 testimony,[17] modification of the 1986 amendments could allow limited resources to be reallocated to activities that are more important to state and local efforts to protect drinking water. For example, we observed that the requirement to regulate 25 additional contaminants every 3 years, with little regard for the relative risks they pose, might well be a good candidate for such reconsideration.

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[17]Drinking Water: Combination of Strategies Needed to Bring Program Costs in Line With Resources (GAO/T-RCED-94-152, Mar. 14, 1994).

The proposed reauthorization bill addresses the resource issue we have identified in several ways. As noted earlier, the bill increases funding for states' drinking water programs from $70 million in fiscal year 1995 to $100 million annually through 2003. In addition, under the proposed SRF, states could use a portion of the moneys allocated to the fund to administer the loan program, administer a program to protect water sources, develop a "capacity development" strategy for assessing the viability of water systems, and provide technical assistance to small water systems for protecting water sources or developing capacity. The bill would also eliminate the requirement that EPA set standards for 25 additional contaminants every 3 years and, instead, require EPA to take action (i.e., make a determination that regulation is or is not warranted or that further study is needed) on at least 5 contaminants every 5 years, beginning in 2001.

USE OF REVOLVING LOAN FUNDS CAN HELP MEET LOCAL ENVIRONMENTAL INFRASTRUCTURE NEEDS

In the 1987 amendments to the Clean Water Act, the Congress reduced the federal role in financing local wastewater treatment facilities by creating the SRF program and phasing out the Construction Grants Program.[18] Under the SRF program, EPA provides grants to capitalize the states' funds, while the states identify investment priorities and manage the loan program. As loans are repaid, the fund is replenished, and loans can be made for other eligible water pollution control projects.

In a 1992 report,[19] we concluded that SRFs are an efficient alternative to the Construction Grants Program for providing a subsidy to local governments. We reported that SRFs increase the flexibility of states to meet priority needs and encourage local governments to reduce costs and improve operations and maintenance. As local governments assume more responsibility for the cost of facilities, they are likely to seek less costly alternatives to meeting their needs.

We also concluded that several changes could improve the ability of states to meet local needs through SRFs. For example, under the Clean Water Act, SRF loans cannot be made to purchase land unless the land itself is directly used in the wastewater treatment process (e.g., wetlands used to filter wastewater as part of the treatment process). Moreover, the land upon which a

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[18]Under the Construction Grants Program, EPA gave funds directly to local governments for the construction of wastewater treatment facilities.

[19]Water Pollution: State Revolving Funds Insufficient to Meet Wastewater Treatment Needs (GAO/RCED-92-35, Jan. 27, 1992).

treatment plant would be built and easements and rights-of-way for wastewater collection systems are not eligible for purchase with SRF moneys. We found that the ineligibility of certain land costs for SRF assistance poses a financial problem for many communities, particularly small communities where land costs can represent 20 percent of project costs. To obtain funds for the purchase of needed land, these communities must often borrow in the private financial market at higher interest rates.

Similarly, the Clean Water Act prohibits states from offering loan terms beyond 20 years. We reported that although the design life of most plants and equipment is 20 years, some treatment facilities, such as filtration systems and lagoons, have a design life exceeding 20 years. Small communities, which often need such a facility, are particularly affected by the restriction on a loan term because a disparity between the loan term and the design life of the project may increase user charges unnecessarily.

While the SRF program is expected to meet only 31 percent of the nation's estimated wastewater treatment needs by the year 2001, it will be particularly difficult for SRFs to meet the needs of small communities because such communities cannot take advantage of economies of scale, and thus per capita costs for wastewater treatment are relatively high. When these costs are combined with low per capita income, the debt may be unsupportable at any interest rate. As a result, almost three-quarters of the states responding to GAO's survey maintained that SRFs will not meet wastewater treatment needs in small communities. These communities are at a disadvantage when they must compete with larger communities for SRF assistance because they may not have credit ratings and may represent higher credit risks as a result of their small revenue bases.

Although the SRF that would be established by the proposed reauthorization bill is unlikely to meet all identified needs for infrastructure improvements, it would provide substantial relief to many water systems that cannot afford the capital investments required to provide safe drinking water. The bill would authorize funding of $600 million for fiscal year 1994 and $1 billion per year for fiscal years 1995 through 2003 to capitalize the state SRFs. The bill also contains provisions that would address some of the problems we identified in the Clean Water Act's SRF program. For example, the bill allows (1) the use of SRF assistance to acquire land for the construction of a treatment facility and (2) for disadvantaged communities, a 30-year loan term as long as it would not exceed the design life of the project. In addition, as noted earlier, the bill contains provisions that could reduce the number of water systems that need assistance, including funding of restructuring and consolidation projects, funding of projects to protect water sources, and incentives for states to prevent the formation of water systems that do not have the financial,

technical, managerial capacity to meet drinking water requirements. Finally, the bill would allow states to use up to 30 percent of their SRF allocations to subsidize disadvantaged communities that cannot afford to repay loans. These provisions address key concerns we have raised about the resources that are needed by water systems to improve the quality of drinking water.

REPORTS ON SAFE DRINKING WATER ISSUES

Drinking Water: Combination of Strategies Needed to Bring Program Costs in Line With Resources (GAO/T-RCED-94-152, Mar. 14, 1994).

Drinking Water: Stronger Efforts Essential for Small Communities to Comply With Standards (GAO/RCED-94-40, Mar. 9, 1994).

Drinking Water Program: States Face Increased Difficulties in Meeting Basic Requirements (GAO/RCED-93-144, June 25, 1993).

Drinking Water: Stronger Efforts Needed to Protect Areas Around Public Wells From Contamination (GAO/RCED-93-96, Apr. 14, 1993).

Drinking Water: Key Quality Assurance Program Is Flawed and Underfunded (GAO/RCED-93-97, Apr. 9, 1993).

Drinking Water: Widening Gap Between Needs and Available Resources Threatens Vital EPA Program (GAO/RCED-92-184, July 6, 1992).

Drinking Water: Consumers Often Not Well-Informed of Potentially Serious Violations (GAO/RCED-92-135, June 25, 1992).

Observations on Compliance and Enforcement in EPA's Drinking Water Program (GAO/T-RCED-91-47, May 10, 1991).

Drinking Water: Compliance Problems Undermine EPA Program as New Challenges Emerge (GAO/RCED-90-127, June 8, 1990).

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