

DRINKING WATER NEEDS AND INFRASTRUCTURE

HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT AND
HAZARDOUS MATERIALS

OF THE

COMMITTEE ON ENERGY AND
COMMERCE

HOUSE OF REPRESENTATIVES

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DRINKING WATER NEEDS AND INFRASTRUCTURE

THURSDAY, APRIL 11, 2002

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENVIRONMENT
AND HAZARDOUS MATERIALS,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:30 a.m., in room 2123, Rayburn House Office Building, Hon. Paul E. Gillmor (chairman) presiding.

Members present: Representatives Gillmor, Shimkus, Wilson, Bass, Pitts, Walden, Terry, Fletcher, Tauzin (ex officio), Pallone, Brown, Green, McCarthy, Barrett, Luther, and Harman.

Staff present: Bob Meyers, counsel; Jerry Couri, policy coordinator; Hollyn Kidd, legislative clerk; and Dick Frandsen, minority counsel.

Mr. GILLMOR. The committee will come to order, and the Chair recognizes himself for the purpose of an opening statement.

Today's hearing focuses on the pressing needs of drinking water systems across our country. The provision of safe drinking water is one of the most important public health and environmental duties that Congress addresses.

Water quality directly relates to the future health and well-being of our population and its economy. One of the benefits of living in this country is that over 76,000 water systems have taken great pains to construct networks that deliver safe and affordable water.

This luxury, which we largely take for granted, is not available in every place throughout the world as the Health and Environment Subcommittee has previously examined. We must ensure that a solid drinking water delivery system is in place to guarantee safe drinking water to all Americans.

Today, while the Senate is preparing to move a water infrastructure bill through its committee, and the House Transportation and Infrastructure Committee recently passed a waste water funding bill out of their committee, as this committee is the committee solely responsible for drinking water programs, I believe that we need to work more diligently and in a bipartisan fashion to understand the scope of any problems to the system, and ensure that a high standard of public health protection is achieved.

Providing clean drinking water is more than just pumping water to a certain location. Providing good drinking water embraces the root goals of the Safe Drinking Water Act to help guide communities in a way that will protect their citizen's drinking water from

contaminants through a network of lines, pipes, and direct disinfection efforts.

The Safe Drinking Water Act of 1996 required the EPA to survey the needs of water systems every 4 years. I believe anyone who has taken time to carefully look at this matter understands that the pursuit of cleaner drinking water in local communities can become quite pricey, and demands additional resources.

While local and State taxes can be raised to meet these obligations, it is really the revolving loan fund, under the Safe Drinking Water Act, that helps localities afford safe drinking water.

As someone who has been a long supporter of funding Federal mandates on local governments and State governments, I believe the SRF is crucial to providing Federal resources to entities trying to simultaneously comply with Federal standards and also protect public health.

Today's witnesses will help us better understand the drinking water needs of our communities across the country. Our first panel brings the perspectives of EPA, who last year released their findings on drinking water needs assessment.

We will also have GAO provide testimony on EPA's funding and comments on their own reviews of the drinking water revolving loan fund.

Finally, we will have the Congressional Budget Office testify to their preliminary findings on the actual needs of drinking water systems and the EPA's work in this area. I am particularly interested in the comments of CBO as this will be their first public airing of one of the more unbiased analyses.

Our second panel will also provide important insight into the drinking water needs of local government, large and small water systems, State drinking water administrators, and environmental groups, including their past work and future financial requirements.

I recognize that many of the members of our panel have various concerns about the Safe Drinking Water Act, and I share many of those concerns that our Nation has drinking water standards that are protective of human health and the environment.

Our hearing today has been set up under bipartisan agreement of the staff to focus solely on drinking water needs. As this year progresses, I intend to exercise our committee's jurisdiction and authority to review EPA's implementation of the Safe Drinking Water Act and its work on contaminant levels and standards setting.

So I want to thank the witnesses for coming, and I want to thank Mr. Pallone for his staff's cooperation in setting up this hearing. It is vital that we assess where drinking water system needs lie.

The EPA currently believes that \$102 billion is immediately needed by all sizes and forms of systems, and that another \$50 billion will be required over the next 20 years to guarantee that safe drinking water reaches those who need it.

Certainly just putting pipes into the ground to deliver water is not enough. The emphasis on this extra funding needs to be on a comprehensive public health campaign that seeks to mobilize public and private resources to purify water from its initial source through its distribution channels, and finally out of the tap.

I look forward to hearing from our panels, and I am pleased to recognize the ranking member of our panel, the distinguished gentleman from New Jersey, for the purpose of an opening statement.

Mr. PALLONE. Thank you, Mr. Chairman. I want to thank you for holding today's hearing on drinking water needs and infrastructure. I have to say that when I walked into the room today that I was about as shocked to see that as I look out on the audience that I am able to see myself three times here across the room.

And a lot of times in the morning, I don't even want to look at myself in the mirror, but I don't have any choice now when I get in here. It is a little weird.

But in any case, I am pleased that we are finally moving forward on this important issue, and I would hope that this hearing would serve as a conduit for a legislative proposal from our subcommittee, and that we might work together to alleviate our country's problems with adequate funding.

So hopefully we can put something together. As a general matter, large water systems also possess much better economies of scale than small systems, and are able to spread capital and operation costs across a broader base of rate payers.

At the same time, however, I recognize that small systems often have to serve customers spread out in low densities and in small towns, and in rural communities, driving their costs up.

To put things in perspective the EPA has estimated that the typical cost to install a new drinking water treatment plant may be 88 percent higher per household than a system serving a thousand residents, versus a hundred-thousand people.

Clearly, this is one of many issues that must be taken into consideration before we can begin to assess the funding problem, which as you mentioned, Mr. Chairman, is a huge problem here.

It is no secret that there are ongoing concerns over the available funds for ensuring the quality of our Nation's drinking water. According to the February 2001 needs survey, the EPA has estimated that \$150.9 billion will be needed during the next 20 years to repair, replace, and upgrade the Nation's 55,000 community water systems.

The water infrastructure network has said that drinking water utilities across the Nation collectively need to spend about \$24 billion per year for the next 20 years on infrastructure, for a total of \$480 billion.

Other estimates show large long term needs as well, and I don't think that anyone in this room would argue that a significant need exists.

In recognition of the large current and future infrastructure needs of drinking water systems, Congress approved authorization of the Drinking Water State Revolving Fund in 1996.

And this fund was authorized at a level of \$1 billion per year through 2003, including another \$600 million in prior year authorizations.

In general, the DWSRF is designed to provide low cost loans to drinking water systems in order to fund infrastructure projects which are needed to ensure the provision of safe drinking water.

As these loans are gradually repaid by drinking water systems, new loans can be issued to other systems in excess of the amount

which would have otherwise been provided directly through the initial Federal grants.

Now, current estimates show that DWSRF will ultimately be able to revolve \$500 million per year at a sustainable level. I find it interesting, Mr. Chairman, that although the administration has recognized significant needs for our Nation's water infrastructure, they haven't even put the authorized \$1 billion in the Drinking Water SRF.

And it just does not add up. The EPA survey stated that our needs are over \$100 billion now, but the budget doesn't even have \$1 billion. I don't really understand what the message is that the President is trying to say.

If he is saying that the drinking water doesn't matter, obviously we are not going to agree with that. But I am hoping today in this hearing that we might be able to understand a bit better when the administration and the EPA are coming from, and gain a more clear understanding of the need.

It seems that everyone is saying, including the administration, that we need a lot more money, and yet the money isn't being provided in the budget, and what the President and the administration are recommending. So obviously there is a problem there, and I don't know exactly how we are going to solve it.

But I do hope that we can put a legislative initiative together on a bipartisan basis, and I know that you and I have worked together, Mr. Chairman, so far in this session on a couple of things in that regard, and hopefully we can do it again. Thank you.

Mr. GILLMOR. Thank you, Mr. Pallone.

The gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman. I appreciate this hearing today. As you know, we have one of the best supplies of drinking water in the world, and this is largely due to the commitment by States; Federal, State, and local agencies, and local—either co-op water systems, and municipal water systems, or privately owned waters systems.

As part of this commitment, we must continually review the needs and effectiveness of this water delivery system. This allows us to plan for future needs, and identify problems in the system before they occur.

The Drinking Water State Revolving Fund has been a great asset to our Nation's water systems. As this subcommittee drafts legislation to reauthorize the program, I would like to emphasize a need to help rural and other disadvantaged communities.

Not only do the people in these communities have less financial resources, but they often are served by small water systems which tend to lack the economy of scale, and that make infrastructure projects more affordable in larger systems.

Of course, at the Federal level, we keep increasing the standards tremendously which stress these very systems that we are trying to help, and many of them are in crisis situations because of increased standards.

There always has to be a debate on the cost benefit analysis based upon sound science, and that should always be part of the debate and how we are trying to deploy safe water to our residents.

I look forward to hearing from our distinguished panel today on the needs of our drinking water system. I still want to continue to focus on the fact that as we debate on standards that there is always costs, and there is a time when the costs outweigh the benefits that we receive.

And in small rural districts the new standards make it prohibitive to even provide safe drinking water. So let's bring some common sense to this debate. There is no one on earth that is going to promote a policy of providing unsafe drinking water.

That is a cry of the left, while the cry in rural America goes unheard, and with that, Mr. Chairman, I yield back my time.

Mr. GILLMOR. I thank the gentleman.

The gentleman from Ohio, Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman. I look around as Frank Pallone does at these Big Brother screens and I am a little perplexed. While the majority says we can't afford to fund prescription drugs, we certainly can fund tax cuts, and hi-technology, big expensive technology in our committee rooms, and that's nice to know.

Mr. Chairman, thanks for calling the hearing and it is an important issue. Thank you, Mr. Chairman, for your good work to improve the quality of our Nation's drinking water. As my colleagues have already stated, it is clear that our Nation faces a considerable gap in funding for infrastructure to treat drinking water over the next 20 years.

And in northeast Ohio, a region that Chairman Gillmor and I have the privilege to represent here in Congress, there are many communities where underground pipes that deliver drinking water are 50, and in some cases, 100 years old.

Over the next 2 decades, there will be an enormous need to update water distribution systems in communities like these, and there will also be a substantial need to bring the water systems in more newly established communities into compliance with the Safe Drinking Water Act.

The program was authorized at \$1 billion annually, and this figure was recognized as too small, but in fiscal year 2002 and 2003, the Bush administration has only requested appropriations of \$150 million.

This simply is not enough to ensure safe drinking water for all Americans in the future. Unfortunately, Mr. Chairman, drinking water infrastructure and numerous other needed investments have been under-funded in the administrations' budget to make way for the President's politically attractive, at least to his richest contributors, his politically attractive tax cuts, but unaffordable tax cuts.

The tax cuts will result in budget deficits and infrastructure deficit as far as the eye can see. These deficits will leave a gaping hole, just not in our fiscal infrastructure, but in our human infrastructure as well.

These tax cuts have already meant that we are not fully funding health care, and we are not fully funding the President's own education plan. Yesterday in committee, it was shown that there is a \$7 billion deficit already in his new education bill.

And we have not yet fully funded the Brownfields program, to which the chairman gets great credit for getting it out of this subcommittee last year. Are these the legacies—a budget deficit and

infrastructure deficit—that we want to leave for our children and our grandchildren.

As a founding member of the House Water Infrastructure Caucus, I join Representatives Bilirakis, the Chair of the Health Subcommittee, and Representatives Boehlert and Borski in December of 2000, to ask CBO to prepare a comprehensive report of the needs gap.

I hope the President's budget allows us to fill that gap. I thank the Chairman.

Mr. Chairman, I would ask for unanimous consent to include in the record a report from Public Citizen, and their testimony if I could.

Mr. GILLMOR. Without objection that will be done.

Mr. BROWN. Thank you.

[The information referred to follows:]

PREPARED STATEMENT OF PUBLIC CITIZEN

Public Citizen, a consumer advocacy organization with over 150,000 members nationwide, is pleased that the House Committee on Energy and Commerce is taking affirmative steps to address the water infrastructure needs of many communities across the United States. As an increasingly larger share of water infrastructure approaches the point of replacement and as the water quality standards become more stringent, the local communities are struggling to find viable means of financing the necessary capital projects.

The Water Infrastructure Network (WIN), a broad-based coalition of local elected officials, drinking water and wastewater service providers, state environmental and health program administrators, engineers and environmentalists, estimate that upgrading the nation's infrastructure will cost \$23 billion a year. Financing this need with rates alone would double the rates on average in the United States, resulting in an economic hardship for at least a third of the U.S. population using the EPA affordability guidelines. That is why adequate federal assistance is imperative to ensuring that citizens have access to safe and affordable drinking water.

The private water companies are proposing privatization of the country's water system as a way of meeting the infrastructure needs. The initial text of the companion bill introduced in the U.S. Senate by Senators Bob Graham (D-Fla.), James Jeffords (I-Vt.), Michael Crapo (R-Idaho) and Robert Smith (R-N.H.), S.1961, contained provisions that both encouraged the transfer of public water system operations and ownership to private companies and made it easier for private utilities to gain access to federal funds for improving infrastructure. Many groups, including the National League of Cities, Association of Metropolitan Sewer Agencies, and Public Citizen have expressed opposition to these provisions. We believe that the managers' amendment will strike out this language.

It is important that the Sponsor(s) of the House water infrastructure bill refrain from including similar language in the legislation. Public Citizen respectfully submits this statement to better illustrate the risks associated with privatization of water services.

While governments may expect to lower debt and transfer the costs of infrastructure repair and maintenance via privatization, the willingness of private companies to make such investments depends on the profit stream. In fact, debt reduction, increased spending for upgrades and the companies' guaranteed profit margins will ultimately be borne by citizens through higher bills. Privatization saddles consumers with the dual responsibilities of public debt reduction and corporate profitability, usually guaranteed by government contracts.

The National Association of Water Companies (NAWC), which represents the private water utilities, is intensively lobbying Congress and the Environmental Protection Agency to encourage water privatization and give private companies access to the same low-interest financing that public agencies can obtain. NAWC also lobbies to block higher water quality standards.

Keeping this lobbying effort in mind, we are disappointed to see important policy decision—such as the privatization of our nation's municipal water systems—dealt with in a stealthy manner by the legislature, regulatory agencies and the Internal Revenue Service. Most citizens are completely unaware that there is growing pressure from transnational water companies to privatize water systems in the U.S. The

move towards privatization is taking place behind closed doors and without the input or knowledge of the majority of people.

The companion legislation, S. 1961 initially tried to tie federal assistance to municipal water systems to the recipient's consideration of privatization. The House Committee on Energy and Commerce should avoid making a similar mistake. Any move here in the United States towards privatizing water should be subject to a vigorous public debate, not forced on communities as a result of special interest influence in Washington, D.C. Any language promoting privatization would not only jeopardize public access to safe and affordable drinking water, but would force a major policy change without adequate public notice or discussion.

We would like to address specific concerns with regard to public-private partnerships and regulatory structure that makes it easier for private companies to gain access to federal funds. We would also like to comment on proposals to recover all operation, maintenance, and capital costs through user rates.

1. PUBLIC-PRIVATE PARTNERSHIPS

To this day, the federal government has not made a systematic assessment of water privatization's benefits and liabilities. Privatization of water and wastewater services is a relatively new phenomenon in the United States. Since the early 1900s, water service generally has been regarded as a public responsibility, and public providers have served most of the United States. Today, public utilities provide reliable water service to 85 percent of the country's population. But a 1997 change in law opened the door for long-term privatization contracts. Consequently, some communities have entered into 10- and 20-year privatization contracts.

Privatization advocates are quick to argue—usually without any supporting evidence—that switching from publicly owned enterprises to privately owned firms will lead to greater economic efficiency, and that the positive effects will permeate through the economy by way of stabilized rates, reduced public debt and improved budgetary management. Privatization proponents argue that public-private partnerships, a euphemism for privatization, can foster savings and improve service. However, because not one of these long-term contracts has been in place for more than five years, it is impossible to determine whether these claims are sound.

In reality, privatization more often than not fulfills none of these promises, and instead creates problems that did not exist before. Vulnerable to corruption and operating according to a profit-driven corporate agenda fundamentally incompatible with delivering an essential human need, water companies are failing citizens in both developed and developing countries.

Privatization involves many risks. The promised cost savings could be neutralized by change orders—reimbursement requests for services not enumerated in the contract. For example, the private company promised the City of Atlanta at least \$400 million in savings over 20 years. However, the company soon requested to increase the contract by \$80 million. Additionally, an audit of the contract showed that the company requested almost \$38 million in change orders between January 2000 and May 2001. Public utilities, on the other hand, often absorb these additional costs without asking for a budget increase or a rate hike.

And the pursuit of lower operational costs and higher profits, private companies could neglect maintenance, especially if a contract is close to expiration. After assuming operations in Atlanta, the private company cut the workforce in half. Today, three years into the contract, the maintenance backlog is growing and meter installation takes twice as long as required under the contract.

Financial stability of the private water companies is also of concern. The case of Enron has taught us that the company's filings may not reflect its financial situation and its debt-to-equity ratio. An incredible pace of consolidation in the water industry over the last five years makes one question whether the water companies have the means to satisfy all terms of their contracts over the long term. If the company becomes insolvent, who will ensure that the users have access to adequate water service? Will the city have to pick up the tab at the expense of the taxpayer? These are among many questions that water privatization raises.

Further, when the city officials who were closely involved in the original contract negotiations are no longer in office, disputes over contract language could end up in court. In the end, the city may not receive what it paid for. Even industry consultants agree that this could prove problematic.

It is true that some communities have had positive experiences with public-private partnerships. Not every private company provides poor service and not every operation and maintenance contract is a failure. However, it is important to recognize that privatization involves significant risks. For example:

- In **Lee County, Fla.**, county officials in October 2000 chose to return the water and sewer systems to public control after an audit revealed serious problems with the private contractor. Equipment was not maintained in acceptable working condition. Hazardous waste was poorly handled and reported. Preventive maintenance was performed late and some work was not done at all. After public control was restored, the county's utility director estimated the company's failure to properly maintain infrastructure would cost citizens more than \$8 million.
- In **Atlanta**, which contracted out the operation and maintenance of its water system in 1998, the city soon began receiving complaints of slow service, broken fire hydrants and brown drinking water flecked with debris. A recent audit of the contract reported a growing maintenance backlog, the company's failure to meet its financial obligations, and significantly lower training hours than required by the contract. The company also experienced difficulties meeting performance targets for pH, turbidity, and phosphate at one of its plants and took longer than required by the contract to install meters and respond to meter leaks. At the same time, the company asked for almost \$38 million of additional payments through change orders and sought to increase the contract by \$80.
- In **Peoria, Ill.**, a process is underway to buy back the city's water system. The city feels that public ownership would reduce the operating costs and cut the rates by 30 percent in the first ten years of public ownership (the company's rates are among the highest in the country). A financial analysis prepared by a leading consultant showed that the city would have \$6 million a year in excess revenues if it owned the water system itself. However, money is not the only driver. In 2001, the U.S. Environmental Protection Agency fined the company \$168,488 for failing to promptly report a release of vapors in 1998. A Peoria firefighter was hospitalized after breathing the fumes.
- In **Tampa, Fla.**, Tampa Bay Water, a public agency that provides water to customers in Tampa, Fla., is being forced to buy the desalination plant currently under construction from Covanta Energy to assure its timely completion and to avoid fines from the Southwest Florida Water Management District. Stone & Webster, engineering firm originally hired to design and build the plant went bankrupt, and on April 1, 2002, Covanta Energy, which replaced it, filed for Chapter 11 bankruptcy protection. Earlier, the company failed to put up a performance bond as required under the contract, jeopardizing Tampa Bay Water's efforts to obtain financing for the plant. Covanta was to operate the plant for several years after the completion.
- In **Pekin, Ill.**, private operations brought a 204 percent water rate increase over 18 years—significantly higher than increases in Illinois cities with public water systems. Infrastructure repairs were not performed on a timely basis. During the 1998-1999 school year, service to two schools was cut off for a week, with teachers being notified by a note taped to the door just before students arrived. In response, city officials began to advocate reclaiming public control. The company responded with an estimated \$1 million public relations campaign, which succeeded in halting the initiative, at least temporarily.

It is important to reemphasize that the long-term operations and maintenance contracts do not yet have a solid case history of success. Privatized water systems could lead to many problems in the future, including higher rates and water quality problems. Many issues have not even been considered. For instance, a community's growth and economic development could potentially be paralyzed because the private water company refused to extend water lines or provide adequate and reasonably-priced services to the new businesses, the legislature will be held responsible.

Although in theory privatization is presumed to introduce competition to water services, it often does exactly the opposite by, in effect, sanctioning a private monopoly. And just as government is responsible to the public, private company is responsible to its shareholders. Because of this, public interest may clash with the company's objectives. Entrepreneurship and profit motive are certainly not objectionable qualities. However, in this case they may not reflect public interest.

Another concern is the municipality's ability to assume the operation and maintenance task after the privatization contract expires. After several years of private operations, the municipality would lose both the expertise and the workforce required to run the increasingly complex water and wastewater systems. This would limit the options available to the local government in choosing the best alternative for its constituents and would force the community into another contract.

Additionally, as the private share in the water services grows, water companies would have an incentive to pressure policymakers to amend environmental and water quality regulations that cut into their profits, thereby promoting an agenda that counters the interests of public health and environment. Some trade groups in

the water sector are already lobbying to prevent higher water quality standards from being adopted.

Finally, all major water companies operating in the United States today are foreign-based. The security of sensitive information about water systems is in question because these companies do not disclose facts about security of their data transmission lines and the level of access its employees overseas have to sensitive data.

Foreign ownership is also an issue in light of the continuing negotiations on the General Agreement on Trade in Services (GATS). If water services are listed under GATS, the agreement's language working together with national legislation favoring privatization could effectively limit the options available to local governments in deciding how water services should be provided.

If the local government and its citizens become displeased with the delivery of water services, it is possible that an international trade agreement could limit the communities ability to withdraw from the contract, under the threat of an international trade tribunal. While this is fairly new territory, investment treaties have become invoked on several occasions already to challenge government actions concerning water.

We strongly urge the House Committee on Energy and Commerce not to include pro-privatization language in its water infrastructure financing legislation.

2. PRIVATE UTILITIES

The eligibility for state revolving funds should not be extended to private water companies. Private water systems are businesses that should be responsible for keeping their assets in adequate condition without public subsidies. Federal regulations do not justify their eligibility for taxpayer bailouts. The U.S. government does not subsidize automakers to help them comply with federal auto-safety and fuel-emission standards. Neither should water companies expect federal assistance. Most businesses in the United States have to comply with federal or state regulations and few of them expect the government to reimburse the cost of these regulations. Moreover, while arguing for public subsidies, private water utilities continue to pay unreasonably high salaries to their executives.

We urge you to change the eligibility requirements to reflect the aforementioned principles.

3. FULL COST RECOVERY

The Senate companion bill mandates that the recipients of federal assistance achieve a rate structure that to the maximum extent possible reflects the actual cost of service and capital improvements (S.1961, Section 103 (j)(2)(A)). The House water infrastructure bill should not contain similar provisions. The majority of the utilities today already charge rates that reflect the cost of service and capital improvements. At the same time, their rate-setting autonomy provides room for flexibility, essential to better calibrate rates in response to local priorities.

Any full cost recovery requirement would add yet another layer of bureaucratic constraints to the SRF application process. This will be costly and burdensome for the states and is not prudent expenditure of the taxpayers' money. And the full cost recovery provisions would discourage the most vulnerable communities from participating in the state revolving fund programs.

Finally, if sufficient federal appropriations for water infrastructure are not made, the rates will double, on average across the nation, according to WIN, resulting in a third of the country's population experiencing economic hardship using the EPA's conventional affordability criteria. These hardships would be significantly more acute in small, rural, low-income, or older shrinking urban communities, according to WIN. In such case, the full cost recovery principles could be devastating to the population. For example, many residents of New Orleans, a city with some of the highest poverty rates in the nation, will find it increasingly difficult to pay for water service as the rates double over the next five years.

Again, thank you for the opportunity to comment on the upcoming water infrastructure legislation. This legislation is an important step in assuring that communities across the United States have the means to implement capital improvement programs essential to their ability to provide water service in compliance with all federal and state standards. But it should not be used as a surreptitious vehicle for privatizing our nation's public water systems. Public utilities are already taking affirmative steps to reduce cost of service through restructuring and improving efficiency, often achieving results that exceed those of private companies. Still, the savings will not be sufficient to meet the financing shortfall. It is essential that the Congress authorizes and appropriates sufficient funding, at levels proposed by WIN,

to keep public water utilities capable of providing adequate and affordable water service.

Mr. GILLMOR. Mr. Pallone.

Mr. PALLONE. I also wanted to ask for unanimous consent to enter the statement of our ranking member, Mr. Dingell, into the record.

Mr. GILLMOR. Without objection, so ordered.

[The prepared statement of Hon. John D. Dingell follows:]

PREPARED STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF MICHIGAN

Mr. Chairman, over one year ago the Subcommittee held its first hearing on the financial needs facing large and small cities across the country of rehabilitating and replacing aging drinking water infrastructure. This is a critical issue for cities like Detroit where pipes first installed in 1887, over 100 years ago, are still being used. The infrastructures of our public water systems are vital to protect the public health and provide safe drinking water for our citizens.

Today, at the Subcommittee's second hearing we will hear from many of the same organizations representing cities and drinking water utilities of all sizes that the needs are just as great as they were one year ago. We will hear from the Congressional Budget Office that if we take the midpoint between their high and low estimate of the gap between what public water systems are now spending and what needs to be spent annually over the next 20 years, we are looking at an additional four billion dollars a year for twenty years or twenty billion dollars over the next five years.

Other witnesses have higher estimates of financial needs. The Environmental Protection Agency has reported that the *current* needs to ensure provision of safe drinking water to our people are \$102.5 billion and growing, a huge sum of money. Billions more were documented as necessary for future years.

Against the well-documented financial needs for replacement and rehabilitation of aging drinking water infrastructure, I must note that the President's budget for FY 2003 contains a \$150 million shortfall in fully funding the drinking water State Revolving Loan Fund which this Committee created in 1996. This budget level ignores the needs of our cities and public water systems. On top of the budget inadequacy, the Administration recently testified that the increased spending authorized for waste water and drinking water infrastructure needs in the bipartisan Senate bill (S. 1961) was quote "not consistent" with Administration priorities. This is most disappointing.

I suggest that this Subcommittee go forward on a bipartisan basis to be clear that providing safe drinking water is consistent with our priorities. Readily accessible and safe drinking water is critical to the health, livability, and well being of our communities. Thank you, Mr. Chairman, for calling this hearing. I look forward to Subcommittee action on this vital issue.

Mr. GILLMOR. The gentlelady from New Mexico, Mrs. Wilson.

Mrs. WILSON. Thank you, Mr. Chairman. I also appreciate your willingness to hold this hearing today. I think these are important issues to look at how we are going to finance our public water systems.

I also am going to have some questions about recent EPA regulations and their impact on the State of New Mexico. The decision to move the arsenic standard down to 10 parts per billion, which is a dramatic reduction from the current 50 parts per billion, places an enormous financial strain on rural water systems that cannot pay for those improvements.

To my knowledge there has been no progress in developing low-cost treatment for water systems, and in the State of New Mexico alone, 25 percent of our water systems are going to be impacted by these new rules; one out of every four water systems in the State of New Mexico.

And for those who are concerned about the environment, this is naturally occurring arsenic, where you have volcanic soil that has arsenic in it, and the water flows over it, and so people have been drinking it for thousands of years in the State of New Mexico.

I would also note that the health effects that are supposedly associated with arsenic are unusually low in New Mexico. We are at the bottom of the scale nationally, which as I have said before probably proves that green chili is the natural antidote.

The real impact though is going to be on the availability of treated water for people in the State of New Mexico. It is between \$400 million, and \$500 million in capital expense alone, spread among 2 million people across the State.

The annual operating costs will go up between \$16 and \$21 million. What does that mean for a family in a large water system in Albuquerque? Our water bills are going to go up between \$38 and \$42 a month per household.

In smaller water systems, like Bernleo, New Mexico, with a population of 6,700 people, their water bills are going to go up \$91 a month because of EPA's new rules. That is over \$1,000 a year more for water.

The median household income in Bernleo, New Mexico, is about \$24,000 a year. I am going to have some serious questions for the EPA on how the Federal Government is going to help States like New Mexico meet this standard, because we are going to be drilling wells again in backyards because we can't afford your standards.

I think that this is an important issue for about three States in this country, who don't have a lot of people, but have a lot of naturally occurring arsenic, and this rule is the responsibility and the obligation of the Federal Government to pay for.

Thank you, Mr. Chairman, and I would also like to enter into the record with unanimous consent a statement of Pete Maggiore, the Secretary of the New Mexico Environment Department, into the record.

Mr. GILLMOR. Without objection, it is so ordered.

[The prepared statement of Peter Maggiore follows:]

PREPARED STATEMENT OF PETER MAGGIORE, SECRETARY, NEW MEXICO
ENVIRONMENT DEPARTMENT

Thank you for the opportunity to provide testimony today on behalf of the New Mexico Environment Department regarding the new drinking water standard for arsenic.

Governor Whitman's announcement of the 10 parts per billion arsenic drinking water standard on October 31, 2001, while protective of public health, create a significant financial and logistical burden on states and municipalities which may not have been anticipated or intended by the USEPA. These impacts are so large that the State of New Mexico and the City of Albuquerque filed suit against the USEPA last year. Ironically, and unlike many contaminants that the USEPA regulates, arsenic that exists in the groundwater in New Mexico is naturally occurring. Although I am pleased to report that settlement discussions related to this litigation are ongoing, there remains a tremendous amount of work to be done in the areas of developing funding sources, technology development and infrastructure improvement before this new standard can be effectively implemented.

It appears that one strategy underlying the multi-year implementation schedule for the new standard was to allow sufficient time for cost-effective treatment technologies to be developed. At present, there does not appear to be a cost-effective technology for arsenic removal for either large or small water systems. Although the EPA plans to allocate \$20 million over the next two years in this area, the fact remains that where arsenic levels exceed this new standard, local governments cannot

secure bond funding to finance treatment systems. This inability to secure funding is associated with a necessary prerequisite for securing bonds which requires a demonstration that the technology being purchased has been proven. While it may be true that significant advancements in treatment technologies can be achieved over the next few years, there is no guarantee that these technologies will be affordable for municipalities. The EPA should extend the implementation schedule until cost-effective technologies can be demonstrated.

The decision to lower this drinking water standard marks the first time the arsenic standard has been changed in over 50 years. The 50 part per billion standard was established by the USEPA in 1975; and that standard was based on a Public Health Service standard originally established in 1942. Given the significant financial stress placed upon municipalities and water system owners, it appears prudent to maximize the flexibility granted to impacted municipalities and water system owners implementing this standard. In addition, Congress and the EPA must adequately fund the implementation of this standard through a robust grant (not loan) process. The absence of a robust grant process could cause widespread non-compliance with this new standard, or alternatively, the substitution of unsanitary water supplies for sanitary ones.

Thank you for your consideration of my testimony and these concerns.

Mr. GILLMOR. And the Chair recognizes the gentlelady from Missouri, Ms. McCarthy.

Ms. MCCARTHY. Thank you, Mr. Chairman. I thank you for this hearing, and for the study we are about to undertake. I think it is critical to the future of our country, and also the economic future of our communities, and particularly our States.

I am just going to submit my remarks for the record, Mr. Chairman, so that we can get on with the important testimony that we have before us today. But again I thank you, and I think this is going to be very important for this subcommittee.

Mr. GILLMOR. Thank you. The gentleman from New Hampshire, Mr. Bass.

Mr. BASS. Thank you, Mr. Chairman. I have no opening statement.

Mr. GILLMOR. Are there other members having an opening statement? If there are none—

Mr. TERRY. Mr. Chairman.

Mr. GILLMOR. Oh, I'm sorry. The gentleman from Nebraska, Mr. Terry.

Mr. TERRY. The forgettable gentleman from Nebraska.

Mr. GILLMOR. The best for last.

Mr. TERRY. I appreciate that, Mr. Chairman. Before my statement or opening remarks, I would say that one of the differences between the sides of the kiosk here, Mr. Brown, you thought that was Big Brother. I just thought—I am trying to figure out a way to get that into my living room.

I want to share the concerns that are brought up, especially from Heather in New Mexico; we have similar issues in the State of Nebraska. Our community systems are aging, and as I understand there are about 55,000 community water systems, and a need of at least a \$151 billion for upgrade.

Certainly as I have heard from our community water officers in our towns throughout Nebraska, that the Drinking Water State Revolving Fund is an important tool for them, but their frustration has been with the moving target placed on them by the EPA.

Now, whether it is copper and an inflexibility on how to deal with that issue, and with the water that is slightly above the acidic

levels that causes leaching in the piping, EPA's only solution mandate is to change the water systems.

Now, with the new arsenic level changes, similar to the drinking water in New Mexico, Omaha, Nebraska, uses ground water that has typically more than 10 parts per billion level of arsenic.

But yet we in Nebraska have been drinking this water for hundreds of—at least 100 years, and then of course those people that had the land before then for time and beyond—without the type of safety and health risks that we are being told about.

So something just isn't jibing here between the science the EPA is relying on, but yet hundreds of years history of actual case studies.

Now, the frustration that faces our municipal, small municipal water systems, especially in our smaller towns in Nebraska, as Mr. Pallone pointed out, we don't have the economy of scale. In a town of 500 or a thousand people, they don't—they are faced with rather dramatic draconian choices.

And they have communicated to me the same thing that they are communicating to Ms. Wilson in New Mexico, that they will just abandon a community water system, and in essence tell each one of the residents put in your own well.

So perhaps the more draconian efforts to clean up our water beyond what we will be proud of in this country for our safe drinking water is now forcing communities to go the opposite direction of what we actually intend.

So I am interested in hearing the testimony of our witnesses to see how we strike the balance to make sure that we continue to be able to take pride in the cleanest drinking water in America, but yet not go to such an extreme that we make it unaffordable and inaccessible to the people in our rural areas. Thank you.

Thank you, Mr. Terry. If there are no further opening statements, the Chair will call up the first panel, and also announce that we will permit any members to submit their statements in writing.

[Additional statements submitted for the record follow:]

PREPARED STATEMENT OF HON. GEORGE RADANOVICH, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Chairman, today's hearing is a vital step in protecting and preparing our Nation's drinking water supply against possible disruption of water service and the biological, chemical or radiological contamination of drinking water supplies.

With the threat of terrorism, it is imperative we constantly conduct vulnerability tests on our Nation's water supply system and formulate the safest emergency response plan. We can achieve these goals by using the most recent physical and cyber vulnerability tools to perform new assessments. It is crucial that we immediately implement improved methods to protect water supply systems after the tragic events of September 11th.

In the end, I hope we can work together to protect the drinking water that our citizens depend on each and every day and build on our Committees' recent progress and result in continued improvements in our Nation's water supply system.

Thank you, Mr. Chairman, for holding this hearing today. I look forward to the witnesses' testimony.

PREPARED STATEMENT OF HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF TEXAS

I'd like to thank the Chairman of the Subcommittee for holding this important hearing. I look forward to hearing the testimony of the witnesses on how we can address the crucial drinking water infrastructure needs facing our nation.

Hopefully, this hearing will clarify how large a problem we face in funding the infrastructure necessary for safe drinking water. That "problem" ranges in size from the \$105.9 billion estimate of the EPA over the next 20 years, to the \$220 billion 20-year estimate of the Water Infrastructure Network.

Today, one of the ways that states are addressing these needs is through the Drinking Water State Revolving Fund (DWSRF). Since its authorization as part of the 1996 Amendments to the Safe Drinking Water Act (SDWA), it has received approximately \$5.25 billion. Of that amount, the EPA has provided grants totaling \$4 billion.

While that may seem like a large amount of money, when compared to the estimate of the needs it is just a drop in the bucket. In FY 2002, Texas received approximately 7.7% of the more than \$775 million available in the DWSRF, for a total of more than \$62 million.

The Texas Water Development Board, however, received proposals for more than \$600 million for improvements to existing water infrastructure. Even when you add in the state match of more than \$12 million, that is a shortfall of approximately \$525 million.

These are real systems in need of equipment or improvement to meet federal drinking water standards.

And the situation long-term in Texas isn't any better than the national picture. The EPA estimates our infrastructure investment needs over the next 20 years to be in the \$12 billion range.

That's a lot of money, and it's money that our states and localities can't afford. While I am fortunate enough to come from an urban area that can bear more of the investment burden, many members don't represent a large city like Houston, and their communities can't afford to get this bill.

I hope that this hearing leads to further action by this Committee on the pressing needs of our drinking water infrastructure. Again, I thank the Chairman for this hearing, and I yield back.

Mr. Gillmor. On this panel, we have Mr. Perry Beider, who is the principal analyst at the Congressional Budget Office; Dave Wood, Director of Environment and Natural Resources Issues at the General Accounting Office; and Ben Grumbles, who is the Deputy Assistant Administrator for the Office of Water at the United States EPA.

Gentleman, thank you for coming today. We have your written statements, and I will provide each of you 5 minutes to summarize your statements before the members of the panel get a chance to ask you questions. And you may begin when you are ready.

Mr. Grumbles.

STATEMENTS OF BENJAMIN H. GRUMBLES, DEPUTY ASSISTANT ADMINISTRATOR, OFFICE OF WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY; PERRY C. BEIDER, PRINCIPAL ANALYST, CONGRESSIONAL BUDGET OFFICE; AND DAVID G. WOOD, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENTAL ISSUES, GENERAL ACCOUNTING OFFICE

Mr. GRUMBLES. Thank you very much, Mr. Chairman. It is an honor to be here and to appear before the subcommittee. First, let me convey Tracy Mehan's regrets for not being able to be here to testify. We are hopeful that his health will continue to improve, allowing him to be back in the office in the coming weeks.

I welcome the opportunity to come and to talk about a very important subject, and that is the Drinking Water Infrastructure needs and the challenges that lie ahead. And what I would like to

do in my amount of time is just briefly to summarize the written testimony and focus on some of the key areas.

First of all, as all of you know on this subcommittee the accomplishments that have been realized under the Safe Drinking Water Act, more than 265 million Americans rely on public water systems, and they enjoy one of the safest supplies of drinking water in the world.

But obviously there are some major challenges ahead, and water infrastructure, and its current and future needs, is certainly one of those challenges. The Safe Drinking Water Act requires that EPA develop every 4 years a survey to assess the drinking water investment needs.

Last year, as has been mentioned we published the second infrastructure survey report, and that showed that \$150.9 billion is needed over the next 20 years to ensure the continued provision of safety drinking water.

Transmission and distribution projects; that is, the pipes, the pipes that convey the source of water to the treatment facility, and then to the consumers represents the largest category of need, 56 percent.

Treatment projects directed at protecting public health make up the second largest category of need at 25 percent. And here is another important point. About \$103 billion, or 68 percent of the total needs, is needed now to protect public health and repair or replace existing pipes.

This current need reflects the age and the deteriorated condition of water infrastructure, but it also simply reflects the continuing costs of operating, replacing, and improving water systems. Most systems with current needs, therefore, are not in violation of any health based drinking water standard.

Future needs. These are projects to be undertaken over the next 20 years as part of routine replacement. The costs there account for about \$48 billion, the remaining amount of \$150 billion.

Although all of the 74,000 State Revolving Fund eligible projects in our survey would protect public health, about 21 percent of the total need, that is, \$31.2 billion, is for compliance with current and proposed regulations under the Safe Drinking Water Act.

Thus, of the total need, nearly \$4 out of every \$5 derives from the inherent costs of being a water system, and that is independent of any Safe Drinking Water Act regulation.

The survey also found that systems serving fewer than 3,300 people comprise more than 80 percent of the Nation's community water systems, but account for only 22 percent of the total national need.

For systems serving more than 50,000, they constitute just 2 percent of the Nation's water systems, but yet account for more than 44 percent of the national need. Nonetheless, because small systems lack economies of scale, the costs they bear on a per household basis are almost fourfold higher than those of large systems.

The daunting economics of small systems is one of the reasons that Congress, and in particular this committee, created the Drinking Water State Revolving Fund. Let me just talk briefly about the broader context of investment and infrastructure needs.

Various recent studies and reports by various groups, including EPA's GAP analysis, which is undergoing final administration review, present varied estimates of future needs.

But a few key points need to be kept in mind. One is that a funding gap will result if the challenge posed by an aging infrastructure network, significant parts of which are approaching the end of their useful life, is ignored.

Second, the Nation, through our partnership, needs to put more resources into water infrastructure in the future than we have been doing.

At the same time, we need to reduce the costs, and we do that by ensuring a more efficient and productive use of such resources through an approach that emphasizes the development of a system's self-sustaining capacity to operate, manage, and fund its infrastructure.

Just a few words, Mr. Chairman, about infrastructure investment and fiscal sustainability. Looking forward to the President's fiscal year 2003 budget, that continues Federal support for drinking water infrastructure, and it requests \$850 million for the Drinking Water State Revolving Fund.

As your committee continues to study the drinking water infrastructure needs, the administration would like to encourage a constructive dialog on the appropriate role of the Federal Government in addressing these needs.

The touchstone of our strategy, Mr. Chairman, is building fiscal sustainability. That requires work on both the fiscal demand side, that is, how to define and manage infrastructure needs, and the supply side, how to pay for those managed needs.

There are several basic principles that should guide us, and I will just mention these briefly, and then I will conclude. One of them is to foster greater private sector involvement and encourage an integrated use of all local, State, and Federal sources of infrastructure financing.

Another key component of the strategy is to promote sustainable systems by ensuring the capacity of water systems and creating incentives to adopt best management practices, to improve efficiency, economies of scale, and reduce the average cost of service.

Also, encouraging cost-based in affordable rates is a key component. Creating incentives to support research and development of innovative and alternative technologies to help reduce the costs, and provide improved services.

Promoting smarter water use by encouraging water conservation and reuse, and finally promoting a watershed base decisionmaking process that includes directing funds to the highest priority projects.

And in conclusion, Mr. Chairman, I just would like to say that the administration recognizes that this is a serious challenge and that infrastructure is very important, and this dialog that you are having and that the committee has convened is absolutely integral to coming up with innovative solutions to help meet the infrastructure challenges.

And I would be happy to respond to questions and answer them at the appropriate time. Thank you, Mr. Chairman.

[The prepared statement of Benjamin H. Grumbles follows:]

PREPARED STATEMENT OF BENJAMIN H. GRUMBLES, DEPUTY ASSISTANT
ADMINISTRATOR FOR WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY

Good morning, Mr. Chairman and Members of the Subcommittee. I am Ben Grumbles, Deputy Assistant Administrator for Water at the U.S. Environmental Protection Agency (EPA). First, please let me convey Tracy Mehan's regrets for being unable to attend today's hearing.

I welcome your invitation to discuss the Nation's investment needs for drinking water infrastructure—the pipes, treatment plants and other critical components that deliver safe drinking water to our taps. The challenge of preserving the integrity of this infrastructure—so that public health can continue to be protected—will form the basis of my comments.

As a Nation, we have made great progress over the past quarter century in ensuring the safety of drinking water. Our success in improving drinking water quality is the result of many programs and projects by local, State and federal governments in partnership with the private sector. More than any single effort, however, it is the cooperative, intergovernmental investment in drinking water and wastewater infrastructure facilities that has paid dramatic dividends for public health.

Today, I will summarize what EPA knows about the need for future investment in drinking water and identify the key challenges I see in meeting this need. I will conclude with some thoughts about how Congress and others could proceed when addressing the problems of financing drinking water infrastructure.

Safe Water—Accomplishments and Challenges

Most Americans would agree that the quality of drinking water has improved dramatically over the past quarter century.

We have made significant progress in improving the safety of our Nation's drinking water. Disinfection of drinking water is one of the major public health advances in the 20th century. In the early 1970's, however, growing concern for the presence of contaminants in drinking water around the country prompted Congress to pass the Safe Drinking Water Act—which now forms the cornerstone of a solid foundation that ensures that all Americans can continue to enjoy safe drinking water.

Today, the more than 265 million Americans who rely on public water systems enjoy one of the safest supplies of drinking water in the world.

Under the Safe Drinking Water Act, EPA has established standards for 90 drinking water contaminants. Public water systems have an excellent compliance record—more than 90 percent of the population served by community water systems receive water from systems with no reported violations of health based standards.

In the past decade, the number of people served by public water systems meeting federal health standards has increased by more than 23 million. Although compliance with drinking water contaminant standards is good, a substantial investment is needed to ensure the safety and security of our drinking water.

Water Infrastructure—Future Needs

The Safe Drinking Water Act requires that EPA develop—every four years—a survey to assess the Nation's drinking water investment needs. The first survey report was released to Congress in 1997.

Last year, we published the second infrastructure survey report. The new survey showed that \$150.9 billion is needed over the next 20 years to ensure the continued provision of safe drinking water to consumers.

The survey includes 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, and to ensure continued compliance with specific Safe Drinking Water Act regulations.

Transmission and distribution projects—that is, the pipes that convey water from a source to a treatment facility and then to consumers—represented the largest category of need (56%), with \$83 billion needed over the next 20 years. This result is not surprising given that, for most water systems, the majority of their capital value exists in the form of transmission and distribution lines. Treatment projects, which have a significant benefit for public health, make up the second largest category of needs at 25%.

The survey also distinguished between “current needs” and “future needs.” About \$103 billion, or 68% of the total need, is needed now to protect the public health and maintain existing distribution and transmission systems. That systems require such a large investment to meet the current need reflects the age and deteriorated condition of their infrastructure. However, it is important to note that in most cases, current needs would involve installing, upgrading or replacing infrastructure that would enable water systems to continue to deliver safe drinking water. A system with a current need, therefore, usually is not in violation of any health-based drink-

ing water standard. For example, a surface water treatment plant may currently produce safe drinking water, but its filters may require replacement due to age and declining effectiveness to ensure the continued provision of safe water.

Future needs account for the remaining \$48.4 billion in needs. Future needs generally include projects that systems would undertake over the next 20 years as part of routine replacement such as reaching the end of a facility's service life.

Although all of the 74,000 projects in the survey would promote public health protection, water systems also identified capital needs directly related to specific regulations under the Safe Drinking Water Act. Approximately 21% of the total need, or \$31.2 billion, is needed for compliance with current and proposed regulations under the Act. Therefore, most of the investment needs documented in the survey (i.e., approximately 79%) stem from the costs of installing, upgrading and replacing the basic infrastructure that is required to deliver drinking water to consumers—costs that water systems would face independent of any Safe Drinking Water Act regulations. These findings indicate that most of the total need derives from the inherent costs of being a water system, which involves the almost continual need to install, upgrade, and replace the basic infrastructure that is required to provide safe drinking water.

The survey also examined investment need by system size. The survey found that small systems (serving fewer than 3,300 people) comprise more than 80% of the nation's community water systems, but they account for only 22% of the total national need. By contrast, large systems (serving more than 50,000) constitute just 2 percent of the nation's water systems, yet account for more than 44% of the national need. This finding reflects the fact that small systems collectively serve far fewer people—about 26 million—than large systems, which serve about 138 million people.

Although the total small system need is modest compared to the needs of larger systems, the costs borne on a per household basis by small systems are almost 4-fold higher than those of large systems. Small systems often face challenges in obtaining financial assistance to address these costs—which is one of the reasons Congress created the drinking water State Revolving Fund.

Other Estimates of Investment Needs

Several groups, including the Water Infrastructure Network and the American Water Works Association, have also issued reports estimating water infrastructure needs. These estimates were all substantially above those of EPA's assessment. The difference owes to the dissimilar methods used to calculate the needs. The other studies used models to estimate needs, whereas EPA's estimate is derived from projects that systems themselves identified and documented on a questionnaire. However, regardless of which number is used to characterize the magnitude of investment needs, all of these estimates are significant—as are the challenges faced by the Nation's water systems in meeting these needs.

Broader Context of Investment Needs

EPA believes the key to understanding the water infrastructure financing challenge is to consider a broad context of factors, including: aging infrastructure, population growth, increasing operations and maintenance costs, and affordability—especially for low-income households and communities.

To better understand the issues related to water infrastructure investments and financing, the Agency is reviewing issues related to long-term needs, assessing different analytical approaches to estimating those needs, and estimating the gap between needs and spending. Last summer, EPA presented a portion of this analysis—known as the Gap Analysis—to a diverse panel of experts drawn from academia, industry, think tanks, and consulting firms. Overall, the reviewers commended the report as a credible effort to quantify the gap. We have made revisions to the analysis based on the peer review and we expect to release the Gap Analysis shortly.

In considering these studies and analyses, it is important to keep in mind a few points. First, there is no single “correct” number to describe the gap. Any gap study must be built using methods and definitions of need, which in turn rest on varying assumptions about present conditions nationwide, and desirable or appropriate policies to follow in the future. The second point is that these gap studies are limited to quantifying the investment gap, and therefore they cannot themselves be a clear guide to policy; for example, they do not consider how the various roles of federal, State and local governments should be balanced. Third, under any of these studies, funding gaps are not inevitable. They occur only in the unlikely event that capital spending remains—for the next 20 years—unchanged from present levels. An honest evaluation would conclude that a funding gap will result only if the challenge posed by an aging infrastructure network—a significant portion of which is beginning to reach the end of its useful life—is ignored.

I believe that most decision makers at the federal, State and local levels would agree that, through our partnership, the Nation needs to put more resources into water infrastructure in the future than we have been doing. At the same time, we need to reduce costs by ensuring a more efficient and productive use of such resources through an approach that emphasizes the development of a system's self-sustaining capacity to operate, manage, and fund its infrastructure.

Drinking Water State Revolving Loan Fund

The primary mechanism that EPA uses to help local communities finance drinking water infrastructure projects is the State Revolving Loan Fund (SRF) established in the 1996 Safe Drinking Water Act amendments. The SRF was designed to provide a national financial resource for clean and safe water that would be managed by States and would provide a funding resource "in perpetuity." These important goals are being achieved. Other federal, State, and private sector funding sources are also available for community water infrastructure investments.

Under the SRF program, EPA makes grants to each State to capitalize its SRF. States provide a 20% match to the federal capitalization payment. Local governments get loans for up to 100% of the project costs at below market interest rates. After completion of the project, the community repays the loan and these loan repayments are used to make new loans on a perpetual basis. Because of the revolving nature of the funds, the dollars invested in the SRF provide about four times the purchasing power over twenty years compared to what would occur if the funds were distributed as grants.

In addition, low interest SRF loans provide local communities with dramatic savings compared to loans with higher, market interest rates. An SRF loan at the interest rate of 2.4% (the average rate during the year 2001) saves communities approximately 23% compared to using commercial financing at an average of 5.3%.

The drinking water SRFs, which this Committee created as part of the 1996 amendments to the Safe Drinking Water Act, were modeled after the clean water SRFs, but included a few differences.

States were given broader authority to use drinking water SRFs to help disadvantaged communities, and to provide technical assistance for management and operations of drinking water systems.

In addition, the law provided each State the flexibility to transfer funds between its clean water and drinking water SRFs. The Administration supports continuing this mechanism to help States fund their priority needs.

Through fiscal year 2002, Congress has appropriated \$5.3 billion for the drinking water SRF program. Through June 30, 2001 States had received \$3.6 billion in capitalization grants, which when combined with State match, bond proceeds and other funds provided \$5.2 billion in total cumulative funds available for loans. Through June 30, 2001, States had made close to 1,800 loans totaling \$3.8 billion, with another \$1.4 unallocated or available for loans. Approximately 75% of the agreements (41% of dollars) were provided to small water systems that frequently have a more difficult time obtaining affordable financing. States also reserved a total of approximately \$576 million of SRF capitalization grants for other activities that support the drinking water program, such as protecting sources of drinking water and providing technical assistance to small systems.

Infrastructure Investments and Fiscal Sustainability

The President's FY 2003 budget continues to maintain federal support for drinking water infrastructure and requests \$850 million for the drinking water SRF. By the end of FY 2002, we expect loans issued by State drinking water SRFs to reach 2,400, with about 850 SRF funded projects having initiated operations by that date.

This proposed FY 2003 funding will help communities across the country finance important drinking water projects. As your Committee continues to study the drinking water infrastructure needs, the Administration would like to encourage a constructive dialogue on the appropriate role of the federal government in addressing these needs.

Ensuring that our drinking water infrastructure needs are addressed will require a shared commitment on the part of the federal, State and local governments, private business, and consumers.

To meet these future challenges, the Administration believes that the touchstone of our strategy should be building fiscal sustainability. In particular, several basic principles should guide our pursuit of safe drinking water:

- *Utilizing the private sector and existing programs:* Fostering greater private sector involvement and encouraging integrated use of all local, State, and federal sources for infrastructure financing.

- *Promoting sustainable systems:* Ensuring the technical, financial, and managerial capacity of water systems, and creating incentives for service providers to avoid future gaps by adopting best management practices to improve efficiency and economies of scale, and reducing the average cost of service for providers.
- *Encouraging cost-based and affordable rates:* Encouraging rate structures that cover costs and more fully reflect the cost of service, while fostering affordable water service for low-income families.
- *Promoting technology innovation:* Creating incentives to support research, development, and the use of innovative technologies for improved services at lower life-cycle costs.
- *Promoting smart water use:* Encouraging States and service providers to adopt holistic strategies to manage water on a sustainable basis, including a greater emphasis on options for reuse and conservation, efficient nonstructural approaches, and coordination with State, regional, and local planning.
- *Promoting watershed-based decision-making:* Encouraging States and local communities to look at drinking water source water protection on a watershed scale and to direct funding to the highest priority projects needed to protect public health and the environment.

Conclusion

This is an important and serious challenge, and I commend your Subcommittee for holding this hearing and gathering such experts, advocates, and colleagues. Already, we see the means to realize these principles in practice, taking shape all across the country. Many States and local governments have been changing the way they do business. As a result, they've successfully managed many of these infrastructure needs, using creative, individualized approaches that are cost-effective, environmentally protective, and socially equitable—efficient, clean, and fair.

Thank you, Mr. Chairman, for this opportunity to discuss EPA's view of the drinking water infrastructure challenges that the Nation is facing. I pledge that EPA will continue to work in partnership with Congress, States, local governments, the private sector and others to better understand the drinking water infrastructure needs we face and to play a constructive role in helping to define an effective approach to meeting these needs in the future.

I will be happy to answer any questions.

Mr. GILLMOR. Thank you, Mr. Grumbles. I would like to ask for unanimous consent that we recognize the chairman of the full committee for an opening statement? Is there an objection.

Hearing none, the chairman is recognized.

Chairman TAUZIN. Thank you, Mr. Chairman. I apologize for being late. I had a leadership meeting this morning discussing important new business before the Congress in welfare reform, and so I apologize for being a little later for you.

But I wanted to thank you for scheduling today's hearing, and apologize for interrupting our witnesses today. But I want to note that this is the second hearing that this subcommittee has held on this important subject, and I think that indicates the gravity and the enormity of the issue, because at stake is both the protection of the public health, and the possible expenditure of billions upon billions of Federal and State, and local dollars here.

Now, this is no small hearing, no small process, and no small concern of this committee. In reviewing the testimony today, I know that the Deputy Assistant Administrator for the Office of Water, Ben Grumbles, has indicated that the administration, "would like to encourage a constructive dialog on the appropriate role of the Federal Government in addressing the drinking water needs of our country."

I would say at the outset that I welcome and encourage this dialog, and we are absolutely determined to work with you in, hopefully, a productive fashion to see if we can't come to some conclusions about what should be that role, and what should be the level of Federal support.

On a broader level, and as Mr. Grumbles and others will point out in their testimony, the issue of drinking water need is far from a static concept. Future need may be influenced by many factors, including changes in technology and efficiency, and need may vary greatly from region to region and locality to locality.

And it is influenced heavily by such uncontrollable factors such as the type of soil which surrounds the underground pipes, and its proclivity to erode concrete. A need also has to be built up over time, including some communities having inherited the unwanted legacy of old and leaking systems, and huge amounts of drinking water lost in those systems.

We also know obviously that weather systems are changing, and the availability of clean water, and rainfall, and weather conditions dramatically affect the availability of those supplies.

And while there are certainly immediate needs, and perhaps even more urgent needs, the need only exists over the long term that proper resources are not devoted to drinking water systems repair and replacement.

And we know robbing Peter to pay Paul is not a new concept, and this is deferral of maintenance in order to address short term budgetary considerations, a new concept. We know that everybody does it.

So we have to strive to create and encourage an intelligent system of financing for our drinking water systems, while being careful to maintain proper incentives at all levels of government and the private sector.

So whatever size the need gap is, or the timing of its occurrence, we risk disinvesting our limited public resources if we don't design a financing system that will meet the twin tests of time and human economic behavior.

In short, it is clear that we are going to have to solve the drinking water needs gap, and it has to do with one sentence, piece legislation, indicating that X-amount of dollars is authorized over the next 20 years.

The world is a little too complex for that. So this hearing will help give us I think a sense of how we deal with some of these complexities, and daunting as the task may be, I want to congratulate the chairman.

And I know that this committee in the past has taken on these kind of challenges, and dealt with them, and since 1996, with the amendments to the Safe Drinking Water Act, the committee has reviewed on a regular basis the implementation of the law.

We have worked with the GAO specifically to analyze the operation of the State Revolving Funds that were created by the legislation. And, most recently, the committee acted in a bipartisan fashion to craft legislation to address threats to drinking water systems imposed by the intentional acts of terrorism.

And that legislation requires vulnerability assessments of drinking water systems, emergency response plans that were built on those assessments. That legislation also authorizes funds to help drinking water systems conduct those assessments. And to take steps that address basic security enhancements, as well as efforts to detect attacks and to provide protection to the supplies of safe drinking water.

So I commend these measures as you know now being considered in a conference with the Senate, and we are trying to resolve that conference as we speak.

Chairman Gillmor and I look forward to the challenge ahead, and as the CBO witness quite accurately states, I quote, Society as a whole pays 100 percent of the costs of water systems, either through rate payer bills or indirectly through taxes. That is the bottom line, like so many things in our country that we fail to recognize.

The consumer ends up paying a hundred percent of the bill, and what we have to do is come up with a rational way of dividing the responsibility between the general taxes collected and the rate payer assessments that are on rate payer bills.

So the journey before us requires not only an unwavering attention to public health goals, but a recognition that there is no free lunch, and that somebody is going to have to pay for all these improvements, and that somebody we know is the consumers of America, whom we call constituents. And so we have to do a very rational and sensible, common sense job of this. That is going to take all of us working together. So, Mr. Chairman, again, thank you for allowing me to interrupt the schedule to encourage our witnesses in this hearing, and also to thank you and encourage this subcommittee in its work.

Again, I want to stress this. There are some things in the new polls that are taking what people list as necessities in life, and they include VCRs, and personal computers, and now DVDs, and all sorts of other devices that are necessities of life.

But when I grew up, we knew what the real necessities were, and we still do I think, and they include good, clean, safe, drinking water, one of the most critical components of a good society.

And, Mr. Chairman, you are on this one, and stay on it, and together we will find some good answers I think, and the country will be better for it. Thank you, Mr. Chairman.

[The prepared statement of Hon. W.J. "Billy" Tauzin follows:]

PREPARED STATEMENT OF HON. W.J. "BILLY" TAUZIN, CHAIRMAN, COMMITTEE ON ENERGY AND COMMERCE

First, I want to thank Subcommittee Chairman Gillmor for scheduling today's hearing on drinking water needs and infrastructure. I would note that this is the second hearing that this Subcommittee has held on this important subject. The gravity and enormity of this issue is clear—at stake is both protection of the public health and the possible expenditure of billions upon billions of federal, state and local tax dollars.

In reviewing the testimony for today's hearing, I noted that Deputy Assistant Administrator for Water, Ben Grumbles, indicated that the Administration "would like to encourage a constructive dialogue on the appropriate role of the federal government in addressing (drinking water) needs." I would say at the outset that I welcome and encourage this dialogue and would be happy to work with the Administration in a productive fashion.

On a broad level—and as Mr. Grumbles and others will note in their testimony—the issue of drinking water "need" is far from a static concept. Future need may be influenced by many factors, including changes in technology and efficiency. Need may vary greatly from region to region or locality to locality, influenced heavily by such uncontrollable factors as the type of soil which surrounds underground pipes and its proclivity to erode concrete. Need has also built up over time, with the some communities having inherited an unwanted legacy of old and leaking systems which can waste huge amounts of treated drinking water.

While there are certainly immediate needs, perhaps even urgent needs, need only exists over the long term if proper resources are not devoted to drinking water sys-

tem repair and replacement. Robbing Peter to pay Paul is not a new concept, nor is the deferral of maintenance in order to address short-term budgetary considerations. Therefore, we must strive to create and encourage an intelligent system of financing drinking water systems while being careful to maintain the proper incentives at all levels of government and the private sector. Whatever the size of any "needs gap" or the timing of its occurrence, we risk disinvesting our limited public resources if we do not design a financing system which will meet the twin tests of time and human economic behavior.

In short, it is clear that we are not going to solve any drinking water "needs gap" with a one sentence piece of legislation indicating that X amount of dollars is authorized over the next 20 years. Unfortunately, our world is far too complex for such a straightforward solution, as well-intentioned as the object of the spending might be. Instead, we will need an intensive examination of complex public policy issues, a review of various options, and a thorough vetting of legislative alternatives. I believe today's hearing moves us further along in that direction.

Daunting as this task may seem, I would note that this Committee has been successful in our previous efforts to tackle the many difficult issues surrounding the basic human necessity of providing safe drinking water. The Committee made substantial alterations to the standard-setting provisions of the Safe Drinking Water Act and various enhancements to the underlying statute through the 1996 Amendments. In the years since the 1996 Amendments, the Committee has reviewed, on a regular basis, the implementation of this law and worked with the General Accounting Office to specifically analyze the operation of the State Revolving Fund created by that legislation.

Most recently, this Committee acted in a bipartisan fashion to craft legislation to address threats to drinking water systems that may be posed by intentional acts of terrorism. This legislation requires vulnerability assessments of drinking water systems and emergency response plans based on these assessments. The legislation also authorizes funds to help drinking water systems conduct assessments and to take steps that address basic security enhancements as well as efforts to detect attacks and protect supplies of safe drinking water. Our committee's measure is now being considered in conference with the Senate.

Chairman Gillmor and I therefore look forward to the challenge ahead. As our CBO witness quite accurately states, "society as a whole pays 100 percent of the costs of water systems, either through ratepayer's bills or taxes." The journey before us then, requires not only an unwavering attention to the public health goals which underpin the Safe Drinking Water Act, but a recognition that there is no free lunch. Altogether, we will need to strike a delicate balance between public and private expenditures while seeking to preserve a drinking water system which has been a major success in preserving the health of American citizens during the 20th century.

Mr. GILLMOR. I thank Chairman Tauzin for his remarks. The gentleman from Wisconsin has asked to be recognized.

Mr. BARRETT. Thank you very much, Mr. Chairman. I will be brief. Mr. Chairman, as a person who represents Wisconsin and whose district lies on the shores of Lake Michigan, I recognize the importance of clean water and fresh water.

The Great Lakes provide 20 percent of the world's known fresh water supply, and they supply the drinking water for 34 million Americans. So even though I am on the shores of this great supply of fresh water, there is still concerns in my State and in my community.

My community was hit several years ago very hard by a breakout of cryptosporidium, which threatened the water supply probably in the most dramatic way that we have seen in this country in the last generation.

And now we are faced with issues of sewerage overflow, where sewerage is pumped right into Lake Michigan, which has raised concerns among many throughout the State of Wisconsin.

So I applaud you for holding this hearing.

I think that this is a very, very important issue. As the Chairman said, there is nothing more important than our drinking water supply. And I think that working together on a bipartisan basis, we

can ensure that millions of Americans for years to come will have a fresh drinking water supply. Thank you.

Mr. GILLMOR. Thank you.

Mr. Perry Beider.

STATEMENT OF PERRY C. BEIDER

Mr. BEIDER. Mr. Chairman, and members of the subcommittee, I am pleased to be here today to discuss future investment in drinking water infrastructure. My testimony draws on an analysis done by me and Dr. Natalie Tawil of the Congressional Budget Office, in response to a request from this subcommittee and your colleagues on the Transportation and Infrastructure Committee.

Last year, CBO testified that estimates of future investment spending are very uncertain and that existing estimates may be too large. Today, I can make those points more concretely by presenting CBO's estimates of a low-cost and a high-cost case, which are intended to span the most likely outcomes within the full set of possibilities.

Specifically, CBO estimates that annual capital costs for drinking water infrastructure will average \$11.6 billion from 2000 to 2019 under the low-cost case and \$20.1 billion under the high-cost case.

All costs here are in 2001 dollars. Data on actual investment spending in 2000 and 2001 are not yet available. The estimates measure costs as financed: that approach takes account of the use of borrowing to spread out the investment's financial burden and thus reflects the impact on water systems and ratepayers at a given point in time.

Specifically, for each year in the 20-year period, CBO's estimate covers the cost of new investments made on a pay-as-you-go basis out of funds onhand, and the debt service—principal and interest—paid that year on previous investments financed through loans and bonds.

CBO's low-cost and high-cost cases draw on the same primary sources used by the Water Infrastructure Network, or WIN, but differ from each other and from WIN's scenario in the values assumed for six factors.

The most important factor is the rate at which drinking water pipes will be replaced over the 20-year period. The other five are the savings from efficiency gains, the costs associated with future drinking water rules, the share of investments that will be financed through borrowing, the average borrowing term, and the average interest rate.

For a comparison, CBO estimates that drinking water investment in 1999, the latest year for which information is available, was \$11.8 billion—again, measured in terms of costs as financed.

That is an estimate, because calculating 1999 debt service payments required many assumptions—for example, about the extent to which water systems borrowed to finance investments over the previous 20 years.

The difference between that 1999 baseline and estimated average investment costs from 2000 through 2019, sometimes dubbed the funding gap, is essentially zero in the low-cost case and \$8.3 billion per year in the high-cost case.

The low-cost case result contradicts conventional wisdom, but CBO considers it reasonable given the uncertainty about how soon pipes will need to be replaced, the prospects for increased efficiency, and the potential for water systems to borrow more and to do so at longer terms. In contrast, the high-cost case would imply an increase of about 70 percent over 1999 investment costs.

WIN's estimate of needs over the 2000-2019 period does not measure investment in terms of costs as financed. In particular, it includes all debt service paid on investments financed during the period, even though much of that debt service will be paid after 2019.

When expressed in costs as financed, WIN's estimate is roughly \$10 billion per year higher than CBO's low-cost estimate but only about \$1 billion more than the high-cost figure.

It is not surprising that CBO's high-cost estimate is close to WIN's, since we used the same basic modeling approach and the specific assumptions in the high-cost scenario are broadly similar to WIN's.

The lesson that CBO draws from comparing the low case, high case, and WIN projections is that given the basic approach, fairly pessimistic assumptions are required to obtain estimates as high as WIN's.

At the household level, CBO estimates that average bills for drinking water and wastewater services combined represented 0.5 percent of average income in the late 1990's. In the absence of increased taxpayer support, we project that by the year 2019, that share will rise to 0.6 percent and 0.9 percent in the low-cost and high-cost scenarios, respectively. Of course, those figures are averages, and households with low incomes or those served by high-cost systems would tend to pay larger shares.

In conclusion, CBO agrees with the consensus of industry experts that the Nation's drinking water systems will require additional investment in the decades to come. But our estimates illustrate that the timing of the increase is not at all clear, nor is its ultimate size once savings from improved management and new technology are taken into account.

Of course, society as a whole pays 100 percent of the cost of water systems either through ratepayers' bills or taxes. And so in an aggregate sense, the only way to make water services more affordable is to reduce the total costs of providing them.

I will be happy to try to answer any questions.

[The prepared statement of Perry C. Beider follows:]

PREPARED STATEMENT OF PERRY C. BEIDER, PRINCIPAL ANALYST, CONGRESSIONAL BUDGET OFFICE

Mr. Chairman and Members of the Subcommittee, I am pleased to be here today to discuss future investment in drinking water infrastructure. My testimony draws on findings from a forthcoming Congressional Budget Office (CBO) study that was requested by this Subcommittee and by your colleagues on the Transportation and Infrastructure Committee.

CBO's testimony before the Subcommittee last year emphasized that estimates of investment spending through 2019 are very uncertain—in part because many important data are not readily available—and existing estimates may be too large. Today, I can make those points more concretely by presenting CBO's estimates of a low-cost and a high-cost case, which are intended to span the most likely outcomes within the full set of possibilities.

I will begin by presenting estimates of average annual investment costs under the two cases and then discuss how CBO derived the estimates and how they differ. I will also compare those projections with an estimate of the current burden of investment in drinking water infrastructure and examine how future investment might affect household budgets. Finally, I will compare CBO's estimates with the much-publicized figures from the Water Infrastructure Network (the WIN coalition). My testimony focuses on capital investment in drinking water systems, but it also presents estimates of future operations and maintenance (O&M) costs under both a low-cost and high-cost scenario.

Before discussing specific dollar figures, I would like to emphasize that society as a whole pays 100 percent of the costs of water systems, either through ratepayers' bills or taxes. Thus, the goal of many water-industry advocates to make water services more "affordable" can be met only by reducing the total costs of providing such services or by using taxes and government subsidies to redistribute their costs from some people to others. Depending on the method used, the net effect of such redistributive efforts may be to shift costs from low-income to high-income households, from large to small users of water, or from ratepayers served by high-cost systems to those served by low-cost systems. Taxes and subsidies may also distort prices and reduce the incentives for efficient choices by system managers and consumers, resulting in the unwanted side effect of higher total national costs for water services.

CBO'S 20-YEAR ESTIMATES

CBO projects that annual capital costs for drinking water infrastructure will average \$11.6 billion from 2000 to 2019 under the low-cost case and \$20.1 billion under the high-cost case. (Unless otherwise specified, all costs are in 2001 dollars.) Annual O&M costs over the same period are projected to average \$25.7 billion under the low-cost case and \$31.8 billion under the high-cost case. CBO chose the 2000-2019 period for its analysis to make it easier to compare its estimates with those of the WIN coalition. Data on actual investment spending in 2000 and 2001, which are provided by the Census Bureau's Survey of State and Local Government Finances, are not yet available.

Three more points will help clarify the nature of CBO's estimates. First, they are intended to represent the minimum amount required to achieve the goals of maintaining desired levels of service to water customers, meeting federal standards for drinking water quality, and maintaining and replacing assets cost-effectively.¹ They exclude investments whose sole purpose is to serve future growth; that is because much of the data underlying them come from the Environmental Protection Agency's (EPA's) Drinking Water Infrastructure Needs Survey, which focuses only on investments eligible for assistance from the state revolving funds, or SRFs.² Because of a lack of data, CBO's estimates also exclude investments to increase the security of drinking water systems. Preliminary indications suggest, however, that security costs will be small relative to the estimates presented here.

Second, the estimates measure costs "as financed" and thus take into account the use of borrowing to spread the investments' financial burden over time. In particular, for each year of the 20-year period, CBO's estimate includes two things: the costs of that year's new investments that are paid for out of funds on hand—that is, on a pay-as-you-go basis; and the debt service (principal and interest) paid that year on previous investments financed through loans and bonds. Economists usually measure investments in terms of their current resource cost—which covers the capital cost of all current investments, regardless of how they are paid for, and excludes payments on past investments. The current resource cost is preferred over other measures of investment volume for analyzing the efficient use of society's resources,

¹That scope is similar to the one used in the needs survey of the Environmental Protection Agency (see text). Although the survey is restricted to investments "required to protect the public health," most of those public health needs simply reflect "the inherent costs of being a water system which involves the nearly continual need to install, upgrade, and replace the basic infrastructure that is required to deliver safe drinking water to customers" (Environmental Protection Agency, *Drinking Water Infrastructure Needs Survey: Second Report to Congress*, February 2001, p. 12). CBO's formulation explicitly recognizes that a water system's investment requirements depend on the standards of service that it chooses. The formulation also targets the minimum amount of spending necessary to achieve the identified goals.

²Investments to serve new or future customers are eligible for SRF assistance only if they respond to a public health problem (for example, a project to hook up users of contaminated wells) or are components of projects triggered by the needs of existing customers (for example, replacing a deteriorated water main with a larger-sized one to allow for expected growth). As discussed later, the other source of data underlying CBO's estimates is an analysis by Stratus Consulting that focused on the costs of replacing existing water pipes and thus also excludes investments relating to future growth.

such as the costs and benefits of water-quality regulations. But CBO's present analysis takes the water-quality and service goals as a given and focuses on the costs of meeting those goals. For that purpose, measuring costs as financed is more useful because it better indicates the burden facing water systems and their ratepayers at a given point in time.³

Third, the relatively large difference between CBO's estimates of 20-year investment requirements under the low-cost and high-cost cases—the former is 42 percent below the latter—reflects the limitations of the available data. Indeed, although the two cases are intended to bracket the most likely outcomes, CBO does not rule out the possibility that the actual level of investment needed could lie outside that range.

HOW CBO DERIVED ITS ESTIMATES

As CBO's previous testimony emphasized, some key data for estimating future investment, such as the average age and condition of the nation's existing water infrastructure, are not readily available. Since CBO could not fill that gap by collecting new data from the nation's 45,000 community water systems, its strategy in developing its low-cost and high-cost cases was to take maximum advantage of existing data and analyses.

In particular, CBO analysts used the basic approach developed by the WIN coalition, working from a study of pipe replacement needs by Stratus Consulting for the American Water Works Association and from estimated requirements for other investment categories derived from EPA's Needs Survey. CBO chose not to rely on the Needs Survey alone; even though the survey strives to include all relevant investments over a 20-year period for drinking water systems nationwide, EPA reports that its results do not fully cover the whole period. (According to EPA, planning documents used by many systems as the basis for their responses to the survey often cover just one to five years.) The Stratus study used a different approach than the survey uses to estimate pipe replacement needs: it combined some national-level data and various assumptions to estimate the number of drinking water systems nationwide (classified by size and region), the miles of pipe per system, the distribution of pipe mileage by pipe size, the replacement cost of pipes of each size, and the rate of pipe replacement.

Although CBO's low-cost and high-cost cases draw on the same sources of data, they differ in the assumptions for six factors: three concern the capital costs estimated by Stratus and EPA, and three involve the costs of financing the investments (see Table 1). The most critical assumption is the rate at which drinking water pipes will be replaced over the 20-year period: the low-cost case assumes an average annual rate of 0.6 percent, and the high-cost case assumes a rate of 1 percent. That factor alone accounts for most of the difference—\$8.5 billion annually—between the two sets of estimates. Using a rate of 0.6 percent in the high-cost scenario would narrow the difference to \$3.4 billion, a reduction of 60 percent.

The lack of data on the condition of existing water pipes is the basis for CBO's view that plausible estimates of the annual replacement rate could be as far apart as 0.6 percent and 1 percent. Both rates have their genesis in the Stratus study. The study's primary analysis assumed an average annual replacement rate of 1 percent, apparently as a compromise between the rates implied by standard rules of thumb about pipe service lifetimes and the rates actually reported in studies from the mid-1990s. However, the Stratus study also presented another approach: analysts estimated when pipes would reach the end of their useful lifetimes on the basis of the assumption that the rate at which pipe miles were installed over time was proportional to the rate of population growth. According to that analysis, the bulk of the replacement cost will not occur until some time after 2020, and the average replacement rate required from 2000 through 2019 will be on the order of 0.6 percent.⁴

³Because O&M costs are generally paid for without borrowing, resource costs and costs as financed are the same in that case.

⁴More precisely, the study reported separate average annual replacement rates for three pipe lifetimes (50 years, 75 years, and 100 years) and two decades (2000 to 2009 and 2010 to 2019). The average of the six individual rates was 0.58 percent. In contrast, the implied long-run rates for the three lifetimes are 2.0 percent, 1.33 percent, and 1.0 percent, respectively, for an average of 1.44 percent.

TABLE 1. FACTORS DISTINGUISHING CBO'S LOW-COST AND HIGH-COST CASES

	Low-Cost Case	High-Cost Case
Capital Factors		
Annual Rate of Pipe Replacement (Percent)	0.6	1.0
Savings from Improved Efficiency (Percent)	15	5
Annual Costs for Regulations Not Yet Proposed (Billions of 2001 dollars)	0	0.53
Financing Factors		
Real (Inflation-Adjusted) Interest Rate (Percent)	3.0	4.0
Borrowing Term (Years)	30	25
Pay-as-You-Go Share (Percent)	15	30

SOURCE: Congressional Budget Office.

Similar uncertainties underlie the rest of the differing assumptions that CBO used in the low-cost and high-cost cases. Examples of improved management methods and new technologies here and abroad, plus conversations with industry experts, lead CBO to believe that efficiency gains will reduce future investment needs—but whether the savings will be on the order of 5 percent or 15 percent is hard to predict with any confidence. CBO also cannot precisely determine the costs associated with future drinking water rules, the share of investments that will be financed through borrowing, the average borrowing term, or the real (inflation-adjusted) interest rate.

CBO's analysis of future O&M spending used simpler methods, and only one factor distinguishes the estimates under the two cost scenarios. For the high-cost case, CBO merely extrapolated a linear trend from real 1980-1998 spending on O&M; for the low-cost case, CBO started with the same linear trend but phased in savings of 20 percent, resulting from improved efficiency, over the period from 1995 through 2004.⁵ Those simpler methods probably do not capture as much of the true uncertainty surrounding future O&M costs as do CBO's more-detailed models of capital investment, but again, O&M was less central to the analysis—in part because it is not eligible for aid under current federal programs.

COMPARING FUTURE COSTS AND CURRENT SPENDING

One useful way to view estimates of future investment costs is by comparing them with a baseline of current spending. For the present purpose, however, the available data on current spending are inadequate because they do not measure spending in terms of costs as financed. Specifically, the data include the capital costs of all investments made in a given year—whether the burden of those projects falls on ratepayers in that year or is being deferred through borrowing—and exclude the principal being repaid on previous borrowing.

For 1999, the latest year for which the necessary information is available, CBO's best estimate of investment spending is \$11.8 billion, measured in terms of costs as financed. However, developing that baseline required CBO to make many assumptions—for example, about the extent to which drinking water systems borrowed to finance investments over the previous 20 years. Alternative assumptions could have changed the result, perhaps by 20 percent.

The difference between that estimate of 1999 investment spending (as financed) and CBO's estimates of average annual investment from 2000 through 2019—sometimes dubbed the funding gap—is essentially zero in the low-cost case and \$8.3 billion in the high-cost case. The possibility reflected in CBO's low-cost scenario—that the average yearly burden of investment in drinking water infrastructure through 2019 might not exceed the 1999 level—contradicts conventional wisdom; however, CBO considers that scenario reasonable, given the uncertainty about how soon pipes will need to be replaced, the prospects for increased efficiency, and the potential for water systems to fund more of their investments through borrowing and to borrow for longer terms. Of course, the estimate of future needs under the high-cost case⁶ representing an increase of about 70 percent over estimated spending in 1999—is also considered reasonable, if less optimistic.

THE POTENTIAL IMPACT OF HIGHER COSTS ON HOUSEHOLD RATEPAYERS

Supporters of increased federal aid for investment in water infrastructure often argue that rising costs will make households' water bills "unaffordable." Under CBO's high-cost case, bills for drinking water and wastewater combined would still represent less than 1 percent of income for the average household, although that

⁵The WIN coalition's analysis also assumed savings of 20 percent.

share would be larger for many households that have low income or that are served by high-cost systems.

CBO estimates that in the late 1990s, average bills for drinking water and wastewater services combined represented 0.5 percent of average household income. To derive that estimate, CBO used data from the Consumer Expenditure Interview Survey (conducted by the Census Bureau under contract with the Bureau of Labor Statistics), which analysts supplemented by imputing bills for the 39 percent of survey respondents who did not report their own. That imputation, which was based on the water bills of respondents with comparable income, may bias the estimate upward, because many respondents without separate water bills are apartment-dwellers, who use less water for lawns and gardens than do residents of single-family homes.⁶

To analyze the impact on households of future investment and O&M spending by drinking water and wastewater systems, CBO first estimated the rates that would be required by 2019 to pay for that spending, holding support from all levels of government constant. It then compared the result with incomes in that year, taking into account projections of real income growth. The share of average household income going to water bills in 2019, CBO estimates, would be 0.6 percent and 0.9 percent under the low- and high-cost scenarios, respectively.

Of course, averages can mask important differences in individual cases (see Figure 1). For example, half of all households spent 1 percent or less of their income on water bills in the late 1990s while others spent significantly more.

COMPARING CBO'S AND WIN'S ESTIMATES

The WIN coalition's estimates of future investments in drinking water and wastewater infrastructure do not measure costs either as financed or in terms of resource costs. When its estimates for the 2000-2019 period are expressed in terms of costs as financed, they are close to CBO's for the high-cost case.

For each year of the period, WIN's estimates add the cost of that year's pay-as-you-go investments to the total debt service (principal plus interest, in constant dollars) to be paid in later years for newly financed investment.⁷ Thus, where a costs-as-financed estimate includes the current debt service paid on past investment, WIN's estimates include future debt service on current investment—much of which will be paid after 2019.

The impact of that difference is substantial (see Table 2). WIN's published estimate of average annual drinking water investment needs from 2000 to 2019 is \$26 billion (in 2001 dollars); using costs as financed reduces the estimate by about 18 percent, to \$21.4 billion.⁸ The reason for the decrease is that the cohorts of investment financed yearly from 1980 through 1999, and still being paid off from 2000 through 2019, are smaller than the new cohorts that are projected to be financed during the latter period. When expressed in comparable terms, WIN's estimate is roughly 6 percent and 84 percent higher, respectively, than the estimates for CBO's high- and low-cost cases.

TABLE 2. CBO'S AND WIN'S ESTIMATES OF INVESTMENT NEEDS FOR DRINKING WATER, 2000-2019
(In billions of 2001 dollars)

	CBO		Water Infrastructure Network	
	Low-Cost Case	High-Cost Case	Published Estimate	Costs-as-Financed Estimate
Average Annual Investment Need	11.6	20.1	26	21.4
Increase Above Recent "Baseline" Investment	-0.2 ¹	8.3 ¹	13 ²	9.4 ^{1,3}

SOURCES: Congressional Budget Office; Water Infrastructure Network.

¹ Relative to a 1999 baseline.

² Relative to a 1996 baseline.

³ CBO's approximation of WIN's results.

⁶ CBO's estimate may also overstate the percentage of income devoted to water bills by accepting at face value all incomes reported in the survey. (Some analysts believe that many incomes at the very low end of the distribution are understated.)

⁷ Equivalently, WIN's annual estimate combines the current resource costs for all of that year's investments and the sum (in real dollars) of all future interest costs for the portion of the investments financed by borrowing.

⁸ As originally published, WIN's estimate was expressed in 1997 dollars and was \$24 billion. Note that the revised costs-as-financed estimate of future investment needs merely reframes results from WIN's own analysis and does not change any modeling assumptions.

Similar contrasts emerge in comparing average future investment with baseline spending. Again, WIN's estimate of the difference between the two levels of investment drops significantly—from \$13 billion per year to \$9.4 billion—when it is expressed in terms of costs as financed. And again, the latter figure is roughly \$1 billion higher than the estimate for CBO's high-cost case and \$10 billion above the estimate for its low-cost scenario.⁹

The fact that WIN's estimates are close to those of CBO's high-cost case when both are expressed in comparable terms should not be interpreted as independent support for estimates of that magnitude. CBO and WIN used the same modeling approach, and CBO's high-cost scenario used specific assumptions that are broadly similar to WIN's.¹⁰ Thus, it is not surprising that the resulting estimates are also similar. The lesson that CBO draws from comparing the three estimates is that under the basic framework of the modeling approach, fairly pessimistic assumptions are required to obtain estimates as high as WIN's.

Given WIN's estimates, it is also not surprising that the coalition sees water bills as accounting for a larger share of future household budgets than CBO does. In particular, WIN projects that 22 percent of households will be paying more than 4 percent of their income for water services by 2009 (halfway through the study period) and talks more generally about "a third or more of the population" reaching that level as rates continue to adjust. (The fraction of households paying more than 4 percent of their income is simply one of many summary measures that can be derived from the distribution of water bills. There is no economic or scientific significance to 4 percent as the threshold at which water bills become "unaffordable.")¹¹ In contrast, CBO's estimates for the end of the study period in 2019 show 11 percent of households paying above 4 percent in the low-cost case and 21 percent doing so in the high-cost case.

Part of the difference between CBO's and WIN's projections lies not in the different estimates of future levels of investment but simply in different conclusions about current spending. CBO estimates that 7 percent of households paid more than 4 percent of their income for water services in the late 1990s; using other data sources, WIN estimates that 18 percent paid that much. WIN's approach is more limited, in two respects. First, the approach uses data only from the state of Ohio, which WIN finds to be representative of the nation as a whole in its costs for drinking water relative to household income. Second, the approach relies on system-level data (specifically, data from 1997 on drinking water and wastewater charges for using the equivalent of 250 gallons per day) rather than on the actual bills paid by individual households based on their own use. WIN's method may bias its results if low-income households tend to use less than 250 gallons of water per day.

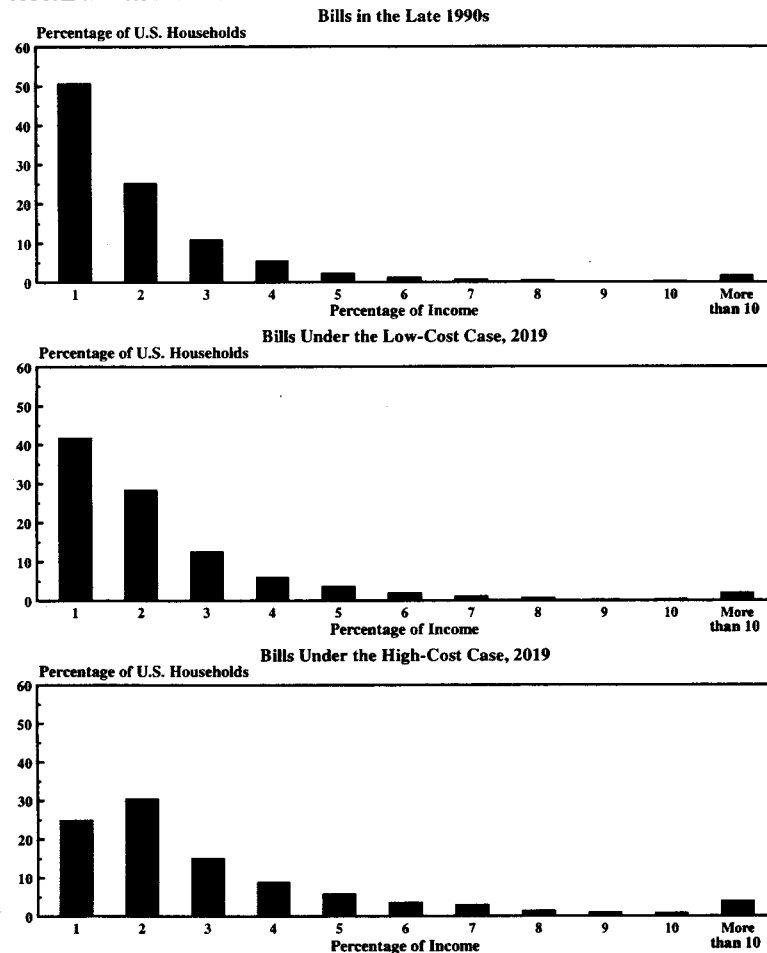
In conclusion, CBO agrees with the consensus of industry experts that the nation's drinking water systems will require additional investment in the decades to come. But CBO's estimates make clear that the timing of the increase is not at all certain, nor is its ultimate size predictable, once savings from improved management and new technology are taken into account. Similarly, CBO agrees that higher rates for drinking water and wastewater services over the next 20 years may lead households to pay a larger share of their income for them. However, CBO's estimates of the potential impact higher rates would have on households are much smaller than those reported by the WIN coalition. Moreover, economists would argue that such considerations should be addressed through policies that redistribute income—not those that manipulate the price of water.

⁹ CBO did not have enough information to directly calculate WIN's own estimate of 1999 debt service, a key component of baseline spending in costs-as-financed terms. Instead, CBO approximated it by multiplying WIN's estimate of average 2000-2019 costs for annual debt service on pre-2000 investments by a scaling factor that it obtained from a mock re-creation of WIN's model. The resulting estimate of baseline spending as it would have been calculated in WIN's analysis is \$12.0 billion, which is very close to the estimate of \$11.8 billion used in CBO's scenarios.

¹⁰ CBO's high-cost case differs from WIN's scenario not only in its easier borrowing terms and savings from increased efficiency but also in its higher costs for complying with federal standards for drinking water quality and somewhat greater reliance on pay-as-you-go funding.

¹¹ WIN chose 4 percent on the basis that EPA has, at various times, used 2 percent of median household income as a benchmark in evaluating the "affordability" of average rates charged by both drinking water and wastewater systems. But in a community whose water systems charged rates that together collected 4 percent of median household income, many households with income below the median would probably be paying more than 4 percent. Thus, there is no logical connection between the EPA and WIN benchmarks.

FIGURE 1. WATER BILLS AS A SHARE OF HOUSEHOLD INCOME



SOURCE: Congressional Budget Office.

Mr. GILLMOR. Thank you very much, Mr. Beider.
Mr. Dave Wood of the General Accounting Office.

STATEMENT OF DAVID G. WOOD

Mr. WOOD. Thank you, Mr. Chairman. I am pleased to be here. Over the past few years, GAO has done a body of work related to the Safe Drinking Water Act, designed to help provide the Congress with information on the nature of problems faced by water utilities, and how well existing programs are working.

In addition to reviewing EPA's activities, on several occasions we have used nationwide surveys to obtain information about how the Act is being implemented on the ground.

My testimony today is based primarily on two recent reports, and discusses three issues pertinent to assessing the Nation's drinking water infrastructure needs. First, the precision of EPA's most recent estimates of national and State level needs.

Second, the States' use of their drinking water State Revolving Loan Funds to assist communities that the States define as disadvantaged. And, third, the amounts of assistance that other Federal agencies and States provide for water infrastructure.

On the first matter, we found that EPA took a number of steps to ensure that it gathered valid data with which to estimate the infrastructure needs of drinking water systems. However, we also observed that EPA may not have achieved its target level of precision for those estimates, which was generally to come within 10 percent of the actual need for reasons associated with some of its sampling methods.

Because of its importance to the allocation of funds to States under the Revolving Loan Program, we recommended that EPA calculate the precision of its estimates, and determine whether it should revise its methods for the next drinking water needs survey in 2003.

EPA concurred that such calculations would be helpful and indicated that it would take this into account when designing the 2003 survey. Regarding the second issue, we found that the States have made limited use of their options to use loan subsidies under their drinking water revolving funds to help disadvantaged communities.

Specifically, we found that as of December 2000, 21 States offer additional loan subsidies, such as forgiving a portion of the loans. But only 14 States have actually provided loan subsidies for disadvantaged communities.

Another 10 States offered longer repayment terms for disadvantaged communities. The 19 States that had not established such programs cited reasons such as concerns about depleting the revolving funds, the availability of below market rate loans to all fund borrowers, and the availability of other Federal or State assistance for disadvantaged communities.

This brings me to the third and final issue discussed in my testimony. In November, we reported on the financial aid made available for both drinking water and waste water infrastructure by EPA, other Federal agencies, and State programs.

We gathered this information for a 10 year period, fiscal years 1991 through 2000. Our State data do not include four States that did not respond to our survey. We found that EPA was the main provider of Federal assistance, contributing about \$3.7 billion in drinking water State revolving fund grants, and about \$16.6 billion for the similar Clean Water Act program.

The States had contributed about \$10.1 billion to match those funds. However, other Federal agencies also provided significant amounts of financial aid. The Departments of Agriculture, Housing and Urban Development, and Commerce, as well as a few other agencies, made about \$19 billion available for water infrastructure in the form of grants, direct loans, or guaranteed loans.

About 11 percent of this assistance was specifically for drinking water facilities. Another 40 percent was available for either drink-

ing water or waste water facilities. Some of this assistance was directed primarily to distressed or lower income communities.

Finally, the States had collectively made about \$9.1 billion in grants and loans under State sponsored programs, and another \$4.4 billion in loans backed by State bond issues.

Excluding the required matching contributions for the State revolving loan fund programs, about 30 percent of the State assistance was specifically for drinking water facilities, and another 26 percent was available for either drinking water or waste water facilities.

In closing, Mr. Chairman, I would like to mention that we have work underway in which we have sent surveys to several thousand drinking water and waste water utilities to obtain information on their funding sources and their financial planning practices.

We anticipate reporting on that work later this summer. That concludes my prepared remarks. I will be happy to respond to any questions that you may have.

[The prepared statement of Dave Wood follows:]

PREPARED STATEMENT OF DAVID G. WOOD, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, UNITED STATES GENERAL ACCOUNTING OFFICE

Mr. Chairman and Members of the Subcommittee: I am pleased to be testifying before you today as you consider the infrastructure needs facing the nation's drinking water systems. As you know, the U.S. Environmental Protection Agency (EPA) is required to conduct an infrastructure needs assessment every 4 years to estimate the future capital investment needs of local drinking water systems. In its most recent national survey, EPA estimated that nearly \$151 billion will be needed over the next 20 years to repair, replace, and upgrade the nation's 55,000 community water systems. The needs assessment survey, which EPA uses to estimate infrastructure needs for each state, serves as the basis for EPA's grants to the states under the Drinking Water State Revolving Fund (DWSRF) program. This program helps communities finance the infrastructure projects needed to comply with federal drinking water regulations and protect public health. EPA requests annual appropriations to capitalize the states' revolving loan funds and then makes specific allotments to each state. The states, which are required to match a portion of the grants, use the funds to make low-interest loans to their local water systems; as the loans are repaid, the states' funds are replenished, enabling them to make loans to other eligible drinking water projects. For projects located in communities that qualify as "disadvantaged," the states may extend loan repayment periods or use a portion of their grants to provide additional subsidies.

In addition to EPA, a number of federal agencies provide financial assistance for drinking water facilities through a variety of grant and loan programs, some of which also may be used for wastewater facilities. Further, some states sponsor their own financial assistance programs for local drinking water and wastewater facilities.

My testimony today discusses several issues critical to assessing the nation's drinking water infrastructure needs: (1) the precision of EPA's most recent estimate of drinking water infrastructure needs, (2) states' use of EPA's drinking water state revolving funds to aid disadvantaged communities, and (3) the amounts and types of drinking water infrastructure funding EPA, other federal agencies, and the states have made available. The information provided in this testimony is based on two recently-issued reports: our January report for this subcommittee and committee¹ and our November 2001 report on federal and state financial assistance for water infrastructure.² We focused on certain aspects of EPA's methodology in reviewing the agency's needs assessment, specifically the impact of sampling on the estimate's precision. In addition, we surveyed all 50 states to determine how they use their drinking water state revolving loan funds to assist disadvantaged communities. Finally, we obtained information on federal and state drinking water and wastewater

¹U.S. General Accounting Office, *Drinking Water: Key Aspects of EPA's Revolving Fund Program Need to Be Strengthened* GAO-02-135 (Washington, D.C.: Jan. 24, 2002)

²U.S. General Accounting Office, *Water Infrastructure: Information on Federal and State Financial Assistance* GAO-02-134 (Washington, D.C.: Nov. 30, 2001)

infrastructure funding over a 10-year period (fiscal years 1991 through 2000) by collecting data from the nine federal agencies responsible for the majority of the federal assistance and, using a detailed questionnaire, surveying the states to collect information on state-sponsored programs. Forty-six states responded to our funding survey. We converted the annual amounts reported by the federal agencies and the states to constant year 2000 dollars.

In summary, our work has shown the following:

- EPA took a number of steps to help ensure that it collected valid data to estimate 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 tell how closely the estimates reflect actual state-by-state needs because EPA did not calculate the precision of the estimates. EPA set a target level of precision—generally, the agency wanted to be 95 percent certain that its estimates were within 10 percent of the “true” needs. We found indications that the level of uncertainty was higher than EPA’s target level of precision, possibly by a considerable amount, for reasons associated with some of EPA’s sampling methods. Because the results of the survey are used to estimate both national and state-level needs, they can influence the level of congressional appropriations for the drinking water state revolving fund program, and they form the basis for EPA’s allotment of these funds to the states. Accordingly, we recommended 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 to be used to conduct future needs assessment surveys. EPA concurred that such a calculation would confirm whether the survey met its precision targets and stated that it would revisit the issue in the design of the 2003 survey.
- Thirty-one states have established programs under their revolving loan funds 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 loan 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 assistance to disadvantaged communities under the revolving fund program. Because providing additional loan subsidies can affect the extent to which states’ revolving loan funds are replenished—and therefore potentially the extent to which future federal funds will be requested—we attempted to estimate of the number of systems potentially eligible for such assistance. On the basis of limited information provided by the states, we estimate that about 28 percent of the nation’s smallest water systems could qualify for additional subsidies.
- In fiscal years 1991 through 2000, nine federal agencies made available about \$44.0 billion in grants, loans, and loan guarantees for drinking water and wastewater capital improvements. Of this amount, EPA provided about \$3.7 billion in drinking water state revolving loan fund grants and about \$16.6 billion under a similar program for wastewater facilities. EPA’s assistance, combined with that of three other agencies—the Departments of Agriculture, Housing and Urban Development, and Commerce—accounted for about 98 percent of the total federal assistance. About 11 percent of the federal aid was specifically for drinking water facilities and another 40 percent was for either drinking water or wastewater facilities. Also, according to responses to our survey, state governments made a total of about \$25 billion in state funds available for water infrastructure programs over the 10-year period, including over \$10 billion to match EPA’s capitalization grants. State-sponsored grant and loan programs accounted for about \$9.1 billion of the states’ contributions, including \$800 million specifically designated for drinking water facilities and \$6.3 billion that could be used for either drinking water or wastewater facilities (and in some cases for other types of infrastructure projects). In addition, states reported that they made another \$4.4 billion available for loans by selling general obligation and revenue bonds, and contributed about \$1.4 billion from other state sources for purposes such as matching non-EPA federal funds and financing state-designated specific drinking water or wastewater projects.

Background

Under the 1996 amendments to the Safe Drinking Water Act, EPA is required to conduct an infrastructure needs assessment every 4 years to estimate the future capital investment needs of water systems eligible for assistance through the

DWSRF program.³ Of the estimated \$150.9 billion capital investment needed according to EPA's most recent survey, 80 percent (\$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 remainder of the estimated needed investment—\$31.2 billion, or about 20 percent—will go to projects directly associated with existing, proposed, or recently issued regulations.

Water systems vary in size, which is often measured by the number of customers they serve. In its most recent survey, EPA obtained information from 100 percent of the largest 1,111 community water systems (those serving more than 40,000 people) and samples of the remaining 7,534 medium systems (those serving from 3,301 to 40,000 people) and 44,373 small systems (those serving 3,300 or fewer people). Small water systems represent over 80 percent of all community water systems, but they only account for about 22 percent of the estimated infrastructure needs. In contrast, the largest water systems represent about 2 percent of the community systems and account for nearly 44 percent of the needs.⁴

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.⁵ 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 qualify as “disadvantaged” under state-defined affordability criteria. States with disadvantaged community programs may opt 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.

U.S. drinking water and wastewater systems encompass thousands of treatment facilities, collection facilities, and related works and well over a million miles of pipes and conduits. While the investment, made over decades, in these facilities is enormous, even more funds will be needed in the future to support efforts to maintain clean and safe water. The Water Infrastructure Network—a consortium of industry, municipal, and nonprofit associations—recently estimated needs of up to \$1 trillion over the next 20 years for drinking water and wastewater systems combined, when both the capital investment needs and the cost of financing are considered. User rates serve as the major source of facilities’ financing, but both federal and state government agencies offer financial support as well. In the 107th Congress, legislation has been introduced in both the House and the Senate that would increase the amount of federal assistance available through EPA’s revolving loan fund programs.

EPA Took Steps to Validate Needs Data, But Did Not Calculate the Precision of Its Estimates

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. EPA allocates the DWSRF funds on the basis of each state’s share of the total estimated national need, except that each state receives a minimum share of 1 percent. According to EPA, its periodic surveys are therefore intended to provide “statistically precise” estimates of the needed capital investments, not just in total for the nation, but within each state.

EPA took a number of steps to ensure that it collected valid information about infrastructure needs at local water systems, and the cost of addressing those needs. For example, EPA took the following measures:

- For large and medium-sized systems, EPA used a questionnaire to collect information on capital projects needed to protect the public health. According to EPA’s report to the Congress,⁶ the agency asked the surveyed water systems to provide detailed information on each project including documentation explaining (1) why it is needed, (2) the basis for the project (e.g., whether it addressed a current or future need), and (3) the project’s estimated cost (or enough informa-

³Eligible systems include community water systems and not-for-profit noncommunity water systems. Community systems serve at least 25 people or 15 connections year-round. Noncommunity systems serve at least 25 people for more than 60 days but less than year-round.

⁴For both large and small systems, these percentages are calculated excluding the estimated \$9.3 billion in needs associated with proposed or recently promulgated regulations.

⁵According to EPA, the weighted average interest rate of DWSRF loans in 2001 was 2.4 percent, or about 3 percent lower than the market rates reported by the states.

⁶U.S. Environmental Protection Agency, *Drinking Water Infrastructure Needs Survey Second Report to Congress* EPA 816-R-01-004 (Washington, D.C.: February 2001), p. 58.

tion on the design capacities so that EPA could use a model to estimate the cost.)

- For the smallest water systems, EPA sent trained water system specialists on site visits to collect data after deciding that specialists would provide better information than a questionnaire because small systems generally have neither the data nor personnel to complete a questionnaire of this type.

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. (EPA surveyed 100 percent of the largest water systems—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 from 3,301 to 40,000.) For these 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. This means that EPA wanted a 95 percent likelihood that its estimate of the needed capital investment in a particular state would fall within 10 percent of the actual or "true" need for that state.

For the small systems, the agency's precision target for the national-level estimate was similarly set at plus or minus 10 percent at the 95 percent confidence level. EPA officials explained that the agency did not have the resources to send specialists to enough small systems to get an accurate picture of small-system 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.) Instead, EPA selected a sample of about 600 small water systems for these site visits. EPA used the results of these visits to calculate a national-level estimate of small system infrastructure investment needs. EPA then apportioned this estimated total among the states on the basis of the number of each state's small systems, categorized by population served and type of water source.

In an effort to assess the precision of EPA's needs estimates, we performed a limited review of EPA's methodology, focusing on the impact of sampling on the estimate's precision. We concluded that EPA probably did not achieve its intended level of precision. More specifically, we found indications that the level of uncertainty, or sampling error,⁷ was higher than EPA's target level of precision, possibly by a considerable amount. For example, we found that:

- The agency's approach did not account for the fact that it extensively used average costs estimated from models when calculating its sample size.⁸ Thus, 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.
- Even though EPA's technical experts believed that a simple random sample⁹ would be required to achieve the target level of precision for small-system needs, EPA deviated from this sampling methodology in two important ways. First, to avoid the travel costs associated with visiting about 600 randomly selected systems located throughout the country, EPA 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. EPA did not increase its sample size to account for the change in technique. Second, based on recommendations from an advisory workgroup,¹⁰ 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 of increasing the sampling error, thereby reducing the level of precision of EPA's estimate.

Although EPA has calculated and reported the actual precision levels for other surveys, EPA officials told us that doing so for the most recent 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

⁷Sampling 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.

⁸For 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.

⁹In a simple random sample, each system has an equal chance of being included in the sample.

¹⁰The workgroup consisted of state, American Indian, Alaskan Native Village, Indian Health Service, and EPA representatives.

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 cause the agency to incur further costs, depending on how many additional site visits were needed.

On the other hand, there are arguments in favor of calculating the precision of EPA's estimates. 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.¹¹ More importantly, determining the precision level of its estimates could help EPA identify any needed changes in its survey methodology—for example, larger or differently selected samples designed to minimize sampling error—to improve the future surveys required by the Safe Drinking Water Act. In commenting on a draft of our January report, EPA agreed that the calculation of confidence limits would confirm whether the survey met its precision targets. EPA also stated that it would fully consider our recommendation and that it would revisit the issue in the design of the 2003 survey.

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

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.” The subsidies may take the form of forgiving a portion of the loan principal or issuing a loan at a negative interest rate.¹² 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, allowing the states to assess the impact of capital project debt on the community's water rates and measure the project's affordability.

According to our state survey:

- Thirty-one states have adopted a disadvantaged community program and offer assistance in the form of loan subsidies or extended loan terms. Three more states reported plans to offer such assistance as part of their DWSRF programs within the next 3 years. As of December 31, 2000, 25 of the 31 states had provided assistance to qualified communities.
- 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. In total, 21 states use median household income as a criterion in determining whether communities qualify as disadvantaged.¹³
- 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. (According to state DWSRF officials, they find this option difficult to explain to local communities and difficult to administer.)
- Of the 14 states that had provided loan subsidies,¹⁴ only Maine, which had used 23 percent of its grants for assistance to disadvantaged communities, came close to reaching the 30 percent cap.

In our survey, we asked the states that had not adopted a DWSRF program for disadvantaged communities to report the reasons why. Of the 19 states without disadvantaged community programs,

- 16 states cited concerns about maintaining the body 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;

¹¹The 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.”

¹²States may also 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.

¹³The state of Utah also reported an income-based criterion, but the state uses the median adjusted gross income rather than household income.

¹⁴Although 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.

- 14 states cited the fact that their DWSRF program already offers loans at below-market interest rates as a major (9 states) or moderate (5 states) 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 states) or moderate (9 states) reason for not providing assistance through the DWSRF.¹⁵

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. A significant amount of funding is available for local drinking water projects from other federal agencies and through state-sponsored grant and loan programs. In our survey on assistance to disadvantaged communities, more than half the states indicated that they provided some type of financial assistance for drinking water projects. Six of the 19 states without DWSRF-related disadvantaged community programs had state grant or loan programs intended specifically to help economically distressed communities to finance drinking water improvement projects.

Because providing additional loan subsidies to disadvantaged communities can affect the rate at which states' revolving funds are replenished—and therefore potentially the extent to which future federal funds will be requested—we attempted to determine the proportion of the nation's community water systems that might qualify as "disadvantaged" and thus be eligible to receive special assistance. According to EPA officials, the vast majority of systems serving disadvantaged communities are likely to be small systems.¹⁶ Therefore, we used the same statistical sample of small water systems that EPA had selected for its infrastructure needs assessment. (A statistical sample allows generalizing the results to the universe of small systems, thereby obtaining a national estimate.)

We identified the specific systems included in EPA's sample—from 5 to 34 systems in each state—and as part of our survey asked the states to determine which of those systems they would consider to be disadvantaged. We asked states that were able to apply their own criteria to determine whether each system initially qualified as disadvantaged or qualified as a result of the additional costs needed to improve it. Other states were asked to use GAO surrogate criteria (i.e., to qualify as "disadvantaged," a community's water rates would have to exceed 1.4 percent of its median household income).

Our effort met with limited success for several reasons. The primary reasons were 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.¹⁷ 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."¹⁸ However, the high non-response rate associated with this analysis left us without information on the systems representing the remaining 45 percent of the universe. As a result, we could not determine whether our findings matched the actual percentage of systems that would qualify as disadvantaged. 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 estimated percentage of disadvantaged communities higher or lower.

Federal Agencies Made About \$44 Billion Available for Drinking Water and Wastewater Infrastructure, While States Provided About \$25 Billion

From fiscal years 1991 through 2000, nine federal agencies made about \$44 billion in financial assistance available for drinking water and wastewater infrastructure

¹⁵ 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.

¹⁶ Among other problems, small water systems often lack the economies of scale that make infrastructure projects more affordable at larger systems.

¹⁷ Determining which systems might fall into the disadvantaged category because of the high cost of a project, for example, would require a case-by-case analysis.

¹⁸ 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 "disadvantaged" systems comprised a minimum of about 16 percent of small systems.

projects. Of this amount, EPA provided about \$3.7 billion in drinking water state revolving loan fund grants and about \$16.6 billion under a similar program for wastewater facilities. EPA's assistance, combined with that of three other agencies—the Departments of Agriculture, Housing and Urban Development, and Commerce—accounted for about 98 percent of the total federal assistance. About 11 percent of the federal aid was specifically for drinking water facilities and another 40 percent was for either drinking water or wastewater facilities. Over 82 percent of the total assistance was provided in the form of grants; the remainder consisted of loans and loan guarantees. Although the programs differed in terms of eligibility criteria, allowable uses, and funding priorities, for the most part, the financial assistance was available to a broad range of entities.

We use the term “made available” to encompass several forms of federal funding. Because of differences in the programs and in the ways that federal agencies account for their financial assistance, the information that best reflected the amounts made available for drinking water and wastewater facilities came from data on appropriations, obligations, or expenditures, depending on the agency and the specific program in question. For example, EPA's data include appropriated amounts for the revolving loan fund capitalization grants to the states for each year; the states may not have loaned the funds (i.e., actually made them available) to local water systems until after the end of the fiscal year in which they were appropriated. In contrast, the data for HUD and Commerce consist of obligated amounts—that is, the amounts of funds allocated by the agencies to drinking water and wastewater infrastructure projects during the fiscal year. For the loan programs of the Small Business Administration and USDA's Rural Utilities Service, the amounts represent the face value of the loans or loan guarantees that were available to be made for the fiscal year; however, because most of these loans are repaid, the ultimate cost to the federal government is significantly less than the face value.

More specifically:

- EPA's financial assistance came primarily in the form of grants to the states to capitalize the Drinking Water and Clean Water State Revolving Funds. In addition, EPA provided \$4.5 billion in grants for drinking water and wastewater projects specifically designated in the appropriations process.
- USDA provided local communities \$4.5 billion in grants, \$7.1 billion in loans, and \$550 million in loan guarantees. USDA also provided \$376 million in grants for water and wastewater projects specifically designated in the appropriations process.
- HUD provided \$4.4 billion in block grants—some directly to large communities and others to states for distribution to smaller communities—to be used for water and wastewater projects. HUD provided another \$39.9 million for specific projects designated in the appropriations process.
- Commerce's Economic Development Administration provided \$1.1 billion in grants to local communities for water and wastewater infrastructure.

The remaining federal assistance, which totaled about \$1.1 billion over the 10 years, was provided by the Appalachian Regional Commission, the Federal Emergency Management Agency, the Department of the Interior's Bureau of Reclamation, the Small Business Administration, and the U.S. Army Corps of Engineers.

In addition to the assistance available to disadvantaged communities under EPA's DWSRF program, other federal programs give priority to projects in economically distressed areas. For example, to be eligible for USDA assistance, facilities generally must serve rural areas with populations of 10,000 or less and must be unable to finance their needs from their own resources or obtain credit at reasonable rates and terms. Proposed projects must be located in economically distressed areas to obtain funding under Commerce's program, and projects in severely distressed areas are eligible for higher funding levels.

According to our state funding survey responses, state governments made a total of about \$25 billion in state funds available for water infrastructure programs from fiscal years 1991 through 2000. Specifically, the states reported that they collectively:

- Contributed about \$10.1 billion to match EPA's capitalization grants for the drinking water and wastewater state revolving funds. This amount consisted of about \$3.3 billion from state appropriations or other state sources, and about \$6.8 billion that the states leveraged—that is, raised through the sale of state-issued bonds backed by the funds.
- Made about \$9.1 billion in grants and loan commitments under state-sponsored programs, including \$3.4 billion through a variety of grant programs and \$5.7

billion in loans.¹⁹ The states reported having a total of 56 state-sponsored grant programs, 29 state-sponsored loan programs, and 35 state-sponsored programs that include grants and/or loans. Of this funding, \$800 million was specifically designated for drinking water facilities while \$6.3 billion could be used for either drinking water or wastewater facilities or for other types of infrastructure projects.

- Made another \$4.4 billion available for loans by selling general obligation and revenue bonds (15 states).

In addition, the states reported that they contributed about \$1.4 billion from state appropriations, interest earnings, and other state sources for purposes, such as matching non-EPA federal funds and financing state-designated specific drinking water or wastewater projects.

Mr. Chairman, this concludes my prepared statement. I would be happy to respond to any questions that you or other Members of the Subcommittee may have at this time.

Mr. GILLMOR. Thank you very much. Let me also apologize to the panel. I have had to leave a couple of times. I am also on the Financial Services Committee, which is holding a major mark-up right across the hall on the corporate responsibility bill, and so they come over here and grab me for a vote once in a while.

Let me start with Mr. Grumbles. Yesterday, the New York Times published a story on a new assessment of drinking water and waste water needs. And, I understand that this assessment is now at OMB. And, recognizing that you don't work for OMB, can you assure me that EPA will work expeditiously within the administration to issue a final report on this matter?

Mr. GRUMBLES. That's correct, Mr. Chairman. Our staff are in a very constructive and constant discussion and dialog with OMB on the GAP analysis report.

Mr. GILLMOR. Thank you very much. And, Mr. Beider, your report says that it is reasonable to assume that a large drinking water investment gap doesn't exist. Everybody else has been saying for some time that it does exist.

Now, recognizing that you also provide a high case estimate, could you defend for a moment your low case estimate? And I guess some people would be wondering how you can be right on this, and everybody else can be wrong.

Mr. BEIDER. I believe what we have done is provide a clearer picture of the range of uncertainty that surrounds attempts to estimate 20-year needs. The fact is, as we said last year in our testimony, that there is much that we don't know about the true state of the Nation's drinking water infrastructure.

The estimates that have been done so far rely on simple national-level assumptions to try to make up for the lack of specific ground-level, system-by-system data. And when you look at the results that are generated by studies from the ground up, from system-by-system data, such as EPA's needs survey and the 20-system survey done by the American Water Works Association, those results are fully consistent with, if not even below, the low-cost scenario that CBO laid out in our testimony today.

In terms of the national-level assumptions that have been made by people like the WIN coalition and that we also make in our sce-

¹⁹ Approximately \$1.8 billion of the state-sponsored loan programs were available for other local projects, such as solid waste disposal facilities, in addition to drinking water and wastewater infrastructure.

narios, the key issue is the rate at which pipes will need to be replaced.

The WIN assessment used an assumption of 1 percent per year, but that was drawn from a previous report done by Stratus Consulting for the American Water Works Association, which presented that figure as an assumption and also outlined a rationale for a completely different assumption of 0.6 percent per year. And that latter figure was the assumption that we used in our low case. When you put that in and some other reasonable assumptions about savings for efficiency improvements, and some of the assumptions about financing costs, the result is that the burden of investment costs may not increase on average over the next 20 years relative to what we are already used to spending.

Again, that is only one possible outcome. We provide a low case and a high case to indicate what we think is the range bounding most of the likely possibilities.

Mr. GILLMOR. Let me follow up quickly, and this is maybe a broad question, but how do you think CBO's report can help guide the debate in this committee over drinking water infrastructure?

In other words, if you were sitting in our place, what other data do you believe might be helpful to have?

Mr. BEIDER. Well, I can think of a lot of data that would be helpful. It is harder to know what data you can actually expect to get your hands on soon. I would have to defer to my colleagues here on the panel and specifically at EPA, I think, to suggest what other information could be provided by the Nation's drinking water systems.

Certainly, I think the study done by the American Water Works Association looking at 20 systems was a thorough job of analysis on a limited base of systems, and, again, I found the results from that study very interesting in coming up with much lower annual costs than had been provided from some of the previous analyses.

Mr. GILLMOR. Thank you very much. My time has expired, and the gentleman from New Jersey.

Mr. PALLONE. Thank you, Mr. Chairman. Mr. Grumbles, over 40 days ago, every member on the Democratic side of the aisle sent Administrator Whitman a letter asking for answers to seven important questions relating to your office's role in ensuring the security of public water systems in the surrounding communities.

And the response was due 1 month ago, but we have not received anything. So I just wanted to ask you why the EPA is stalling and failing to answer our questions, and try to get an answer of when you are going to get back to us.

Mr. GRUMBLES. Congressman, I wouldn't say that the EPA is stalling. I would say that we are taking very seriously the thoroughness and the importance of the issues that are raised in that letter, and these are not routine, simple, questions that can be answered pretty quickly.

So I apologize that the letter has not gotten back to you, but I can say that it is going through a thorough review, a policy review, and—

Mr. PALLONE. How about a date when you are going to get back to me? I was going to suggest tomorrow, but I am sure you will say

that is not happening. So why don't you give me a date approximately?

Mr. GRUMBLES. I know that it is kind of out of my hands, in terms of the pecking order as to who sends and signs the letter.

Mr. PALLONE. Why don't I suggest that you get back to us within the next 2 weeks.

Mr. GRUMBLES. That is certainly understandable, and I will do whatever I can to make sure that we follow that.

Mr. PALLONE. All right. I appreciate it. Mr. Grumbles, in 1999 the EPA released its drinking water infrastructure needs survey and found that \$102.5 billion was needed now, and a total of \$150 billion was needed over the next 20 years. You have stated that.

Mr. GRUMBLES. Yes.

Mr. PALLONE. But how do you reconcile the huge need of more than \$100 billion with the fact that the President's fiscal year 2003 budget only asks for \$850 million, and that is less than 1 percent of the unmet needs.

And also a shortfall of \$150 million from the billion authorized by this committee for the State revolving loan fund. I mean, where are we going? It just seems that the needs are so out of proportion to what the administration is proposing in its budget.

Mr. GRUMBLES. Congressman, a couple of things. One, in terms of the level of funding for the SRF that is in the fiscal year 2003 budget. As you know, that level is \$850 million and its highest level that has been in requests from this or previous administrations for the Safe Drinking Water Act SRF.

I think the administration is proud of the fact that this fiscal year budget that the drinking water and clean water SRFs combined is the highest request—

Mr. PALLONE. I am not arguing that, and I am not trying to be difficult. I guess I just feel like we keep talking about these huge amounts, and I am assuming that if we don't at least bump this up in terms of a higher authorization and higher budget that that means that either drinking water isn't going to be safe because the infrastructure needs won't be met.

Or alternatively that the cost to rate payers will be incredibly increased, and I guess I am afraid of both. So comment on that. What is it going to mean if we don't increase—

Mr. GRUMBLES. Well, you make some good points, and I think one of the important points that I would like to make is that we very much welcome constructive dialog with the authorizing committee, in terms of the authorization levels for the drinking water, as well as the Clean Water State Revolving Funds.

In terms of trying to reconcile the fact that we say that \$150 billion needs, and that we are also working on a gap analysis report, which has very large numbers in it, in terms of the gap, I think that really the important message is to keep in mind that we recognize that there is a Federal funding role and involvement.

And we certainly are proud of the success and the track record of the State Revolving Fund that this committee established in the 1996 amendments. But one of the other things that we are trying to convey is, and I think most stakeholders will acknowledge this, we are missing the picture if we focus unduly on the level of Federal funding to address this issue.

This is such a huge issue, and involves so many players, and it did not occur overnight. It has taken decades, a century, to get to this point.

Mr. PALLONE. Well, I understand all of that, but I guess what I would like—I guess you are pretty much saying that you think you are suggesting that is the most money that we are going to get out of the administration. I think that is what you are saying.

But then what is the response as to whether or not the utilities are going to be able to meet the infrastructure needs with that level of Federal funding. Are they going to be able to do it? What is going to be the consequence, in terms of the safety of the drinking water?

Mr. GRUMBLES. I think the response is going to be a couple of things. One is as people increasingly recognize of let's focus on the costs and not just the supply side, in terms of new infusions of Federal, State, or local dollars, but look at the costs.

How can we enter into asset management structures or encourage more cost effective public-private partnerships. I think one of the important things that we want to emphasize is that in this opportunity, in terms of reauthorizing the infrastructure laws, the more we can promote fiscal sustainability, where those who are running the system actually look and manage their assets, look at more cost-based rates, and look at a water-shed approach that takes into account source water protection to try to reduce the costs at the end of the pipe in order to get the water clean.

There are a variety of mechanisms in addition to just the new money from the Federal, State, or local sources. Mechanisms such as encouraging and really getting aggressive about research and development of technologies, improved and more cost effective technologies, asset management, more effective structuring of systems small and large, public and private.

Essentially to get more bang for their buck. So that is part of the dialog that we are very enthusiastic about engaging in with this committee to try to whittle away at that gap, however large that gap actually is.

But to make progress without reducing the standards that are required and that the American public wants, in terms of the Safe Drinking Water Act.

Mr. PALLONE. Thank you.

Mr. GILLMOR. The gentleman, Mr. Shimkus, for questions.

Mr. SHIMKUS. Thank you, Mr. Chairman. Mr. Grumbles, I would like to put some positive aspects on the request by this administration for \$850 million. Isn't it true that this exceeds the average amount authorized for the entire 8 years of the previous administration? If you take an average request, isn't \$850 million more?

Mr. GRUMBLES. I believe it is. As we were discussing, the level of the request is the highest level as well from this administration.

Mr. SHIMKUS. And I would like just for my colleagues' benefit, I stumbled upon this. We did ask for a GAO report on water infrastructure, and that is dated November of 2001. And it is really amazing.

From fiscal year 1991 to fiscal year 2000, nine Federal agencies made available about \$44 billion in a variety of forms for drinking water and waste water capital improvements. The EPA provided

\$20 billion. The USDA provided local communities \$4.5 billion in grants; and \$10.1 billion in loans, and \$550 million in loan guarantees.

HUD, \$4.4 billion. Commerce and Economic Development, \$1.1 billion. The remaining Federal agencies, which total about \$1.1 billion over 10 years, was provided by the Appalachian Regional Commission, the Federal Emergency Management Agency, the Department of Interior's Bureau of Reclamation, the Small Business Administration, and the Army Corps of Engineers.

So my question is, and this whole debate on the States' revolving fund, are we leaving some partners out?

Mr. GRUMBLES. Well, I would feel a bit nervous about talking about other partners, in terms of Federal agencies. I try to keep myself limited to the EPA.

Mr. SHIMKUS. But if we are talking about safe drinking water for the country, and you have nine partners, and we are talking about infrastructure, I don't think we are—the infrastructure needs are national, correct?

Mr. GRUMBLES. Yes, sir.

Mr. SHIMKUS. So we have a national need, and we are talking about one fund where there are nine other partners that are trying to meet these similar needs. There seems to be a disconnect for me.

I think you would conclude—if you have national needs, then why aren't we including all nine partners in the assessment of what steps we are doing to meet those needs?

Mr. GRUMBLES. Well, we take very seriously the partnership that we have with some of those other agencies, like the Rural Utility Service, particularly when it comes to rural and small town drinking water needs. We are partnering with them and other agencies as well.

Mr. SHIMKUS. But let me interrupt, but I think the point is valid. If this is a need assessment for the Nation, and trying to indicate that this one fund is not meeting all the needs, and we have eight different additional agencies that are trying to do that, we are missing part of the equation.

Would everyone—and not only you, but what about your colleagues on the panel? Do you agree with that?

Mr. BEIDER. I would certainly say that, yes, if you are looking at the Federal policy context, you want to take account of all of the existing programs.

Mr. GRUMBLES. And if I could just elaborate, Congressman. I think the response that I was giving as well to Congressman Pallone is that when we have \$150 billion needs assessment, that is national, and it is not—our intent is certainly not to say that this is the dollar amount that should be the authorization level for the Safe Drinking Water Act SRF.

It is more of a national assessment, and a separate question is how to go about at the Federal, State, and local, public and private sectors, how to respond to that need.

Mr. SHIMKUS. And, Mr. Wood, would you like to respond?>

Mr. WOOD. Yes, I would just concur with my colleagues and say that you all are faced with a difficult task in trying to figure out how much to put into this SRF each year. But I would certainly

want to take into account, if I were you, the streams of funding that are available from the other agencies.

Mr. SHIMKUS. Let me—and I am treading in other jurisdictional areas, but do you think there is some inefficiencies and loss of buying power, and loss of focus because we have in essence nine different agencies involved in this issue?

Mr. WOOD. We have not done any work specifically directed to that issue, comparing one to another. What I can say is that a lot of those programs have somewhat different parameters.

In other words, obviously the assistance provided by FEMA would be only to communities that have been hit by disaster. The USDA's programs are directed strictly at rural areas, and some of the Department of Interior's money is strictly for Indian water systems.

So it is sort of compartmented, but again I would encourage looking at the whole picture as you are going about your work.

Mr. SHIMKUS. And my final question would be, first, Mr. Grumbles, tell me the benefits or disadvantages of the direct grants versus the loan issue on the State Revolving Fund?

I have actually dealt with it on the USDA rural development safe water rural water issues. I believe that they bring partnership. You do some granting and you do some loaning. What is your analysis of the percentage of both, and the benefits or the disadvantages?

Mr. GRUMBLES. Well, that is a fundamentally important question to the whole debate, and I think where the administration is, is essentially where this committee ended up in 1996, and that was that rather than authorize a national grant program, or site specific grant programs, that there would be a drinking water State revolving fund modeled on the Clean Water Act State Revolving Fund.

And then this committee and the Congress went even a step further and said we acknowledge, we recognize that there are specific situations, particularly disadvantaged communities, where without undermining the corpus of the fund, the SRF, there should be the opportunity for States to exercise the flexibility to provide negative interest loans or principal forgiveness, mirroring in essence a grant in those specific situations where disadvantaged communities would not be able to avail themselves or get any use out of the loan.

Mr. SHIMKUS. Thank you, Mr. Chairman. I will just say that those numbers that I gave didn't include the billions of dollars that the States had done themselves to address this problem also, and thank you, Mr. Chairman, and I yield back.

Mr. GILLMOR. Thank you.

And does the gentleman from Texas have questions?

Mr. GREEN. Yes, sir, Mr. Chairman. I appreciate the opportunity. I want to follow up my colleague with the information that \$44 billion from these nine funds were spent, and the estimated need is \$150 billion, does EPA coordinate with these other Federal funds, these other funds that provided, whether it be the Department of Agriculture, or whether it be HUD, or anyone else?

And I know, for example, that we have cases where agencies say that we don't have the funding available, but you could apply over

here, because maybe you fit in the Agriculture. Do you know if there is coordination between the EPA and these other funds?

Mr. GRUMBLES. Congressman, it certainly is our intent to coordinate with the other agencies, and I know that we do coordinate with them, and in instances where we don't, I think OMB steps in to help us coordinate with the other Federal agencies.

I know in particular with respect to affordability concerns that the EPA is in the process of entering into a memorandum of understanding with the rural utility service on being able to more effectively target financial assistance under the two programs toward small areas and adding compliance costs, particularly with arsenic.

Mr. GREEN. Mr. Chairman, I think that our colleague brings up a food point that if there is a way that we can get information, and again it may not be in the purview of our jurisdiction, but to see if the coordination from the agencies—and maybe the CRS or GAO.

I know that we always get the CBO from our committee, but maybe we could see if there is some coordination between these agencies. I hope that just common sense does it, but again I am glad that it was brought up in our committee.

I was looking at what the State of Texas, the Water Development Board, and I come from a very urban area. So if we can't find it in one pot, we will try and find it somewhere else, whether it is the EPA, or HUD, or somewhere else.

But I was looking at the list for my revolving fund in Texas, and we have \$70 million available, but the requests are \$606 million for the revolving loan fund. Is that pretty typical of urban States? Because I know that Texas and California, and New York, are high usage States, and might they have that much shortfall?

And again these requests are from cities, water districts, throughout the State of Texas, and this is for the Revolving Loan Fund. This is not for grants.

Mr. GRUMBLES. Two things. One, I would be most comfortable in saying that we would provide for the record and to your office a more specific, detailed response, because I certainly don't know off the top of my head as to what the levels or the percentages are, and how frequent they are.

The second thing that I can say with confidence is that the States take very serious their responsibility to come up with their priorities and their lists of projects to receive assistance under the State Revolving Funds and they would certainly want to have more—I mean, they never have a problem coming up with needy and necessary important projects to receive funding.

Mr. GREEN. Well, we can always come up with projects. It is funding them that is the frustration, because I know from my years in the State Legislature, we worked to provide the State matching for them, whether it be an urban area like Houston, or with some of our rural water systems, who provide it.

And again in light of the big picture, where we are having drought in so much of the Western United States, and maybe even up in this area from what I understand, our Safe Drinking Water is even more important.

And I want to make sure that we get a number for authorization that fits in with whether these other funds are available, but also that we are not seeing such a substantial shortfall in projects, as

compared to what can actually be funded through the revolving fund on the State level.

But let me in my time, Mr. Chairman, ask a question that I haven't heard, but one of the other issues that have come up since September 11 is our—like my colleague from New Jersey mentioned, the response to terrorism against our water supply.

And I know again from our local experiences in the Houston area that we have redoubled efforts to make sure that our surface water supply has more security, and that there has been more vigilance.

But I would just be interested whether it is in response to the letter, and anything that you can share with us today on what impact that may have on our need for additional funding, or additional authorization for safe drinking water.

Is that something that we can build into it, and would that increase the authorization need?

Mr. GRUMBLES. Well, in response to that, I know that some of the measures through enhanced security of drinking water facilities, a great number of the measures are currently eligible under the drinking water State revolving funds.

And I could only assume that for each State, in terms of their needs when they are looking at implementing their plans as a result of their vulnerability assessments, that could lead to increased costs and a greater need within that State.

That certainly is one of the issues, and one of the measures that EPA is taking very seriously, is using the funds that the Congress has appropriated to get the vulnerability assessments done, and also engage aggressively in training sessions, and work shops, disseminating information in a secure way to those who need the information to take measures to strengthen security at their facilities.

Mr. GREEN. And our concern is making sure that we have a number for the authorization, and we will go back and see if we can find the money every year like we do.

But just so we have all of this included in the need for authorization, and particularly including the other available funds that these nine agencies have so we can get a somewhat reasonable picture for an accurate authorization. Thank you, Mr. Chairman.

Mr. GILLMOR. Thank you. The gentlelady from New Mexico, Mrs. Wilson.

Mrs. WILSON. Thank you, Mr. Chairman. Mr. Grumbles, I have several questions relating to the arsenic standard and its impact on our availability of safe drinking water, and I am sure that this is something that you expected and are prepared for.

If not, I am going to ask that you get me answers to these questions in writing. The State of New Mexico has 2 million people, and the implementation of this standard with using current technologies is going to be between \$400 million and \$500 million in capital costs alone.

So set aside the operating costs. That is just the up front costs. What kinds of reductions in depth does the EPA predict in New Mexico with the implementation of this standard? How many lives are you going to save?

Mr. GRUMBLES. I am going to have to defer and provide that in writing to you, Congresswoman. I don't know the numbers for that.

Mrs. WILSON. That is interesting that you don't. That is a pretty big chunk of change to be asking New Mexico to pay without knowing the answer. I have actually figured it out based on your own reports to us, and it has received very wide publication in New Mexico.

The answer is two deaths over a period of 7 years, and you are asking us to raise our water bills \$90 a month in small towns, and about \$40 a month in Albuquerque, in larger towns. Two deaths over 7 years, \$500 million.

If you were a county commissioner in Bermiel County, New Mexico, and I said you have \$500 million to spend to improve public health in New Mexico, would that be your priority?

Mr. GRUMBLES. Well, I understand the question, but I don't know what my priorities would be if I were in that position, but clearly your point about cost effectiveness, I understand the point.

Mrs. WILSON. The University of New Mexico just completed a study that looks at, and it will be published in *Risk Analysis*, which is an epidemiological journal, this month, and the EPA has been asked to comment on it and so far has declined to do so.

If you would look at risk factors and epidemiology because of the increased trucks that are going to have to be trucking chemicals around and removing arsenic and so forth, the estimate is that we are going to actually lose more people from traffic accidents than we will gain from reductions in bladder cancer over the same period.

So in fact you are going to have a net increase in deaths because the public health impact is so small. Doesn't the EPA believe that all the water systems impacted by this rule will be able to meet the standard by the current compliance date of 2006?

Mr. GRUMBLES. Congresswoman, I think what the EPA believes, and we have heard very clearly from you and from other members who are taking a leadership role on this issue of affordability and balancing risk, while maintaining a national standard of protectiveness under the Safe Drinking Water Act, I think that the course that we have charted out has several components to it.

One of them is to aggressively pursue the statute's provisions with respect to affordability and variance technologies.

And on that front, what we are doing is that we are actively engaged in discussions with OMB and hopefully with SAB to get the Science Advisory Board working on flushing out exactly what criteria should be used for the affordability determination, which is integral to the opportunity for variances and variance technologies.

And on the exemptions or extensions of time, I think our belief is that using the existing regulations, and also having workshops with rural and small communities that are adversely impacted, they feel very concerned about the arsenic standard, is walking through with them the procedures and streamlining the procedures so that if extensions or exemptions, or variances, are applicable, they will be able to avail themselves of those.

Mrs. WILSON. With respect to treatment technologies, have there been any large scale demonstrations of the treatment technologies that the EPA currently—that are currently available, and what large scale demonstration projects do you have for innovative new technologies on your R&D plan?

Mr. GRUMBLES. I want to be able to respond to you, and I also want to say at the outset that I am not really sure how you define large scale, and so what I would welcome is the opportunity to work with you, and to provide to the committee some more specific details where we have various assumptions as to how you define large scale.

I do know that one of the specific components of the plan that we are pursuing on R&D affordable technologies is to have \$8 million specifically devoted to demonstration projects so that it is not just something left to discussions or paper research, and that we are actually out there funding demonstrations as quickly as we can, cost effective and affordable technologies.

Mrs. WILSON. Does the EPA have an R&D road map for what are the most promising technologies for reducing the costs of arsenic removal?

Mr. GRUMBLES. After this hearing, I certainly will contact the Office of Research and Development, which is not within the Office of Water that I am in. But we are both working on this overall important issue of research and technologies.

But I believe they have a road map but I need to confirm that with them, and I guess they definitely have a plan, but I just don't know how detailed it is in terms of constituting your definition of road map.

But I do know that it is a high priority that the administrator has, and not just those within the Office of Research and Development, and the Office of Water, is using the \$20 million for the R&D Program over this year and next year, is to come up with specific technologies, and to also disseminate the more research so that these technologies can be applied.

I mean, I guess that constitutes a road map, but it is one aspect of the arsenic debate that we are taking very seriously. And I would welcome the opportunity to provide more detailed information, step-by-step, as to where we go from here on the technologies.

Mrs. WILSON. I would welcome the information. Thank you, Mr. Chairman.

Mr. GILLMOR. The gentlelady from Missouri.

Ms. MCCARTHY. Thank you, Mr. Chairman. Gentlemen, in my district in Kansas City, Missouri, the water services there, they received a 2001 gold award for competitiveness achievement from the Association of Metropolitan Water Agencies.

They won this because of their exceptional management practices and their high performance. They don't qualify, my community of Kansas City, they don't qualify for any of the funds at the State level to help them.

So the message that I think that is being sent is that there is no reward for being good, and I wonder as you restructure and think about ways in which we need to change these revolving funds, and how we get the money out to the States to help communities, if in fact you are giving consideration to communities that have done a good job, and are models for the Nation.

And how to help them, because there are still many unmet needs. The State of Missouri years ago, the citizens actually passed a tax on themselves to improve the storm water systems.

So once again we are out there ahead of the curve and we still have a lot of unmet needs, but we are not getting all the assistance that we should, and that is just one thought. I just would like some reaction on what your thinking is for the future of this program.

And my other thought is that people are buying more and more water in bottles these days, and I am one of them, and I think it speaks two things. One, that they don't have a lot of faith in the system, and so they are going about with the bottled water syndrome.

And they are willing to pay \$2 or even more at an airport for that. But they do complain about their sewer fees and their water fees on their monthly bill, even though I think if you did the math, it is hard to understand that.

So I would like your thoughts on restoring confidence in the public on the water systems, but also this question of just how do you get acceptance for the truth cost of water delivery is.

I think for a long time, because of the way that it was subsidized or otherwise, in budgets that people weren't really paying the true costs of water. Now we have some very legitimate needs to meet that are quite understandable, but there is a resistance to pay for those. So I would love your thoughts on that as well.

Mr. GRUMBLES. I can start and then the other panelists may have some ideas or comments as well. First, on the eligibilities and the first aspect of your question. Do you know why in that particular instance why that community was not eligible?

Ms. MCCARTHY. No, I don't, and I am curious about that myself. I am going to look into that.

Mr. GRUMBLES. And as you point out, that is a threshold issue obviously, and how we determine the eligibilities. Basically, the EPA is in the role of implementing what Congress spelled out, and they spelled out some pretty specific requirements and details on eligibility for the State Revolving Fund, and then EPA subsequently issued regulations to further implement the eligibility provisions of the State Revolving Fund.

And I think one of the key components of our regulations, and certainly our current philosophy is, to provide deference to the States. They are the managers of the State revolving funds, and so as long as there is some basic net that were spelled out in the statute, a lot of it is left up to the States to determine how they channel their funding and determine their eligibility question.

On the second one, and a very important one that you raised about confidence in the water systems, the public water systems, and not simply just increasing reliance on bottled water, I think there are a lot of measures that can be taken.

It is really not a leading role for the Federal Environmental Protection Agency, as much as it is for those that are in the firing line or in the battle lines, however you want to use the metaphor, but the ones who are actually the utilities who are on a daily basis proving the value of their product.

And how they take their job seriously, and provide that water, and in terms of the EPA, we are committed to the principle of the importance of having community water systems.

That is, it is cost effective, and it is also environmentally protective to rely on community water systems, and so in some small way

perhaps, but in an important way, part of our job is to remind the American public of what the figures are, the facts and figures about the continued safety of their drinking water supplies, but it is really—a lot of the burden or opportunity falls on the shoulders of those at the utilities, who are the ones who are actually there in their communities providing the product.

Ms. MCCARTHY. Anyone else want to talk about that or the true cost of water?

Mr. BEIDER. I certainly agree in general that in many systems across the country, ratepayers are unaccustomed to paying the full cost of the water that is delivered to them. I am not an educational psychologist or a sociologist, and so I am not going to hazard an expert opinion as to how we can get people used to it.

But I will say that in general, it sounds like an education problem, and it is probably an adjustment problem. The first time you see a water bill that is 20 percent higher, that is probably a shock. But if the utility adequately prepares people for why it is necessary, that 20 percent, if it is off a small enough base, may not be a real problem other than just an adjustment problem.

Ms. MCCARTHY. Thank you, Mr. Chairman.

Mr. GILLMOR. The gentleman from Kentucky, Mr. Fletcher.

Mr. FLETCHER. Thank you, Mr. Chairman, and certainly it is a pleasure to serve on your committee as the newest member, and thank you very much for the opportunity. Let me just say as we start, that in a former life just a few weeks ago, we served on the budget committee, and I want to thank the administration for the commitment they have had in certainly supporting the Clean Water Act.

When we look, as the ranking member mentioned, certainly a greater commitment could be made there. But when we look at the options, it was either a tax increase, increasing the debt, taking the money from national or homeland security, or education.

There really were not a lot of other areas that the money could come from unless we increased our debt or increased taxes. So I think we have made a very appropriate commitment here. Maybe not as much as a lot of us would like, but given the financial circumstances of the country, I think it is a very appropriate commitment.

Let me ask you. Some people feel there is a gap, and Mr. Grumbles is from the EPA, but in our district, or in my district, we have a lot of multiple systems, and as they are trying to upgrade to meet the new standards, it becomes very costly.

So we have encouraged and actually are getting funding for a regional study to try to do substantial consolidations. What kind of efforts has EPA made in encouraging the consolidations to make sure that we don't have duplicated systems that may be inefficient because of the duplication?

And also the other question I have is concerning that we also have concerns about testing that is both done on the State and Federal levels that requires duplicate testing and increased operating costs.

And if you could comment on that, Mr. Grumbles, and maybe the GAO and CBO could talk about their estimates, and do they take

into account or how much consolidation do they take into account in their estimates? Thank you.

Mr. GRUMBLES. Congressman, in terms of the consolidation issue, it is one of the—it is embedded in one of the fundamental principles that we have in the testimony on fiscal sustainability.

And I think we agree with the vision of this committee, and the Congress in 1996, when unlike the Clean Water SRF language with the new drinking water SRF, the authorization language specifically includes an explicit contemplation of opportunities for consolidation, as well as looking in general at the fiscal, managerial, and capacity of these systems as they get financial assistance.

So we encourage a very thorough analysis and review by the State and local entities about opportunities for consolidating systems, regionalization, to me the economies of scale, and to have them more cost effect and a more environmentally protective approach.

And I am sure that without having any direct knowledge of it that over the years, in terms of EPA efforts to implement the Act, I am quite confident that we have helped in terms of having workshops, and discussions with those who implemented the Safe Drinking Water Act to take advantage of, and to fully—at least to try to fully utilize that new concept in the 1996 Act about encouraging regionalization and consolidation of facilities.

In terms of avoiding duplication of testing, I don't know. I would ask for your permission to provide you something more explicit and detailed for the record. I know that our objectives are to minimize and avoid the duplication costs, and the testing costs.

And we recognize that when it comes to the Safe Drinking Water Act implementation costs, often times the infrastructure is a huge cost, but there is also the very substantial costs of monitoring and also testing.

And we recognize the need to minimize the duplication and avoid those costs. But if I could, I would like to provide a more direct and detailed response to your question for the record.

Mr. FLETCHER. Thank you. We appreciate that. And I didn't know if the other two gentlemen had comments on their estimates and some of the differences in the gap and consolidation considerations of their estimates.

Mr. BEIDER. In our estimates of future investment costs for drinking water systems, we assumed in our low-cost case that investment costs could be reduced 15 percent by various forms of improved efficiency; in our high-cost case, we assumed a 5 percent savings. The WIN analysis that has received so much publicity did not make a comparable assumption.

One of the many forms of improved efficiency that we had in mind in picking those numbers was, indeed, consolidation of systems, and the others included things like asset management, which Mr. Grumbles has talked about; demand management, meaning pricing closer to actual costs to reduce inefficient use; innovative contracting; and, of course, better materials and technologies. We don't have a breakout of how much of the 5 percent or the 15 percent we could attribute to each one of those factors, but we think those are certainly reasonable ballpark estimates.

Mr. WOOD. I would just add that GAO has not done its own estimate of needs out there, but I think—and Ben can correct me if I am wrong—it is important to put into context. You raised the issue, and CBO also alluded to this, that needs are not really static. They are constantly changing.

And the EPA's needs assessment was simply or essentially a snapshot in time of the needs of systems as they exist now, and to the extent that there is consolidation, or mergers, and so forth in the future, obviously that is going to affect how much is needed, in terms of construction investment. So it puts that into context.

Mr. FLETCHER. Thank you, Mr. Chairman.

Mr. GILLMOR. Thank you. That concludes our questions, with one exception. Mr. Pallone, our ranking member, does have another question.

Mr. PALLONE. Thank you, Mr. Chairman. I just wanted to ask Mr. Beider. Obviously I favor a higher authorization level than what we currently have at the \$1 billion level, and if you take the midpoint of the CBO analysis, which is \$4 billion per year of additional spending to address infrastructure needs, it comes to \$20 billion over 5 years.

I just wanted to ask you, and if Mr. Grumbles and the others want to say—you could just say yes or no very briefly, whether you would support a \$20 billion increase in the drinking water State revolving loan fund authorization over 5 years.

Or what kind of increase you would support over what we have?

Mr. BEIDER. That is an easy question for me. CBO doesn't make policy recommendations.

Mr. PALLONE. Okay. Mr. Grumbles and Mr. Wood, would you like to take a quick answer?

Mr. WOOD. I would concur and say that GAO doesn't make those kind of recommendations either.

Mr. PALLONE. Okay. And EPA?

Mr. GRUMBLES. Do you catch the trend that—

Mr. PALLONE. But you are a policy guy.

Mr. GRUMBLES. I am, but I certainly am not able to pontificate on my own. That is something that the administration is working on that would be part of an administration position.

Mr. PALLONE. Okay. Thank you. Thank you, Mr. Chairman.

Mr. GILLMOR. Thank you, and I want to thank our panelists again for your time, and also for your expert testimony. And, gentlemen, if it is okay with you, I would like to ask your availability to respond in writing to any further questions from the members.

And with that, I would dismiss panel one, and call up panel two.

Mr. SHIMKUS [presiding]. We would like to welcome the second panel, and we look forward to hearing your testimony before we go to you, I want to make a special welcome to Mr. Terry Gloriod, who is from Illinois, and that's why I got the benefit of getting into the big chair as you noticed.

Terry is the President of the Illinois-American, Iowa-American Water Companies, and Illinois-American is located in Belleville, Illinois, and serves Clinton and Bond Counties, which are in my Congressional District.

Prior to joining the American system, Mr. Gloriod was vice president of operations for Continental Water Companies, with respon-

sibilities for the St. Louis County Water, Northern Illinois, Northwest Indiana, and Long Island Water Companies.

Mr. Gloriod has over 30 years of experience in the water industry. Terry has been active in the water associations, including the American Water Works Association, and the National Association of Water Companies.

He is currently on the Water Utility Council and the American Water Works Association Research Foundation Board, and he chairs the government relations committee. Mr. Gloriod is a licensed water operator and professional engineer, and a diplomate in the Academy of Environmental Engineers.

Terry holds a B.S. in civil engineering from Washington University, a renowned university in St. Louis, Missouri, and we are glad to have you here, and thanks for coming all this way.

We want to welcome the rest of you, too, but not as flowery, and I apologize, but here in order we have Mr. Jay Rutherford, Director, Water Supply Division, of the Vermont Department of Environmental Conservation. Welcome.

We go to Mr. Joseph Bella, Executive Director of the Passaic Valley Water Commission; Mr. Elmer Ronnebaum, General Manager of the Kansas Rural Water Association; and I will be interested in your comments.

Mr. Paul Schwartz, President of the Clean Water Action; and Mr. Howard Neukrug, Director, Office of Watersheds, Philadelphia Water Department, and then of course, Mr. Terry L. Gloriod. Oh, and I missed Mr. Joseph A. Moore, who is an Alderman on behalf of The National League of Cities.

I know that you were all in attendance for the first panel, and I am sure that you have got a lot of things turning around in your minds, and so we will recognize you for 5 minutes for your opening statements, and we will be a little bit generous, but we have got a large panel, and some of you probably have flights or trains to catch to get back.

And with that I would like to recognize Mr. Rutherford for 5 minutes. And your whole statement is already submitted into the record, and so if you can summarize, that would be helpful.

STATEMENTS OF JAY L. RUTHERFORD, DIRECTOR, WATER SUPPLY DIVISION, VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION, ON BEHALF OF THE ASSOCIATION FOR STATE DRINKING WATER ADMINISTRATORS; JOSEPH A. BELLA, EXECUTIVE DIRECTOR, PASSAIC VALLEY WATER COMMISSION, ON BEHALF OF THE ASSOCIATION OF METROPOLITAN WATER AGENCIES; JOSEPH A. MOORE, ALDERMAN, ON BEHALF OF THE NATIONAL LEAGUE OF CITIES; HOWARD NEUKRUG, DIRECTOR, OFFICE OF WATERSHEDS, ON BEHALF OF AMERICAN WATER WORKS ASSOCIATION; ELMER RONNEBAUM, GENERAL MANAGER, KANSAS RURAL WATER ASSOCIATION, ON BEHALF OF NATIONAL RURAL WATER ASSOCIATION; TERRY L. GLORIOD, PRESIDENT, ILLINOIS-AMERICAN WATER COMPANY, ON BEHALF OF THE NATIONAL ASSOCIATION OF WATER COMPANIES; PAUL D. SCHWARTZ, PRESIDENT, CLEAN WATER ACTION

Mr. RUTHERFORD. Mr. Chairman and committee members, good morning. My name is Jay Rutherford, and I am the drinking water administrator for Vermont. I am speaking to you today on behalf of the Association of State Drinking Water Administrators, which represents the States, the territories, and the District of Columbia, in their efforts to provide safe drinking water to over 250 million consumers.

Today I am going to focus on two related needs. First, for those in our communities for help in maintaining safe drinking water, and also on the challenges that the States are facing in an increasing complex program.

As you heard from Mr. Grumbles earlier, EPA has identified drinking water infrastructure needs of \$150.9 billion over the next 20 years, with \$1.2 billion of that needed immediately.

The majority of this need is for transmission and distribution replacements, but many small systems also have regulation driven needs that are simply overwhelming on a per household cost basis.

In addition to decaying infrastructure, the Nation's water systems are also facing a juggernaut of at least 11 new Federal drinking water regulations from the 1996 amendments to the Safe Drinking Water Act.

Each of these regulations—arsenic, for example, can involve substantial capital needs as you have heard for systems to remain in compliance. The 1996 amendments also provided for the drinking water State revolving fund, or DWSRF, a partnership of Federal and State government funding.

Funding was authorized for 2003 at approximately \$1 billion per year, but appropriations thus far have been only 61 percent of the authorized amounts. In spite of the funding gaps, the DWF program has been highly successful to date.

Through last July the States have provided over \$3.7 billion in assistance for nearly eighteen hundred drinking water projects in the country. This program has been well received and well used by our public water systems.

To begin to address these gaps, we recommend that Congress appropriate the amounts that were not done in the earlier years to meet the full authorization. Second, we request that the current

SRF funding be extended through 2010, to appropriate at least \$3 billion annually to meet the need.

Third, is to extend the ability of States to transfer funds between the Clean Water and Drinking Water SRFs. And, fourth, to authorize specifically the use of the fund for needed security enhancements.

On the State implementation side, the acting vision was that States would implement Federal drinking water regulations, and 49 of the 50 States do just that. We regulate 169,000 public water systems nationwide, and a huge majority of these are small and require substantial technical assistance, training, compliance assistance, and oversight.

The 1996 amendments have dramatically changed the world of small water systems and the oversight programs. New, highly complex, regulations are coming out at a pace that has staggered the States' abilities to provide the assistance and oversight that these small systems need.

These new regulations include arsenic, radionuclides, microbial disinfection byproducts, unregulated contaminants, consumer confidence reports, capacity development, operator certification, source water assessments and delineations, and the Drinking Water State Revolving Fund.

In addition to all of this, the States are also maintaining core program activities, such as compliance monitoring, training, and enforcement, for the currently regulated contaminants.

And most recently States are also finding themselves deeply involved in water system security issues, as well as the drought. The Act authorizes the EPA to provide 75 percent of the States' program costs, but historically we have only received 35 percent of the costs.

In spite of the new workloads, Congress has not increased the State implementation grant since fiscal year 1997. The drinking water loan fund did authorize a 10 percent set aside from each capitalization grant to help States with the new programs.

But as the GAO noted in their 2000 report on the subject, many States have major impediments to using this set aside, thus limiting its usefulness. For example, this set aside requires a 100 percent State match to use it.

This winter, EPA and my association sponsored a national gap analysis, which showed that the gap this year is \$220 million, with a staffing shortfall of nearly 2,500 full-time equivalents.

In just 3 years, this gap will grow to \$300 million and 3,500 FTEs. This is a blue print for a public health crisis. the goal of both the Federal and the State programs is to protect public health.

On a more personal level, it is about knowing that whenever you brush your teeth, bathe your child, or have a glass of water, that that water has been monitored and treated as needed, and that the operator has been properly trained and certified, and that the water system itself has the capabilities to reliably provide that water.

With these goals in mind, we recommend the following. First, that Congress extend the safe implementation grant to 2010 and appropriate \$250 million per year for State activities.

And, second, that Congress should significantly reduce or delete the 100 percent match required for States to access the program management set aside. Mr. Chairman, thank you for inviting me to testify and I would be pleased to answer any questions that you or the committee members may have.

[The prepared statement of Jay L. Rutherford follows:]

PREPARED STATEMENT OF JAY L. RUTHERFORD, DIRECTOR, WATER SUPPLY DIVISION,
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION ON BEHALF OF THE
ASSOCIATION OF STATE DRINKING WATER ADMINISTRATORS

INTRODUCTION

The Association of State Drinking Water Administrators (ASDWA) is pleased to provide testimony before the House Committee on Energy and Commerce Subcommittee on Environment and Hazardous Materials regarding drinking water needs and infrastructure. ASDWA represents the drinking water programs in each of the fifty states, territories, and the District of Columbia in their efforts to ensure the provision of safe, potable drinking water to over 250 million consumers nationwide. ASDWA's primary mission is the protection of public health through the effective management of state drinking water programs that implement the Safe Drinking Water Act (SDWA).

WATER INFRASTRUCTURE

Water Infrastructure Needs

Providing a supply of safe, potable drinking water is critical to protecting public health and ensuring current as well as long-term economic growth of this Nation. In February 2001 the United States Environmental Protection Agency (EPA) released a report entitled *1999 Drinking Water Infrastructure Needs Survey* that indicated that drinking water systems infrastructure needs totaled \$150.9 billion over the next 20 years and that \$102.5 billion was needed *immediately* to ensure the provision of safe drinking water. The bulk of this need, \$83.2 billion, is for transmission and distribution projects followed by treatment (\$38.0 billion), storage (\$18.4 billion), source (\$9.6 billion), and other needs (\$1.9 billion). These needs are documented for the 54,000 community water systems and 21,400 not-for-profit non-community water systems nationwide. These estimates, however, do not include funds needed for compliance with the new arsenic rule or security upgrades for water system protection.

Why is there an Infrastructure Need?

Water utilities must continue to upgrade and improve their infrastructure to meet new SDWA regulatory mandates and to replace aging and failing distribution system pipes and appurtenances. Much has been learned over the last decade about specific health problems associated with distribution system problems such as leaking pipes, cross connections, and backflow. Many of these concerns are likely to be addressed specifically in the future as EPA proposes developing a distribution system rule. Since September 11, this need has expanded to include security-related upgrades for treatment plants as well as distribution systems.

The 1996 Amendments to the SDWA require that EPA develop regulations to address microbial contamination, disinfection by-products, radon, radionuclides, arsenic, ground water protection, and filter backwash. EPA must also continue to evaluate potential contaminants for regulation well into the future. As a result, infrastructure funding needs will continue to escalate as more contaminants are promulgated that address new contaminants in drinking water, and as current regulatory levels are driven lower to meet improved analytical methods to bring standards closer to the maximum contaminant level goal. In addition, new treatment technologies such as membranes, ozone, and UV irradiation will become more commonplace in water treatment. Some of these technologies are capital intensive to install and operate, while others will require significant retrofitting of current treatment plants and upgrades to distribution systems. Many drinking water systems will also be required to comply with the new arsenic standard over the next several years. In many small systems, the installation of treatment for arsenic will likely result in the need for additional system upgrades.

In addition to meeting infrastructure needs associated with compliance with the SDWA, water systems also face the challenge of replacing miles of distribution pipes as materials age and begin to fail. The demographics of distribution pipe installation indicate that over the course of the next 20 years, many of the miles of pipes that

have been put in the ground over the last 100 years will reach the end of their useful life and need replacement. Additional security upgrades will also be needed at water systems.

Current Funding Availability

Funding of water system infrastructure needs involves a partnership at the Federal, state, and local level. At the Federal level, funding is available through the Drinking Water State Revolving Loan Fund (DWSRF) that was established under the 1996 SDWA Amendments. In the SDWA, Congress authorized \$9.6 billion between FY-94 and FY-03 for states to provide loans and “grant equivalents” to water systems in need. An important note is that although \$8.6 billion was authorized through FY-02, only \$5.27 billion has been appropriated leaving a funding gap of \$3.33 billion that the states and water systems were expecting to be available to meet infrastructure needs and compliance requirements of the SDWA.

States also must match the DWSRF with 20 percent state funding as a way to further capitalize this program. Through June 30, 2001 states had contributed over \$773 million additional funds for the program. To the extent that the full Federal amount has not been appropriated; however, revenue is also lost due to the loss of state matching funds. A number of states also leverage the funds to create additional dollars for infrastructure improvements. Through June 30, 2001, states had leveraged almost \$1.5 billion in bonds to provide additional project funding. A number of states have also established their own grant and loan programs that are used to supplement DWSRF funding.

The DWSRF has proven to be very successful. Through July 2001, states have provided over \$3.7 billion in SRF assistance for 1,776 drinking water projects. Twenty percent of the funds have gone to systems serving over 100,000 people, 40 percent have gone to systems serving between 10,000 and 100,000 people, and 40 percent have gone to systems serving fewer than 10,000 people.

Additional Federal funding also comes through the Rural Utility Service Water and Waste Loan and Grant Program under the U.S. Department of Agriculture's Rural Development office. These funds assist eligible applicants in rural areas and cities and towns serving up to 10,000 people. The Federal Housing and Urban Development (HUD) Agency also provides block grants to states under its Community Development Block Grant (CDBG) program to provide assistance to small local governments that generally serve less than 50,000 people and counties with a population of less than 200,000 people. Water and wastewater projects are eligible activities under the CDBG program. Many states use these funds along with USDA and DWSRF funding to package the appropriate mix of grants and/or loans to meet a community's specific financing needs.

At the local level, a primary source of funding for infrastructure improvements comes through rates charged by utilities to consumers for water use. In many cases, however, rates have been kept artificially low and long-term maintenance costs deferred. This has the potential to contribute to “rate shock” should customers have to bear the full cost of projected infrastructure replacement needs. Municipalities can also borrow money from the private sector such as banks or go to the bond market although many smaller water systems and non-municipal systems find it more difficult to access these types of funding.

Is There a Funding Gap?

While it is possible, through instruments such as EPA's drinking water needs survey, to project drinking water infrastructure needs over the next 20 years, it is much more problematic to define how large an infrastructure funding gap exists. To calculate this accurately, one needs to have a solid understanding of the current and long term funding needs and then have a fairly accurate assessment of the total sources of revenue at the Federal, state, and local level that can be brought together to meet these infrastructure funding needs. The delta (or difference) between these two numbers represents the funding gap or need but only at the gross national level. The “gap” can vary significantly on a water system-by-water system basis depending on system size, contaminants of concern, the system's current rate structure, access to available capital, and the age of the system, among many factors.

Conclusion

Drinking water system infrastructure needs will continue to increase due to new SDWA regulatory requirements as well as the need to replace aging and failing pipes in distribution systems, and implement new security upgrades. A continued partnership among Federal, state, and local funding sources will be essential to ensure the long-term provision of safe, potable drinking water to consumers nationwide. Numerous needs surveys, including EPA's recent analysis, have concluded that nationally, water systems face a daunting task in continuing to ensure safe

drinking water. The highly successful DWSRF should be continued as a viable mechanism for meeting current and future water system funding needs.

Recommendations

- Congress should reduce the current drinking water funding gap by appropriating the full authorization of the DWSRF and the backlog of unappropriated funds.
- Congress should extend the current DWSRF authorization through FY 2010.
- Congress should appropriate at least \$3 billion each year for FY 2003-2010.
- Congress should extend the ability to transfer funds between the DWSRF and CWSF.
- Congress should include security upgrades as eligible projects under the DWSRF.

STATE INFRASTRUCTURE

State Implementation Responsibilities

State drinking water programs also need adequate funding to ensure the effectiveness of their own “infrastructure” to carry out the myriad responsibilities of the SDWA. Since the SDWA Amendments of 1996, state program responsibilities have dramatically expanded to move beyond compliance at the tap to delineating and assessing the sources of all waters used for public water supplies, ensuring qualified operators at all water systems, defining and implementing water system capacity programs, creating a new DWSRF funding mechanism, and providing significantly more information and outreach to the public. These efforts are in addition to implementing Federal as well as state-specific drinking water regulations addressing specific contaminants. Since September 11th, significant new security responsibilities have fallen to states for training, communication, and in some instances conducting vulnerability assessments for water systems. In addition, almost half the states are currently experiencing drought conditions that are significantly taxing state staff and resources.

Forty-nine of the 50 states currently have “primacy” or enforcement authority for the Federal SDWA. To achieve and maintain primacy, states must adopt rules that are no less stringent than the Federal requirements and have the ability to enforce these regulations. Although some states have requirements that are more stringent; for the most part, state drinking water programs are implementing and enforcing Federal requirements.

Collectively, state programs provide oversight, implementation assistance, and enforcement for approximately 169,000 public water systems nationwide. These systems range from large metropolitan municipalities to mobile home parks and schools. The vast majority (over 95 percent) of these systems are small, serving less than 3,300 people. Many of these systems require extensive technical assistance, training, and oversight.

Today, the regulatory landscape is significantly more complex than ever before. Since FY-97, state Public Water Supply Supervision (PWSS) dollars have had to stretch to cover development, implementation, and enforcement of numerous new regulations and programs such as those to address arsenic, radionuclides, the microbial/disinfection byproducts rule cluster, unregulated contaminant monitoring, consumer confidence reports, capacity development, expanded operator certification requirements, source water assessment and delineation, and the DWSRF. States anticipate new regulations to be put in place this year to address radon and groundwater. States are also expected to implement revisions to the surface water treatment and lead and copper rules, public notification, and variance and exemption requirements. These requirements are in addition to the state program responsibilities for core activities such as compliance monitoring, data management, training, and enforcement for 88 currently regulated contaminants. States also are responsible for ensuring that public health is protected through preventive measures such as disease surveillance, risk communication, sanitary surveys, laboratory certification, permitting, and emergency response. States expect that their responsibilities will continue to expand as EPA promulgates additional regulations and reviews current regulations for modification. This overwhelming new workload has added to the historical strain on state program resources and staff.

State Funding

The SDWA authorizes EPA to fund up to 75 percent of the costs to states to implement the drinking water program. Historically, however, states have contributed 65 percent of the funding while EPA has only contributed 35 percent. While this gap has closed in recent years due to the advent of set-asides from the DWSRF, many states still substantially over match the Federal contribution. Given current state fiscal constraints, it is questionable whether states will be able to keep pace with these funding levels in the future.

The current Federal PWSS grant provides \$87.3 million for states to implement their programs (the remainder of the \$93 million currently appropriated by Congress is directed to Indian Tribes). This level has not increased for states over the last five years (since FY-97), even though many of the new initiatives under the 1996 Amendments became effective almost immediately. The level funding of \$87.3 million actually means that states have lost funding due to inflation and rising personnel costs. A recent state survey, conducted by ASDWA and EPA, indicates that the current state funding gap is \$220 million climbing to \$300 million by FY-05.

Congress recognized the need to fund state program activities and in the 1996 Amendments allowed states to take up to a 10 percent set-aside from the drinking water SRF for program implementation. EPA, however, has never requested the full \$1 billion per year authorization and states have only been able to access 4 percent of the set-aside funds. To the extent that SRF funds are also used to provide resources for new programs such as operator certification training reimbursement and unregulated contaminant monitoring the corpus of the funds available for state use is further reduced. Many states have also encountered significant barriers to fully accessing these funds including:

- the inability to obtain the needed one-to-one state match with new state revenue (for program implementation activities)
- the inability to shift resources directed to water system infrastructure improvements to state program implementation
- the unstable nature of the annual SRF funding allocation which is based on water system needs and is affected by the states' annual intended use plan for projects and set-asides
- the threat of up to 40 percent withholding for failure to implement certain program requirements such as capacity development and operator certification
- the unwillingness of state legislatures to approve new hires using "temporary" funding (the drinking water SRF is only authorized until 2003)

To supplement insufficient Federal funding, many states have turned to state general revenues and fees to maintain an adequate core program. These additional funds; however, have not been adequate to fully meet state program implementation costs.

ASDWA and EPA conducted a national resource gap analysis in 2001 to estimate state resources needed to implement the drinking water program between 1999 and 2010. The analysis showed that in FY-02, the funding gap for states to implement the SDWA equaled \$220 million and staffing needs fell short by 2,478 full time equivalents (FTEs). By FY-05, the gap will widen to \$300 million and 3,533 FTEs.

Even the U.S. General Accounting Office (GAO) has raised state funding concerns. In August 2000, GAO released a report to Congress entitled, *Drinking Water: Spending Constraints Could Affect States' Ability to Implement Increasing Program Requirements*. An extrapolation of their findings indicate that even if all states had been able to access the maximum 31 percent of DWSRF set-asides for program implementation and related activities, there would still be a funding gap beginning in FY-02. Since few states are able to access the full set-aside amounts, the funding gap is much greater than GAO's "optimum" estimate, and in fact, a gap already exists. The Report further notes that even those states that felt they were managing to keep up with the pace of implementing and enforcing the new statutory program requirements, at least for the short term, were only able to do so by "... scaling back their drinking water programs, doing the minimum necessary to meet requirements, and setting formal or informal priorities among their responsibilities." This is a blueprint for a public health crisis.

Conclusion

Adequate infrastructure funding needs for state SDWA program implementation is just as critical as adequate funding for water system infrastructure improvements. States are responsible for ensuring water system security and compliance and providing "infrastructure" for source water assessments, certified and trained water system operators, water system financial, technical, and managerial competency, public outreach and communication, and working directly with water systems to obtain and maintain compliance. As Congress moves forward to evaluate and find solutions for the water infrastructure funding gap attention must also be directed to the state program funding gap.

The goal of both of these efforts is protecting public health. It is about knowing that whenever you brush your teeth, bathe your child, or prepare your food, the water has been monitored and tested for contaminants; that the responsible operator has been trained and certified; and that the drinking water system has demonstrated that it is technically, financially, and managerially capable of providing safe drinking water. In order to meet Congressional expectations and Federal regu-

lations to successfully implement the SDWA, states and water systems both need increased funding to ensure a safe and dependable supply of drinking water today and for future generations.

Recommendations

- Congress should extend the PWSS authorization through 2010 and authorize and appropriate \$250 million per year for state drinking water implementation activities.
- Congress should significantly reduce or delete the one-to-one DWSRF match required by states to access DWSRF funds for program implementation.

Mr. SHIMKUS. Thank you very much. We have been called for votes, and we are going to try to get to two more opening testimonies, and then we will have to break.

And so I would like to recognize Mr. Bella for 5 minutes.

STATEMENT OF JOSEPH A. BELLA

Mr. BELLA. Good morning, Mr. Chairman, Congressman Pallone, and members of the subcommittee. My name is Joseph Bella, and I am the executive director of the Passaic Valley Water Commission in New Jersey.

I am testifying on behalf of the Association of Metropolitan Water Agencies, which is an organization of the largest publicly owned drinking water suppliers. The Passaic Valley Water Commission serves drinking water to 750,000 people in Passaic, Bergen, Hudson, Essex and Morris Counties, in Northeastern New Jersey.

The commission also provides water on a wholesale basis to municipal water agencies and private companies, including the New Jersey-American Water Company and United Water-New Jersey Water Company.

AMWA is a founding member of the Water Infrastructure Network, or WIN, which consists of 46 organizations, many of which you know, representing publicly and privately owned water systems, urban and rural water systems, mayors, city council members, county officials, labor, environmentalists, consumers, engineers, manufacturers, and builders.

WIN has estimated that drinking water utilities across the Nation collectively need to spend about \$24 billion per year for the next 20 years on infrastructure, for a total of \$480 billion.

Other estimates by the American Water Works Association and the EPA show significant needs as well. All these estimates demonstrate that safe investments or investments for safe clean water and fire protection will be massive.

According to a recent survey, just 32 metropolitan water systems reported that they must spend \$27 billion over the next 5 years on drinking water and waste water infrastructures.

At the Passaic Valley Water Commission, we anticipate spending \$160 million over the next 10 years on capital improvements. Compounding these financial burdens are security related costs. Our utility anticipates spending as much as \$2 million over the next 2 years.

Water infrastructure in many American cities is 80 to 100 years old, and the cities that are served by metropolitan water utilities are economic engines of their State and of the Nation.

A significant Federal investment in these large publicly owned agencies will translate into stronger water systems, better fire pro-

tection, and thousands of new jobs. Yet, 31 States provide no assistance to metropolitan water agencies in fiscal year 2001.

What is needed is to help close the drinking water infrastructure gap is an investment program that helps both large and small water suppliers, and a strong grants component with a 15 percent set aside for metropolitan drinking water agencies to make certain that the States address their needs.

Recently introduced legislation proposes to invest more funds in water infrastructure and establish new procedures and requirements to apply for and receive SRF assistance. These bills also address water rates, asset management programs or plans, community planning, and contracting.

These practices embody those commonly used in metropolitan water agencies today. For instance, the Passaic Valley Water Commission has raised rates on average of 3 percent per year, but had the commission not received SRF assistance, we would have had to raise rates an additional 3 percent per year to cover over \$14 million in additional debt that would have accompanied private capital.

What we are concerned about is that States and the EPA might be authorized to develop new and cumbersome requirements for water systems applying for funds, even though many State, city, and county governments and some State agencies have already addressed these issues adequately.

That is not to discard what responsible water agencies have already accomplished and create new layers of bureaucracy. The bill also requires SRF fund applicants to consider public-private partnerships, a form of privatization.

And whether a water agency considers a public-private partnership, it should remain at the discretion of local government, because local factors will dictate whether their partnership is in the best interests of the consumers.

Privatization often sells itself as faster, better, and cheaper than public operation, but what the water industry has learned in the last several years is that public water utilities can operate just as efficiently as private water companies.

At the Passaic Valley Water Commission, by analyzing our competitiveness and reengineering our operations, we have been able to save nearly \$7 million per year and increase revenues by \$33 million.

Dozens of other public systems have produced similar results, upending the faster, better, cheaper method. Therefore, if it makes sense to require public recipients to consider privatization, then it makes sense to require private SRF recipients to consider becoming public entities.

AMWA appreciates this opportunity to discuss the infrastructure needs of drinking water agencies, particularly those serving metropolitan areas. We look forward to working with the subcommittee on proposals to help large and small water agencies continue to provide safe and affordable drinking water. Thank you very much.

[The prepared statement of Joseph A. Bella follows:]

PREPARED STATEMENT OF JOSEPH A. BELLA, EXECUTIVE DIRECTOR, PASSAIC VALLEY
WATER COMMISSION ON BEHALF OF THE ASSOCIATION OF METROPOLITAN WATER
AGENCIES

INTRODUCTION

Good morning, Mr. Chairman. My name is Joseph Bella. I'm the Executive Director of the Passaic Valley Water Commission, headquartered in Clifton, New Jersey.

I'm testifying on behalf of the Association of Metropolitan Water Agencies, which is an organization of the nation's largest publicly owned water agencies. Together, AMWA members serve clean, safe drinking water to over 110 million Americans.

The Passaic Valley Water Commission was established in 1927 and serves drinking water to 750,000 people in Passaic, Bergen, Hudson, Essex and Morris Counties in northeast New Jersey. The commission also provides water on a wholesale basis to municipal water agencies and private companies, including the New Jersey-American Water Company and United Water-New Jersey.

AMWA is a founding member of the Water Infrastructure Network (WIN), which consists of 46 organizations representing publicly and privately owned water systems, urban and rural water systems, mayors, city council members, county officials, labor, environmentalists, consumers, engineers, manufacturers and builders.

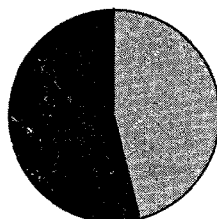
Here is a list of WIN members. Committee members are probably familiar with many of them. American Coal Ash Association (ACAA); American Concrete Pipe Association (ACPA); American Concrete Pressure Pipe Association (ACPPA); American Council of Engineering Companies (ACEC); American Public Works Association (APWA); American Society of Civil Engineers (ASCE); American Water Works Association (AWWA); Associated General Contractors of America (AGC); Associated Equipment Distributors (AED); Association of California Water Agencies (ACWA); Association of Metropolitan Sewerage Agencies (AMSA); Association of Metropolitan Water Agencies (AMWA); American Portland Cement Alliance (APCA); Construction Management Association of America (CMAA); California Rebuild America Coalition (CalRAC); Clean Water Action (CWA); Construction Industry Manufacturers Association (CIMA); Design-Build Institute of America (DBIA); Environmental and Energy Study Institute (EESI); Laborers' International Union of North America (LIUNA); International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers; International Union of Bricklayers and Allied Craftworkers (BAC); International Union of Operating Engineers, AFL-CIO (IUOE); National Association of Counties (NACO); National Association of Flood and Stormwater Management Agencies (NAFSMA); National Association of Regional Councils (NARC); National Association of Sewer Service Companies (NAASCO); National Association of Towns and Townships (NATAT); National Heavy & Highway Alliance; National League of Cities (NLC); National Ready Mixed Concrete Association (NRMCA); National Rural Water Association (NRWA); National Society of Professional Engineers (NSPE); National Urban Agriculture Council (NUAC); Operative Plasters' and Cement Masons' International Association of the United States and Canada (O&CMIA); Pipe Rehabilitation Council (PRC); Plastics Pipe Institute, Inc. (PPI); Prestressed/Precast Concrete Institute (PCI); Rural Community Assistance Program, Inc. (RCAP); Uni-Bell PVC Pipe Association (Uni-Bell); The Vinyl Institute; United Brotherhood of Carpenters and Joiners of America (UBC); Water Environment Federation (WEF); WaterReuse Association (WaterReuse); and Western Coalition of Arid States (WESTCAS).

INFRASTRUCTURE FUNDING NEED AND GAP

The Water Infrastructure Network's (WIN) report *Clean & Safe Water for the 21st Century* and its follow up, *Water Infrastructure Now: Recommendations for Clean and Safe Water in the 21st Century*, estimate that drinking water utilities across the nation collectively need to spend about \$24 billion per year for the next 20 years on infrastructure, for a total of \$480 billion. WIN's analysis also concluded that drinking water systems currently spend \$13 billion per year on infrastructure, leaving an \$11 billion annual gap between current spending and overall need. There are similar figures for wastewater systems.

**Overall Drinking Water Infrastructure Needs =
\$24 billion per year**

Local Spending = \$13 billion



Gap = \$11 billion

Other estimates show large long term needs as well. The American Water Works Association's Dawn of the Replacement Era estimates a \$250 billion need over the next 30 years, based on a survey of 20 utilities. And EPA's drinking water needs survey indicates a \$150.9 billion need for the next 20 years, although it only focuses on needs related to compliance with the Safe Drinking Water Act.

WIN's estimate was developed by expert economists who are familiar with the water industry, its resources and how it manages and builds infrastructure. We believe it is comprehensive and accurate. Nevertheless, all of the estimates demonstrate that investments for safe, clean water and fire protection will be massive.

According to a recent survey, just 32 metropolitan systems reported that they must spend \$27 billion over the next five years on drinking water and wastewater infrastructure¹. For instance, Cleveland, Ohio must spend up to \$700 million over the next five years; Columbus, Ohio, \$253 million; New Orleans, \$1.2 billion; Kansas City, Mo., over \$500 million; Denver, \$363 million; Chicago, \$600 million; Austin, \$568 million; Phoenix, \$1.28 billion; Omaha, Nebraska, \$355 million. In Detroit, ongoing and new capital expenditures for drinking water projects are \$1.4 billion over the next five years and \$2.9 billion for wastewater projects.

At the Passaic Valley Water Commission, we anticipate spending \$160 million over the next ten years on capital improvements.

INCREASED SECURITY COSTS

Compounding these financial burdens are the looming investments local drinking water agencies will be forced to make to help protect their facilities and consumers from potential terrorist attacks. The Passaic Valley Water Commission anticipates spending as much as \$2 million over the next two years.

Near-term security improvements at water systems include fencing around facilities and reservoirs, security doors and locks, intruder alert systems, better lighting, surveillance cameras to monitor entry ways and sensitive facilities, access control and barricades around key facilities. Some systems already have some or all of these measures in place, while others are in the process of installing them. The American Water Works Association estimates that these costs could total \$1.6 billion for the 54,000 public drinking water systems in the U.S. The average cost per utility ranges from \$8,000 for water systems serving only a few thousand people to \$700,000 for systems serving more than 100,000 people. Those serving more than one million people expect to spend much more.

Capital projects may be needed to. Water systems are now in the process of assessing their vulnerabilities to terrorism. When these assessments are complete, water systems will know what they need to accomplish to become more safe and secure. Only then will we know accurately what capital construction projects are going to be needed.

PAST AND PRESENT FEDERAL FUNDING

The needs of small water systems are substantial, and the lack of infrastructure dollars available to them could have public health impacts. However, metropolitan water agencies—those serving 100,000 or more people—are facing monumental infrastructure replacement costs. AMWA urges the committee to consider mechanisms to address the needs of both small and large systems.

Historically, the federal government has invested billions of dollars in smaller drinking water systems. Over a 12 year period, the Rural Utility Service (RUS) and

¹ Waterworld, December 2001

EPA have poured over \$8 billion in loans and grants into small systems and \$932 million into systems serving between 10,000 and 100,000 people. During this same time period, metropolitan water systems have received drinking water SRF loans amounting to only \$547 million.

This difference of nearly \$8.5 billion illustrates the need for state and federal policy makers to consider the problems of the nation's urban areas and the critical nature of these systems to the economic wellbeing of the country.

The water infrastructure in many American cities is 80 to 100 years old. Although some states make loans to large water systems to ensure the funds revolve, especially where small systems are not prepared to apply for assistance, most states do not help large systems. In fact, 31 states provided no assistance to metropolitan water agencies in fiscal year 2001. Yet the cities that are served by metropolitan water utilities are the economic engines of their states and the nation, and a significant federal investment in these large publicly owned agencies will translate into stronger water delivery systems, better fire protection and thousands of new jobs. Along with banking and finance, telecommunications, transportation and oil and gas production, water infrastructure is among the nation's most critical infrastructures. Uninterrupted water service is necessary to local, state and national economies; strong infrastructure provides fire protection; and safe drinking water protects our families and consumers from water-borne diseases and pollution from farm and urban runoff and other types of contamination.

WATER RATES

WIN estimates that household water bills must double or triple in most communities, on average, if utilities are forced to absorb the entire infrastructure bill. This scenario is complicated by rate inelasticity. A household's water bill often covers drinking water supply, sewer and storm-water control. Raising rates to cover one, diminishes the ability to pay for the other two. Unfortunately, all three sectors are facing massive infrastructure challenges. The impact on American families is even harsher when you consider the other utility expenses, such as phone, gas and electricity.

Members of Congress who served at the local level know this debate all too well. In communities large and small across the nation, utility managers face rate inelasticity each time they propose a rate increase to cover infrastructure costs.

DEMOGRAPHICS

Further compounding this issue is demographics. Large investments are a major source of financial vulnerability for water utilities due to the very fixed nature of the pipes and plants and the very mobile nature of the customers. When populations grow, the infrastructure is expanded, but when people move away, the pipe and the liability for repair and replacement remain behind, creating a financial burden on the remaining customers. This is true in small towns facing economic hardship, as well as cities, where the more affluent leave the less affluent to cover the water infrastructure maintenance and replacement costs. This problem, known as "stranded capacity," adds considerably to the challenge of funding infrastructure replacement in our communities.

LEGISLATIVE APPROACHES

What is needed to help close the drinking water infrastructure gap is an investment program that not only helps small systems achieve and ensure regulatory compliance, but also recognizes the challenges facing large water systems. AMWA and our WIN partners have asked Congress to authorize and appropriate \$57 billion over a five year period for both drinking water and wastewater infrastructure (\$28.5 billion for drinking water). This amount is only half of the infrastructure funding gap for those years. This investment program should include a strong grants component to help systems that are disadvantaged, yet have the capacity to return to self-sustainability. We recommend it also include a 15-percent set-aside for metropolitan drinking water agencies, to make certain that states address their needs. Under this proposal, small systems would continue to get the help they need to comply with the Safe Drinking Water Act, and metropolitan water agencies could invest in replacing aging infrastructure. In states where there are few metropolitan systems or where the systems do not need assistance, the funds set aside could be used for small systems.

Legislation was recently introduced by leaders of the Senate Environment and Public Works Committee and the House Transportation and Infrastructure Committee to invest more funds in water infrastructure and to establish new procedures and requirements to apply for and receive SRF assistance.

Although the needs of drinking water agencies over the next five years are nearly \$60 billion, the Senate bill, if enacted, would authorize \$15 billion over five years and fund hundreds of projects to ensure safe drinking water for many years to come.

These bills also attempt to address the areas of water rates, asset management plans, community planning and contracting. These practices embody those commonly used in metropolitan water agencies today. For instance, the Passaic Valley Water Commission has raised rates on average three percent per year. This allows us to keep up with inflation, invest roughly \$3 million to \$4 million in infrastructure placement annually and cover other expenditures. But had the commission not received SRF assistance, we would have had to raise rates an additional three percent to cover the \$14 million in debt service that would have accompanied the private capital. What we are concerned about is that states and the EPA might be authorized or even directed to develop new and cumbersome requirements for water systems applying for funds, even though many city and county governments and some state agencies already address these issues adequately.

AMWA encourages the subcommittee to maintain these practices as ideals and provide the opportunity for utilities that have not yet adopted them to do so. The subcommittee should avoid a situation in which the states or EPA enter the domain of local government and attempt to reinvent the wheel. Instead, industry organizations have many years of experience in this area and could be relied upon to provide technical and educational service to those utilities that have not adopted the practices.

Let's not discard what responsible water agencies have already accomplished and create a layer of bureaucracy that could make applying for SRF assistance too cumbersome. This would reduce access to the program, potentially leaving many water systems with compounding needs and unresolved compliance problems.

The bills also emphasize the importance of creative approaches to managing a water utility by encouraging consolidation, partnerships, and adoption of non-structural alternatives. Many water systems are already considering various approaches to regional water management and it is important that these types of arrangements be evaluated and supported. For instance, the Passaic Valley Water Commission has partnered with private water companies to buy and sell water to satisfy local supply demands, and we have absorbed water systems around us, improving water service to consumers. Under one partnership arrangement, the Passaic Valley Water Commission, the city of Newark and other communities partnered to form the North Jersey District Water Supply Commission, to share the costs of developing new sources of water. Other utilities are engaged in a variety of voluntary cooperative partnerships, ranging from providing less costly water supplies to cooperation in obtaining new supplies and developing needed infrastructure.

Rather than require consideration of alternative approaches as part of a loan application process, the SRF should provide financial incentives in the form of grants, loan forgiveness or lower interest rates for those drinking water systems that develop alternative arrangements that provide more effective and efficient management of local resources. In particular, financial incentives should be provided to those drinking water systems that agree to partner with small systems facing compliance problems.

Among the partnerships water systems would be required to consider under the Senate bill are public-private partnerships, a form of privatization. AMWA is not here today to oppose private-public partnerships, but whether a water agency considers a public-private partnership should remain at the discretion of local government, because local factors will dictate whether the partnership is in the interest of the consumers. Therefore, the association urges the subcommittee to avoid endorsing public-private partnerships. Privatization is a very contentious issue in most communities.

Privatization often sells itself as "faster, better, cheaper" than public operation. But what the water industry has learned in the last several years is that public water utilities can operate just as efficiently as private water companies, or more so. In New Orleans, the public employees participated in a competitive bid process against two international private contractors, and the public employees demonstrated they could operate the city's water systems even more efficiently than the private firms. At the Passaic Valley Water Commission, by analyzing our competitiveness and reengineering our operations, we have been able to save nearly \$7 million per year and increase revenues by \$3 million. Dozens of other public systems have produced similar results, upending the "faster, better, cheaper" myth.

Privatization experts have identified some of the issues that need further exploration. Among them are those surrounding accountability and the blurring of roles and responsibilities. For example, who is responsible for complying with environmental regulations, resolving service complaints and planning to meet future

needs?² Who pays if the private partner fails? If the private partner takes on more liability than it can afford, who's responsible when something goes wrong?

Another issue that has recently emerged is a concern about the implications of international trade agreements on domestic privatization since four of the major companies involved in the U.S. water market are located in other countries. For example, once a municipality contracts with a foreign provider, can that municipality withdraw from the agreement? What impact could the General Agreement on Trade in Services (GATS) and the authority of the World Trade Organization (WTO) have on future contracts? Will GATS or WTO prevent publicly owned U.S. water systems from providing water or services to neighboring water agencies.

The Senate bill also proposes procurement provisions that were abandoned in the Clean Water Act when the Clean Water SRF program was adopted. The requirements were abandoned because they encumbered both state agencies and local government, overrode state and local procurement laws and created many disputes. The same would hold true today, and AMWA urges the subcommittee to avoid such provisions in its own legislation.

CONCLUSION

AMWA appreciates this opportunity to discuss the infrastructure needs of drinking water agencies, particularly those serving metropolitan areas. We look forward to working with the subcommittee on proposals to help large and small water agencies continue to provide safe and affordable drinking water.

Mr. SHIMKUS. Thank you. You did a great job. Welcome. Mr. Moore, and from the great city of Chicago, Illinois, I should have given you due recognition in my opening comments. I do so now, thank you, and you are recognized for 5 minutes, after which we will then recess the committee and then go to the floor for a vote.

STATEMENT OF JOSEPH A. MOORE

Mr. MOORE. Thank you very much, Mr. Chairman. I do bring you greetings from that part of Illinois north of I-80. I am an Alderman as you indicated from the city of Chicago, and I am also chair of the National League of Cities Energy, Environment and Natural Resources Committee.

I am here to testify on behalf of the National League of Cities, and the 18,000 cities we represent across the United States on the need for an expanded Federal investment in the Nation's drinking water and waste water infrastructure.

And I think what we have heard today for the most part is a consensus that we face an unprecedented financial problem. There is a huge financial gap between what cities are able to invest and what is actually needed to protect the public health, the environment, and our economy.

Now, we can differ over exactly how much that gap is, but there is no question that the gap is very, very significant. What I would like to do just very briefly is address four matters.

First of all, why we have this funding gap, and second, what local governments have been doing to address this issue. Third, why the Federal Government should help us out; and finally, how the Federal Government should help.

First of all, why the funding gap. Well, our infrastructure is crumbling all at once. Different materials, with increasingly shorter shelf lives, are used over the years, leaving us with where we have got a hundred years worth of infrastructure being exhausted all at once.

²Dr. Janice Beecher, Beecher Policy Research, Public Works Financing, November 2000.

So that the iron pipes that were made and installed back a hundred years ago, and the concrete pipes that were installed in World War I, and the plastic pipes that have been installed since World War II, are essentially all falling apart at the same time.

Furthermore, we have had a great amount of population growth in our urban areas, and as the infrastructure aged, our population grew, and so we have a situation now where systems that were designed and built for a population at the time of construction are now serving 2 to 3 times as many people as their designed capacity.

Finally, cities have been faced by Federal mandates under the Clean Water Act and the Safe Drinking Water Act, and those mandates have drove up the costs, and have depleted local resources dedicated to infrastructure repair.

And until the 1996 amendments to the Safe Drinking Water Act, there was absolutely no Federal commitment at all, and local rate payers bear the entire costs. And I would argue that even with those amendments, cities like Chicago, like Kansas City, and others, have not really been able to benefit from any or have benefited only very minimally from any Federal assistance.

So what are our local governments doing to address the issue? We are investing \$60 billion annually, and Chicago alone is planning to spend over a \$100 million a year over the next 5 years on water infrastructure.

We have the world's two largest water treatment plants, two Quib complexes, 12 pumping stations, and hundreds of miles of pipe, and they all require large capital investment.

This amount does not include security related infrastructure improvements, which have become a much more pressing issue following September 11.

And we currently in Chicago estimate that the cost of these security related infrastructure improvements will be at least \$14 million, and that estimate is actually likely to increase as our vulnerability assessment nears completion.

Local systems are raising water and sewer rates to cover the additional costs. We are raising our water and sewer rates at the rate of 4 percent a year over the next 4 years. Some cities are raising their rates even higher.

So local governments are doing their part, and they are managing their assets in a more of a business-like manner, and Chicago has worked hard to achieve cost efficiencies, and we have outsourced our engineering program management functions, and portions of our billing and collection systems.

And we outsourced a portion of our water pipe construction program, and so the fact of the matter is that we don't need the Federal Government to encourage us to institute—as we are doing that already.

Finally, why should the Federal Government help? Well, a sound water and sewer infrastructure is the basis of a sound economy. A sound infrastructure is essential to the protection of public health.

Federal assistance as demonstrated by the Clean Water Act is a catalyst that ensures public health protection and environmental progress, and it is needed to enhance the security of our drinking and waste water systems, systems that were designed with little

thought given to the kind of terrorist activities that we witnessed on September 11, need to be upgraded.

The bottom line is that clean and safe water is no less a national priority than national defense, or the interstate highway system, or aviation systems, and all of those enjoy significant, long term, Federal assistance and Federal grant programs.

And water and waste water infrastructure deserve no less. How can the Federal Government help? We need to have a financial partnership for water infrastructure. We need to have a system that provides more flexibility versus grants, as opposed to loans.

And we need to have a standard funding for research and technology to assist local governments in providing clean and safe water more efficiently and effectively. And we need to establish a mechanism to develop a long term and secure financial partnership for water infrastructure needs, and provide assistance as I said to enhance security of water systems.

And finally as you work on new proposals, I would just caution you to not put into place new Federal requirements, particularly Federal requirements for establishing public-private partnerships.

The fact of the matter is that these decisions should be made at the local level. I do have and I would like to include in the record a letter from my colleague in Atlanta, who has outlined some of the serious problems that they face when they privatize their system.

All I ask is that you give our local entities the flexibility to address the privatization issue on a case-by-case basis, and I appreciate your attention.

[The prepared statement of Joseph A. Moore follows:]

PREPARED STATEMENT OF JOSEPH A. MOORE, ALDERMAN, CHICAGO, ILLINOIS ON
BEHALF OF THE NATIONAL LEAGUE OF CITIES

Mr. Chairman, members of the Committee: I am Joseph Moore, Alderman from the city of Chicago, and chair of the National League of Cities' Energy, Environment and Natural Resources Committee. I am here today to testify on behalf of NLC and the 18,000 cities we represent across the United States on the need for an expanded federal investment in the nation's drinking water infrastructure. We appreciate the opportunity to present the views of our members as well as those of the Water Infrastructure Network¹.

I would like to discuss the Water Infrastructure Network (WIN) Report—*Water Infrastructure NOW*—which recommends a major new and revitalized federal commitment to the nation's drinking water and wastewater infrastructure. It outlines the parameters of a potential federal response to the \$1 trillion funding gap between the amount cities are currently investing in our drinking water and wastewater infrastructure and the additional dollars needed to assure protection of public health, the environment and our economy over the next generation.

Before examining the details of the Report, however, it is necessary to address some fundamental questions:

¹The Water Infrastructure Network is a coalition of state, local, environmental, professional, and labor organizations comprised of 29 diverse groups including: American Coal Ash Association; American Concrete Pressure Pipe Association; American Consulting Engineers Council; American Public Works Association; American Society of Civil Engineers; American Water Works Association; Associated General Contractors; Association of California Water Agencies; Association of Metropolitan Sewerage Agencies; Association of Metropolitan Water Agencies; California Rebuild America Coalition; Clean Water Action; Environmental and Energy Study Institute; Environmental Business Action Coalition; International Union of Operating Engineers, AFL-CIO; National Association of Counties; National Association of Flood and Stormwater Management Agencies; National Association of Towns and Townships; National League of Cities; National Rural Water Association; National Society of Professional Engineers; National Urban Agriculture Council; Prestressed/Precast Concrete Institute; Rural Community Assistance Program, Inc.; Water Environment Federation; WaterReuse Association; and Western Coalition of Arid States.

- (1) Why do we have a funding gap of such enormous magnitude?
- (2) What have local governments been doing to address the issue?
- (3) Why should the federal government help? and,
- (4) How should the federal government help?

1. WHY IS THERE A WATER INFRASTRUCTURE FUNDING GAP?

A number of factors contribute to the water infrastructure funding gap facing municipalities:

- the simultaneous expiration of the useful life of water infrastructure installed at different times;
- population growth; and
- implementation of new, more costly, and more complex federal mandates which, in effect, substitute federal priorities for local priorities.

The nation's drinking water infrastructure represents more than a century of investment, funded almost entirely by local ratepayers. A significant part of the nation's water infrastructure dates from the late 19th century. More recent expansions of these systems took place following the two world wars. All of which means the newest systems are over 50 years old. What is more, the newer the infrastructure, the more likely it is to be deteriorating. Different materials, with increasingly shorter useful lives, were used over time, thus leaving us in the position where 100 year's worth of infrastructure is being exhausted all at once. As a consequence, municipalities now face a confluence of deterioration of their underground pipes, and, in some cases, their treatment facilities, that process the nation's drinking water and sewerage.

Until passage of the 1996 Safe Drinking Water Act Amendments, the federal government made no financial commitment to the nation's drinking water systems. The fact that drinking water in the United States is among the safest in the world is a significant tribute to the local ratepayers and their leadership that have financed these treatment facilities.

Another factor contributing to the current funding gap is that urban populations grew significantly as local water infrastructure aged. Systems designed and built for the population at the time of their construction are now serving two to three times as many people as their design capacity.

While Congress recognized the need to provide financial assistance to municipal drinking water utilities when it passed the Safe Drinking Water Act Amendments of 1996, this funding is limited in its use for infrastructure repair. For the most part, it is available only as loans, and is substantially targeted to addressing the non-compliance problems of the nation's smaller drinking water systems.

Finally, federal mandates have also played a role in diverting local resources away from local needs and priorities and retargeting them to federal priorities. When cities do manage to set aside funds to address a critical local water infrastructure need, more often than not, a new unfunded—and usually costly—federal mandate depletes local resources that would have been dedicated to infrastructure replacement.

2. WHAT HAVE LOCAL GOVERNMENTS BEEN DOING TO HELP THEMSELVES?

- local governments—or rather local tax and ratepayers—invest \$60 billion annually in our drinking water and wastewater systems. A recent asset management study in 20 cities estimated the average per capita replacement value of their systems to be \$2,400 per person.
- local systems are raising water and sewer rates to accommodate the increasing costs (which EPA indicates are 6 percent a year above the inflation rate) of operating and maintaining their systems.
- local governments are managing their infrastructure assets in a more businesslike manner, spurred in part by new federal requirements developed by the Government Accounting Standards Board—on which local government bond ratings are based.
- local governments are applying new management tools to assess and operate their systems more effectively and efficiently.

Until recently, our drinking water infrastructure was funded entirely by local ratepayers. And the deteriorating water infrastructure that must be replaced because it has maximized its useful life over the past 50 to 100 years was constructed entirely at local expense.

In addition, municipal local rate structures generate the \$60 billion annually we invest in maintaining and operating our drinking water and wastewater systems and cover 90 percent of all costs, including construction costs. In meeting the enormous needs of the future, cities also expect to finance—again through local rate-

payers—\$1 trillion of the needs for repair, rehabilitation and replacement of the aging and crumbling water infrastructure over the next 20 years.

Municipalities have also been raising their water and sewer rates to accommodate increases in their operating and maintenance costs, which, according to EPA, are rising at six percent above inflation annually. Many cities require developers, and subsequently homeowners, to finance the cost of new connections to municipal systems.

In addition, cities are improving their management practices. Local governments will soon be required to comply with new rules promulgated by the Government Accounting Standards Board in Statement 34 (GASB 34). These rules will require municipalities to report their long-term financial position, quantifying resources and obligations more comprehensively. The information cities will be required to provide will include an evaluation of the condition of local infrastructure. Bond rating services and others will be able to evaluate whether cities are “acquiring assets to benefit future fiscal years or if these assets are being used but not replaced.”² The GASB 34 rule will, at a minimum, encourage local governments, who have not done so already, to evaluate their infrastructure in a more systematic manner.

Other asset management tools, such as the “Nessie Study” are also being implemented by cities to help identify when pipes and treatment plants were built, how long they can be expected to last, when they will need to be replaced, and the likely cost for such replacement. More efficient operations are also among the tools used to provide more cost effective operations at the municipal level. And some local governments are subjecting their system operations to competitive bidding to affect cost savings and generate new and better efficiencies.

3. WHY SHOULD THE FEDERAL GOVERNMENT HELP?

- a sound infrastructure is the foundation of a sound economy;
- a sound infrastructure is essential to the protection of public health;
- federal assistance, as demonstrated by the success of the Clean Water Act, is the catalyst that ensures public health protection and environmental progress; and,
- federal assistance is essential to enhance the security of our drinking water systems.

The *Water Infrastructure NOW* report makes an eloquent case for a renewed federal financial partnership in water infrastructure. It says:

The case for federal investment is compelling. Needs are large and unprecedented; in many locations, local sources cannot be expected to meet this challenge alone; and because waters are shared across local and state boundaries, the benefits of federal help will accrue to the entire nation. Clean and safe water is no less a national priority than are national defense, an adequate system of interstate highways, or a safe and efficient aviation system. These latter infrastructure programs enjoy sustainable, long-term federal grant programs; under current policy, water and wastewater infrastructure do not.

With respect to the need for enhanced security, it should be remembered that our drinking water facilities were constructed with little, if any thought given to the potential for the unprecedented terrorist activities of the type witnessed on September 11th. The security mechanisms built into these systems were not designed for anything of that magnitude. We believe federal assistance to enhance drinking water security needs—especially those involving capital investments—is both necessary and a legitimate use of these funds.

In light of the staggering costs of maintaining, operating, rehabilitating, and replacing our drinking water system infrastructure to serve our citizens, a partnership similar to that in the Clean Water Act of the 1970-80's must be established. Since virtually all of us live downstream from someone else, it is in the national interest for all levels of government to participate in assuring that our drinking water infrastructure is sound, reliable, protective of human health, and affordable.

4. HOW CAN THE FEDERAL GOVERNMENT HELP?

- establish a financial partnership for drinking water infrastructure;
- provide more flexibility in the types of assistance available to municipalities to include grants as well as loans;
- expand investments in research and technology development;
- establish a mechanism to develop a long-term and secure financial partnership for water infrastructure needs; and

²“GASB 34: What Implementation Means to the Rating Process,” Hyman C. Grossman and LaVerne Thomas, *Public Finance*, p. 2, Sept. 20, 1999, Standard and Poor's.

- provide assistance to ensure implementation of new and heightened security needs of drinking water systems.

The Water Infrastructure Network has developed and agreed on the outlines of a legislative proposal to enhance the federal financial commitment to drinking water infrastructure needs. The proposal recommends a five-year, \$57 billion authorization beginning in fiscal 2003 for loans, grants, loan subsidies and credit assistance for basic drinking water and wastewater infrastructure needs. These funds would be allocated to states to capitalize state-administered grant and loan programs.

Half the funds would be targeted to wastewater and half to drinking water needs. States would have the flexibility, however, to shift up to an additional 15 percent from one purpose to the other, an innovation incorporated in the 1996 amendments to the SDWA. This flexibility would be available so long as such a transfer did not adversely affect any project on the state's priority list that was "ready to go."

WIN recommends, and NLC supports, that Congress require the States to provide 25 to 50 percent of each year's allocation as grants that would fund up to 55 percent of project costs. Up to 75 percent of project costs would be eligible for grant funding in economically distressed communities. Loans and loan subsidies would include interest rate discounts, zero interest rate loans, principal forgiveness and negative interest rate loans.

The report proposes an additional \$4 billion in resources for State governments to help them meet their drinking water and wastewater responsibilities. WIN also recommends funding for development of innovative technology and management techniques to assist local governments in providing clean and safe water more effectively and efficiently in the future.

And finally, the WIN report recommends that Congress "establish a formal process to evaluate alternatives for, and recommend the structure of, a longer-term and sustainable financing approach to meet America's water and wastewater infrastructure needs."

As the committee is well aware, both the House Transportation and Infrastructure Committee and the Senate Environment and Public Works Committee are moving forward with legislation that would significantly enhance resources available to the Clean Water and—in the case of the Senate—the Drinking Water SRFs. As these proposals have moved through the legislative process, NLC and others have raised concerns about potential new federal requirements to establish public/private partnerships in providing drinking water and wastewater services. We consider such recommendations sufficiently important, to raise the issue before you develop legislation.

First, NLC believes such relationships are solely the province of local governments. There are many examples at the local level where public/private partnerships—particularly in drinking water—are working well and redound to the benefit of local ratepayers, the municipality and the private entity operating the local system. Simultaneously, other examples indicate such relationships can leave much to be desired.

Second, while not claiming expertise in this area, NLC also has concerns about the impact of international trade agreements on the privatization of local services and the relationship of such agreements to the maintenance of local control and autonomy. As the committee undoubtedly knows, the majority of the large private water companies operating in the United States are foreign owned. At the local level, we have concerns that contracting with these foreign-owned companies may—because of the terms and conditions of international agreements—adversely affect the ability of a local government to make many critical determinations about the utility once it is under contract with such a private partner. We would be happy to provide expert resources and additional information to the committee on this issue and ask only that there be a full understanding of the ramifications of public/private partnerships in the water business before requiring or encouraging such activities in federal law.

Mr. Chairman, members of the Committee, thank you for the opportunity to testify for the 158,000 local elected officials who comprise the National League of Cities on the critical needs facing local governments in financing drinking water infrastructure needs over the next generation.

Mr. SHIMKUS. Thank you very much. In this report that I talked about in my opening statement, you left out the State's contribution in your list, which was over this same report period, \$1.4 billion. And I ask for unanimous consent, and of course I agree and you can submit that letter.

And I am going to run and vote, and we will recess until 12:15.

[Brief recess.]

Mr. SHIMKUS. I would like to call the hearing back to order, and I want to make an announcement. There is another committee that has the room at 1, and so we are going to try and finish up our opening statements and then open ourselves up for questions and additional comments.

So I would like to thank you all for you all being very punctual, and I would like to thank my ranking member for getting back here rapidly also. And now we will go to Mr. Neukrug, Director of Office of Watersheds of the Philadelphia Water Department. Welcome and your full statement is into the record, and if you can summarize for 5 minutes.

Mr. NEUKRUG. Thank you, Mr. Chairman, and you did much better with my name the first time.

Mr. SHIMKUS. All right. I will take that back.

STATEMENT OF HOWARD NEUKRUG

Mr. NEUKRUG. Good morning, Mr. Chair, and Mr. Pallone. I am Howard Neukrug and I am the Director of the Office of Watersheds for the city of Philadelphia Water Department, and I am really honored by this opportunity to express the views of the American Water Works Association on these critical infrastructure issues.

AWWA is the world's largest association for the drinking water profession. Our 57,000 members include over 4,300 utilities, which represent 80 percent of the drinking water supplied to our Nation.

We thank you for holding this hearing, and look forward to continuing to work with you and your offices, and your staffs, as we move forward with the bill. I took the last half-hour break to get rid of most of my notes and just give you my key points.

And we have three key points for you. Number 1, there are significant capital needs for water and waste water infrastructure needs in the United States today, and it will continue at least through the next 20 years, if not longer.

The second point is that the Drinking Water State Revolving Fund has been a very valuable tool to the industry, and we consider it to be one of the tools, one of the financing tools, that we hope will remain into the future.

The third point is that to survive as a viable tool in the 21st Century, some changes are going to need to be made, and this State Revolving Fund really needs to be reinvigorated. It needs to be reinvigorated with dollars, and it needs to be flexible, and as uncumbersome as possible for utilities to go out and seek that money as part of the solution to their infrastructure needs.

In the written testimony, we quote a number of \$28.5 billion over 5 years, and we hope that you would consider that number. I just would like to bring up from the earlier testimony from Mr. Beider, who complimented the 20 city study that was done by the American Water Works Association, called the Dawn of the Replacement Era.

I think there is one key point here that needs to be made to clear the record a little bit, and that is that was really done with a broad brush approach, looking over the entire Nation, and the infrastructure needs of the entire Nation.

The reality, and one of the benefits of an SRF, is its flexibility and its ability to use and to go site specific locations. And what our 20 city survey found was that there are humps, because development didn't occur gradually over time.

It occurred in the 1890's, and it occurred in the 1920's, and again in the 1950's. And it just so happens that because of the type of pipe that was used at that time, we are now coming to a critical point in time where all those pipes for many utilities are coming due for replacement at the same time.

So when you look at it broadly, and you look at it nationwide, you may not be able to accept the numbers that Mr. Beider presented. But when you look at it on a city by city basis throughout the country, you are going to find that there are real financial needs coming up for many utilities over the next 20 years.

And in conclusion, and going back to my written statement here, while various studies and analyses have arrived at very different figures for the magnitude of the drinking water infrastructure replacement need, AWWA does not believe that these differences are a major issue.

All of the conclusions, regardless of the methodologies and assumptions used, points to a very large infrastructure funding need over the next 20 or 30 years, and a viable State revolving fund is a critical component to the solution.

And we call upon Congress for a new partnership for investing in drinking water infrastructure, in which utilities, States, and the Federal Government all have important roles.

We urge the subcommittee to introduce a bill as quickly as possible, and we pledge to work with Congress to develop a responsible and fair solution to our Nation's drinking water infrastructure challenge, and I thank you for your time and your consideration of our views. Thank you.

[The prepared statement of Howard Neukrug follows:]

PREPARED STATEMENT OF HOWARD NEUKRUG, DIRECTOR, OFFICE OF WATERSHEDS,
PHILADELPHIA WATER DEPARTMENT ON BEHALF OF THE AMERICAN WATER WORKS
ASSOCIATION

INTRODUCTION

Good morning Mr. Chairman. I am Howard Neukrug, Director of the Office of Watersheds for the Philadelphia Water Department in Pennsylvania. The Philadelphia Water Department is a municipal water, wastewater and storm water utility serving over two million people in the Philadelphia metropolitan area. I serve as the Chair of the American Water Works Association (AWWA) Water Utility Council and am here today on behalf of AWWA. AWWA appreciates the opportunity to present its views on drinking water needs and infrastructure.

Founded in 1881, AWWA is the world's largest and oldest scientific and educational association representing drinking water supply professionals. The association's 57,000 members are comprised of administrators, utility operators, professional engineers, contractors, manufacturers, scientists, professors and health professionals. The association's membership includes over 4,300 utilities that provide over 80 percent of the nation's drinking water. AWWA and its members are dedicated to providing safe, reliable drinking water to the American people.

AWWA utility members are regulated under the Safe Drinking Water Act (SDWA) and other statutes. AWWA believes few environmental activities are more important to the health of this country than assuring the protection of water supply sources, and the treatment, distribution and consumption of a safe, healthful and adequate supply of drinking water.

AWWA is also a member of the Water Infrastructure Network (WIN)—a broad-based coalition of drinking water, wastewater, municipal and state government, en-

gineering and environmental groups, dedicated to preserving and protecting the hard-won public health, environmental and economic gains that America's water and wastewater infrastructure provides.

AWWA and its members commend you for holding this hearing concerning the infrastructure needs of the Nation's public water systems. AWWA looks forward to working with the subcommittee in its efforts to address the growing infrastructure costs facing public water systems and consumers.

FEDERAL MANDATES AND THE CONTEXT FOR WATER AND WASTEWATER FUNDING ISSUES

Both drinking water and wastewater utilities face enormously expensive federal mandates that set the context for all other funding issues. Although, the jurisdiction of this Subcommittee does not include wastewater, the funding issues of drinking water and wastewater utilities are inextricably intertwined. The drinking water community faces a complex array of expensive new federal requirements and new standards, including standards for arsenic, radon, disinfection byproducts, enhanced surface water treatment, and others. Wastewater utilities also face enormously expensive federal mandates, such as those relating to Combined Sewer Overflows (CSO) and Sanitary Sewer Overflows (SSO). For both water and wastewater utilities, these needs significantly skew financing for other investments, including the replacement of aging pipes, appurtenances, and other infrastructure. Local ratepayers are often seriously challenged to pay for these mandates, and little, if any, room is left in the ratepayer's budget for other vital spending. In many cases, it appears that mandatory spending for clean water mandates has "driven out" the ability to raise rates for drinking water services.

We believe that significant federal assistance, including grants, is necessary and justified to help meet the cost of these very expensive federal mandates on water and wastewater utilities, and to meet these costs of repair and replacement of aging pipes, appurtenances, and other infrastructure that have been, in many cases, deferred because federal mandates have consumed the ratepayer's budget.

We would point out that, in the case of CSO and SSO mandates, federal support for the cost of those requirements is not only justified in the community receiving federal support, it also lowers costs for drinking water utilities downstream in the form of improved water quality. This is especially true in critical source water protection areas.

THE DRINKING WATER INFRASTRUCTURE NEED

The importance of safe drinking water to public health and the nation's economic welfare is undisputed. However, as we enter the 21st Century, water utilities face significant economic challenges. For the first time, in many of these utilities a significant amount of buried infrastructure—the underground pipes that make safe water available at the turn of a tap—is at or very near the end of its expected life span. The pipes laid down at different times in our history have different life expectancies, and thousands of miles of pipes that were buried over a 100 or more years ago will need to be replaced in the next 30 years. Most utilities have not faced the need to replace huge amounts of this infrastructure because it was too young. Today a new age has arrived. We stand at the dawn of the replacement era.

Recognizing that we are at the doorstep of a new era in the economics of water supply, the replacement era, AWWA has undertaken an analysis of 20 utilities throughout the nation to understand the nature and scope of the emerging infrastructure challenge. The project involved correlating the estimated life of pipes with actual operations experience in the sample of 20 utilities. Projecting future investment needs for pipe replacement in those utilities yields a forecast of the annual replacement needs for a particular utility, based on the age of the pipes and how long they are expected to last in that utility. By modeling the demographic pattern of installation and knowing the life expectancy of the pipes, we can estimate the timing and magnitude of that obligation. This analysis graphically portrays the nature of the challenge ahead of us. In the AWWA statement submitted to the Subcommittee for the hearing on Drinking Water and Infrastructure, March 28, 2001, we summarized the highlights of the analysis and subsequently provided a copy of our report entitled, *Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure*, to all members of the Subcommittee.

Extrapolating from our analysis of 20 utilities, we project that expenditures on the order of \$250 billion over 30 years might be required nationwide for the replacement of worn out drinking water pipes and associated structures (valves, fittings, etc). This figure does not include wastewater infrastructure or the cost of new drinking water standards. Moreover, the requirement hits different utilities at different times and many utilities will need to accelerate their investment. Some will see rap-

idly escalating infrastructure expenditure needs in the next 10-20 years. Others will find their investment decisions subject to a variety of factors that cause replacement to occur sooner or at greater expense, such as urban redevelopment, modernization, coordination with other city construction, increasing pipe size, and other factors.

Overall, the findings confirm that replacement needs are large and on the way. There will be a growing conflict between the need to replace worn-out infrastructure and the need to invest in compliance with new regulatory standards under the Safe Drinking Water Act. In addition, as pointed out earlier, the concurrent demands for investment in wastewater infrastructure and compliance with new Clean Water Act regulations, including huge needs for meeting combined sewer overflow (CSO) and storm water requirements, will compete for revenue on the same household bill.

Ultimately, the rate-paying public will have to finance the replacement of the nation's drinking water infrastructure either through rates or taxes. AWWA expects local funds to cover the great majority of the nation's water infrastructure needs, and remains committed to the principle of full cost recovery through rates. However, many utilities may face needs that are large and unevenly distributed over time. They must manage a difficult transition between today's level of investment and the higher level of investment that is required over the long term. Facing an inexorable rise in infrastructure replacement needs driven by demographic forces that were at work as much as a 100 years ago, compounded by the negative effects of changing demographics on per-capita costs in center cities, many utilities face a significant challenge in keeping water affordable for all the people they serve.

Affordability, poverty and infrastructure abandonment seem to go hand-in-hand. In Philadelphia, where 40 percent of the population lives in poverty, a rise in water bills will remain a significant socio-economic issue well into the foreseeable future. In the March 27, 2001, issue of the *Philadelphia Inquirer*, it was reported that almost one-third of the 28,000 residential blocks in Philadelphia have abandoned homes. We estimate that there are three or more abandoned houses on each of 4,600 residential blocks in our city. At ten city blocks per mile, these inner-city neighborhoods contain a total of 460 miles each of water and sewerage pipes. At a replacement cost of \$1 million per mile for water pipe and \$1.5 million per mile for sewer pipe, these 4,600 blocks represents over \$1 billion in pipe infrastructure replacement costs—the burden of which is falling on fewer and fewer households and, typically, poorer and poorer families. An analysis of U.S. Census data shows that for over the hundred years from 1850 to 1950, the population of Philadelphia grew from 100,000 to 2 million people. But from 1950 to the end of the century, Philadelphia lost 25 percent of its population, dropping to 1,500,000 people. In the forthcoming AWWA report, the average per-capita value of water main assets in place today across the sample of 20 utilities is estimated to be three times the amount that was present in 1930. In Philadelphia, however, that ratio is almost eight times the value in 1930 due to population declines since about 1950. Demographic change, then, places financial strain on all public water systems and has a direct impact on affordability of the investment required.

While various studies and analysis have arrived at differing figures for the magnitude of the drinking water infrastructure replacement need, AWWA does not believe that differences in the figures should be the major issue. All of the conclusions, regardless of the methodologies and assumptions used, point to a very large infrastructure funding need over the next twenty to thirty years. To meet this challenge, AWWA has called for a new partnership for investing in drinking water infrastructure in which utilities, states, and the federal government all have important roles.

PUBLIC WATER SYSTEM SECURITY NEEDS

The events of September 11, 2001, have added a new dimension to the protection of drinking water and drinking water infrastructure needs. In addition to protecting drinking water from contamination, America's homeland security requires a secure water supply. Public health, fire protection, and sanitation depend on it. The role of public water systems for first responders is a critical, and is often overlooked in discussions concerning homeland security funding priorities. The al Qaeda terrorist network and others are known to have conducted research on public water systems in the United States. If the intent is to create terror in our society, water systems are targets of opportunity for terrorists, not only to contaminate the water supply, but also to deny first responders water for fire protection in a coordinated terrorist attack.

Drinking water suppliers have a long history of security preparedness prior to September 11, 2001. However, the post-September 11 world has added a new understanding of security and has added an unprecedented financial burden on public water systems for immediate steps needed to protect the people of the United

States. AWWA research has estimated the cost of immediate capital improvements to ensure security of access to critical public water system assets through barriers, detection devices and cyber security systems to be approximately \$1.6 billion. This cost will provide initial security improvements for about 53,000 water systems serving more than 264 million people. It does not include future capital costs of upgrades to address vulnerabilities identified in vulnerability assessments such as hardening pumping stations, chemical storage buildings, transmission mains, add redundant infrastructure or relocate facilities and pipelines. These new security concerns added to the cost of replacing aging drinking water infrastructure and the capital cost of compliance with federally mandated regulations, drives the need to greatly increase the level of federal investment in drinking water infrastructure now.

THE DRINKING WATER STATE REVOLVING FUND

In our report entitled *Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure*, AWWA recommended changing and expanding the existing Drinking Water State Revolving Fund (DWSRF) to significantly increase federal funding for projects to repair, replace, or rehabilitate drinking water infrastructure to include the aging distribution pipes. Subsequent to September 11, AWWA has further recommended that drinking water capital security upgrades should specifically be identified in the SDWA as eligible projects.

In many ways, the DWSRF program has been very successful. Loans are reaching communities of all sizes and income levels, average costs of capital are well below market rates, many states have been highly creative in leveraging their original federal capitalization grants, and funds are generally in demand among local borrowers. Yet, clearly, these programs can be improved to address a range of remaining problems that impede enhanced equity, efficiency, and effectiveness.

AWWA believes that the DWSRF could serve as a model for funding drinking water infrastructure with the following changes:

- Significantly increased federal funding.
- Clear eligibility of projects to repair, replace, or rehabilitate drinking water infrastructure.
- Clear eligibility for capital security upgrades.
- Universal eligibility of all water systems, both public and investor owned, regardless of size.
- Ability to make grants or loans in any combination and to use other financing tools to leverage public and private capital.
- Reasonable terms and conditions such as demonstration of system viability and ability to repay a loan.
- Streamlined procedures for those accessing the funds.

AWWA urges the Subcommittee to introduce a bill as quickly as possible to amend the SDWA to address drinking water infrastructure needs in the DWSRF so that a bill can be enacted before the end of this Congress. In the remainder of this statement, we will summarize suggested improvements to the DWSRF to address the growing drinking water infrastructure and security needs.

DWSRF AUTHORIZATIONS

AWWA recommends that the DWSRF authorization should be significantly increased to provide at least half of the \$57 billion (\$28.5 billion) recommended by WIN over the next five years drinking water. We believe that this authorization would mark a significant step by Congress towards assisting in the enormous challenge public water systems and their customers face in meeting federal mandates and at the same time replacing aging distribution pipes in the coming years. As illustrated in AWWA's report entitled *Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure*, the "demographics" of pipe replacement is real, it is big, and the bill is coming due soon. This challenge is exacerbated by population shifts and growth patterns over the years, economic conditions and the changed demographics of urban populations.

We must note that the recommended authorization level is a very small fraction of the \$250 billion in infrastructure replacement needs over the next thirty years identified by AWWA. AWWA does not expect that federal funds will be available for 100 percent of the increase in infrastructure needs facing the nation's water utilities. AWWA remains committed to the principle that utility operations should be fully supported by rates. In the long run, the objectives must be to manage the costs of replacing pipes and treatment plants and ensure financial sustainability through local rate structures. However, many utilities are going to face a period of adjustment in adapting to the new reality of the replacement era described in the AWWA

report. Many utilities and their customers will need additional assistance in working through extraordinary replacement needs in the next 20 years in the form of principal forgiveness or other direct financial assistance measures.

The difference between drinking water utilities' current expenditures for infrastructure replacement and the needed level of expenditure is estimated by WIN to be about \$11 billion per year over the next 20 years. If the federal government were to provide half the cost of this gap, the federal share of total utility spending would still amount to under 12 percent of total utility spending for twenty years. For comparison, the federal share of investment in roads, bridges, and airports is 80 percent.

It is clear that, even with federal assistance, the burden of paying for public water system improvements will remain overwhelmingly with utilities and their rate-paying customers. In recognition of this, we believe that, if the needs of older cities with large economically disadvantaged populations are to be met, an increase in the authorization is warranted. We look forward to working with the Subcommittee to ensure that authorization levels will be adequate to address the needs of older cities with economically disadvantaged populations and meet the security needs of public water systems.

ELIGIBLE PROJECTS

Aging Infrastructure.

It is important to note that support of drinking water infrastructure is not the primary purpose of the Environmental Protection Agency (EPA) programs. The eligibility requirements of the DWSRF created by the SDWA Amendments of 1996 address the compliance needs of public water systems. The very large and growing need to replace aging drinking water infrastructure is a challenge that is not specifically addressed by the DWSRF as currently structured and funded.

AWWA recommends that the DWSRF eligibility of projects for the replacement and rehabilitation of aging distribution system pipes and appurtenances be made explicit in the statute. This, we believe should be the major purpose of the increased DWSRF authorizations. EPA has interpreted the current provisions of the SDWA to authorize the use of DWSRF funding for the replacement and rehabilitation of aging distribution pipes as furthering the health protection objectives of the SDWA as authorized in Section 1452 of the Act. While this interpretation of the SDWA is welcome, it is not universally accepted. That statute should make Congress's intent clear that repair and replacement of aging infrastructure is an important priority and not rely on an EPA or State interpretation that is subject to change.

Security Upgrades.

Since September 11, 2001, AWWA has been advocating for federal assistance for public water systems to help pay for security upgrades to protect public water systems from terrorist attack. Since that time events have validated this concern, and water utilities are undertaking comprehensive vulnerability assessments and emergency planning to protect both water quality (for health protection) and water supply (for fire suppression and sanitation). Of note are documents found in the possession of al Qaeda terrorists in Afghanistan that could be used to help plan an attack on a drinking water utility. Security concerns thus represent a large, immediate, and unprecedented cost for public water systems concerns.

EPA has interpreted the current provisions of the SDWA to authorize the use of DWSRF funding for capital security upgrades as furthering the health protection objectives of the SDWA as authorized in Section 1452 of the SDWA. While this interpretation of the SDWA is welcome, it rests on interpretation and is subject to change. Moreover, it does not state Congress's intent that capital projects to address security concerns should be priority projects for DWSRF funding. AWWA strongly recommends that bill make explicit the DWSRF eligibility of capital projects to address security

LARGE PUBLIC WATER SYSTEMS

AWWA does not believe that the DWSRF adequately addresses the infrastructure challenges presented by large urban public water systems and particularly those with declining and economically disadvantaged populations. During the short history of the DWSRF, large public water systems have not been receiving a fair share of SRF loans. According to EPA, states have made approximately seventy-five percent of all SRF loans to small communities. In per capita terms, assistance to very small communities has averaged over \$400, while loans to large communities (with over 100,000 people) have averaged a little over \$50 per capita.

Current law mandates that fifteen percent of a state capitalization grant shall be reserved for small systems serving populations under 10,000 to the extent that such funds can be obligated for eligible projects. AWWA supported that set-aside in 1996, to ensure that small systems could participate in the loan program. We did not anticipate that large systems would be left out of the program, relatively speaking, and there is no corresponding set-aside for large public water systems serving populations over 100,000. As noted, the bulk of DWSRF funding is going to small systems.

AWWA is not convinced that an overall increased authorization for the DWSRF alone will provide states the ability to provide more assistance to large public water systems than was possible previously as some believe. To assure that systems of all sizes can participate in the SRF program, AWWA believes that a corresponding set-aside of fifteen percent of a state capitalization grant should be reserved for public water systems serving a population of 100,000 or more, assuming there are eligible project applications. This will ensure that large public water systems with major infrastructure replacement needs and disadvantaged consumers can participate in the DWSRF program in all States.

DWSRF LOAN REQUIREMENTS AND RESTRICTIONS

AWWA has recommended streamlining many of the requirements and procedures for obtaining loans from the DWSRF. We believe careful attention is required to strike an appropriate balance between Congress's desire to encourage certain behaviors at utilities, and the need to keep the DWSRF as unencumbered as possible by unproductive red tape. Congress or EPA should exempt certain types of projects or projects below a certain size threshold from DWSRF red tape requirements that don't make sense. Similarly, capital investments to improve the security of the Nation's drinking water should be exempt from red tape to the maximum extent possible. We urge the Congress to resist adding requirements for DWSRF loans that can lead to an inappropriate federal micro-management of drinking water rate structures, assessment management, utility ownership and management options or local planning decisions. If a public water system is otherwise financially sound, can repay the loan, and can comply with applicable drinking water regulations, the addition of irrelevant requirements creates a burden to obtaining a loan.

Congress also needs to provide incentives for States to reform their existing programs to make them more effective. For example, some states have not allowed larger systems to access the existing state revolving fund, or have excluded investor owned systems. Some states encumber their revolving funds with nonproductive red tape, charge high loan origination and other fees, or charge loan rates that are equivalent to market rates. Some states preclude the use of alternate procurement methods that minimize infrastructure procurement costs. For example, the "design/build" process for infrastructure procurement has been documented to save 20-40% of construction costs for new treatment plants in some cases. Public procurement laws in many states, while not explicitly banning design/build, mandate a process that prevents its use where local authorities have determined it would be advantageous. The result is that, in many states, revolving loan funds have not proved to be useful or attractive even to drinking water utilities desperately in need of capital.

To improve the efficiency, effectiveness and flexibility of the DWSRF, Congress should authorize the use of DWSRF funds to purchase or refinance outstanding debt obligations of a drinking water system; guarantee, or purchase of insurance for, and obligation of a drinking water system; secure the payment or directly repay principal or interest on general obligation bonds issued by the State if proceeds of the bonds will be deposited in the DWSRF; and deposit into a capital reserve for a debt instrument of a drinking water system. Since drinking water infrastructure projects have a design-life much longer than twenty years, AWWA recommends that the DWSRF loan repayment period be extended to thirty years for all utilities. This is an accepted loan repayment period in the financial market. These measures will greatly reduce the cost of financing drinking water infrastructure and allow communities increased flexibility.

CONCLUSION

How we address our emerging drinking water infrastructure needs is a critical question facing the Nation and this Congress. America needs a new partnership for reinvesting in drinking water infrastructure. There are important roles at all levels of government.

AWWA does not expect that federal funds will be available for 100 percent of the infrastructure needs facing the nation's water utilities. However, AWWA does be-

lieve that due to concurrent needs for investment in water and wastewater infrastructure, security projects, replacement of treatment plants, new drinking water standards, and demographics, many utilities will be very hard pressed to meet their capital needs without some form of federal assistance. Over the next twenty years, it is clear that SDWA and CWA compliance requirements and infrastructure needs will compete for limited capital resources. Customers are likely to be very hard pressed in many areas of the country. Compliance and infrastructure needs under the SDWA and CWA can no longer be approached as separate issues. Solutions need to be developed in the context of the total drinking water and wastewater compliance and infrastructure needs.

In our testimony we have made recommendations that we believe will improve the DWSRF to address the increasing drinking water infrastructure financing needs. We believe that increasing the DWSRF authorization to at least \$28.5 billion over the next five years is critical. AWWA urges the Subcommittee to introduce a bill as quickly as possible to amend the SDWA to address drinking water infrastructure needs in the DWSRF so that a bill can be enacted before the end of this Congress. AWWA pledges to work with Congress to develop a responsible and fair solution to Nation's drinking water infrastructure challenge. We thank you for your consideration of our views.

This concludes the AWWA statement on drinking water needs and infrastructure. I would be pleased to answer any questions or provide additional material for the committee.

Mr. SHIMKUS. Thank you very much.

And now Mr. Elmer Ronnebaum, the General Manager of Kansas Rural Water Association, and again your full statement is into the record, and you have 5 minutes, and welcome.

STATEMENT OF ELMER RONNEBAUM

Mr. RONNEBAUM. Thank you, Mr. Chairman, and Mr. Pallone. My name is Elmer Ronnebaum, and I am from the Kansas Rural Water Association, and I am the General Manager. We have about 750 member, small community and medium-sized community members.

We are an affiliate of the National Rural Water Association, which represents some 22,000 small water and waste water systems nationally, and it is my honor to speak on their behalf today.

As we have heard this morning, we agree that the principal dynamics of small communities need to be recognized in discussing funding issues. They are that small communities make up the largest percentage of drinking water systems, over 90 percent.

Two, that due to a lack of economies of scale, costs, where small consumers often pay a higher water and sewer bill, and water rates of \$75 are not uncommon in rural areas where I am from.

Three, small systems have limited technical and administrative abilities, and any increase in compliance or additional burdens on the revolving loan fund that cause them to further difficulty to navigate through the funding program will make that less attractive to them.

Four, there are suggestions that consolidation and privatization are solutions to problems of small systems.

Consolidation can work in some cases and in many cases it can't because of geography and a number of other aspects.

Consolidation should be a local decision. The 1996 amendments to the Safe Drinking Water Act provided all sorts of discretion and funding to States to meet local priorities.

Rural water's message here today is that the Drinking Water State Revolving Loan, and the flexibility that came with it were a monumental decision, and it was a step in the right direction.

The flexibility has made the State SRFs responsible to nearly every stakeholder. In Kansas, the Drinking Water State Revolving Loan Fund has received approximately \$50 million in EPA cap grants, and it is the most highly leveraged program in the United States, at 1 to 4.

They have turned that loan program into \$210 million in loans. They have made 75 loans for \$150 million, and 52 of those went to small communities for \$67 million. So the point is that Congress has made the resources and the flexibility available to the States, and it is up to the States to make sure that that happens.

But even with their successful implementation in Kansas, the loan demands through applications received exceeds the funding availability by 100 percent. Why such demand for funding? New regulations drive demand.

For example, the city of Atwood, and we heard about arsenic this morning, Atwood, Kansas, is looking at 12 parts per billion. They are looking at a treatment plant improvement between \$1.3 and \$2 million to remove two-parts per billion.

That translates to a \$30 per month increase per customer for Atwood's 700 connections; a \$30 per month increase, in addition to which Atwood has just finished a new sewer treatment process and needs basic infrastructure improvement.

Infrastructure improvements are needed because they are obsolete and some are in a deteriorated state as previous panelists have commented that technology has improved the components that go into those systems.

There are three key concerns that Rural Water has in the drinking water SRF. First, ensure that communities with the greatest need in the area of public health and economic need receive prioritization in the funding programs.

Provide for both loans and grants, and also make sure that a minimum of those funds go to small communities. What is not needed are new funding priorities, set asides for various-sized systems, or changes in the disadvantaged community determination.

We do not believe that corporate water supply systems should receive or be eligible for State Revolved Funding. Taxpayer subsidies should be prohibited from profit generating companies, or companies paying profits for shareholders and investors.

Do not add new requirements for environmental or land use planning, the actual cost of water, common industry practices. Again, if Congress increases the demands on the applicants, most systems will find the program less attractive.

We believe also that guidance should be given to ensure that all purchases, including professional services, are competitive. Rural Water supports those provisions similar to USDA's programs. Thank you, Mr. Chairman, for the opportunity to speak as you evaluate this funding program.

[The prepared statement of Elmer Ronnebaum follows:]

PREPARED STATEMENT OF ELMER RONNEBAUM, GENERAL MANAGER, KANSAS RURAL WATER ASSOCIATION, ON BEHALF OF THE NATIONAL RURAL WATER ASSOCIATION

Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to be here today to discuss small communities and their water funding concerns.

My name is Elmer Ronnebaum. I am General Manager of the Kansas Rural Water Association. Kansas Rural Water has more than 750 small community mem-

bers that operate water utilities and most operate wastewater utilities. The Association is governed by the local communities. The mission of the Association is to improve and protect water quality through grassroots technical assistance of utility operation and maintenance and training. Kansas Rural Water Association is an affiliate of the National Rural Water Association which represents over 22,000 small and medium sized community water and wastewater utilities. Every community wants to provide the best possible water quality to their consumers. Rural Water provides the resources and training to achieve this objective in a common sense, hands-on manner systems can utilize. I am honored to speak on their behalf today.

On behalf of all small and rural communities, I would like to thank the Committee for your efforts to assist small communities with compliance with the federal Safe Drinking Water Act. Rural Water looks forward to working with you as you consider the Safe Drinking Water Act and the State Revolving Loan Funds.

Recently, EPA announced they would provide direct grants to large communities to conduct vulnerability assessment for security. EPA has not provide any of the over \$90 million appropriated by Congress for small communities. However, small communities are just as, if not more so, at risk than large communities. Also, the cost of security plans in small communities will be greater per household than in large communities. Many small communities believe that they need to make security improvements immediately. This is another concern of small communities that is not being addressed in federal funding programs.

This hearing is considering funding needs of water supply systems and how to improve the State Revolving Loan Fund. What water suppliers think their "needs" are, is different than what the EPA or state regulators might think the "needs" of the water suppliers are. If water suppliers are to include, in their "needs", compliance costs with all the existing regulations and upcoming regulations, then the water suppliers' "needs" must include more grant funds and loan funds to comply with EPA regulations. Compliance with EPA regulations is much more expensive (as measured as price per gallon or cost per meter) for small suppliers due to the small suppliers' lack of "economy-of-scale".

The compliance with upcoming Maximum Contaminant Levels (MCL's) of total trihalomethanes (TTHMs) and haloacetic acids for surface water treatment systems serving less than 10,000 persons is an example of small systems' compliance costs. The "cost of compliance" includes monitoring costs, recordkeeping costs, reporting costs, engineering costs, capital improvements costs, and operation and maintenance costs. This is shown by the fact that there have been regulations for trihalomethanes on systems serving more than 10,000 persons—but not for the systems serving less than 10,000, for more than 15 years. Why did EPA not have the same TTHM regulations on small systems? It might be that it is due to the high unit cost that was judged to be "politically" unacceptable. Otherwise, why should citizens served by systems serving populations greater than 10,000 receive drinking water with much lower risks? Aren't people in small towns just as important?

The actual costs on any one supplier are not yet known. But when those costs are known, that water utility will surely note that the costs are considerable. What benefits and costs are realized by compliance with each regulation are unknown and debatable. The nation has said through the EPA regulations that the nation wants a much, much lower risk level from drinking water than many, many other things in our society. And as with many things, the costs of the ever-reducing the risks in drinking water results in ever-increasing costs, especially to the small systems.

The five principle dynamics of small communities that we believe need to be recognized in discussing funding policies are:

- One, that small communities make up the overwhelming percentage of water and wastewater utilities—over ninety percent of regulated communities.
- Two, that due to a lack of economies of scale, small town consumers often pay high water and sewer rates. Water bills of more than \$50 for 5000 gallons of water are not uncommon in rural areas. This dynamic often results in very high compliance costs per household in rural systems. Simultaneously, the rural areas have a greater percentage of the poor households and a lower median household income. This results in very high compliance cost per household in rural systems coupled with a lesser ability to pay.
- Three, small systems often have limited technical and administrative resources to deal with compliance and navigate through funding programs. In the smallest systems, one person may run both the water and sewer system and in some cases communities can only afford a part-time or volunteer operator. The more complicated we make funding programs the more likely the small communities will not be able to participate. This dynamic is counter productive the objective of the SRF because small communities are usually the entities which most need the funds. The lack of resources also makes small systems a challenge for state

agencies—it takes less state agency resources to deal with large town versus a smaller one who needs more “help” getting through the process.

- Four, small community water systems have been the historical solution to rural families living without water. Small water systems were ONLY started to improve the public health. The result is dramatic improvements in public health by providing an alternative for families from gathering their drinking water from untreated streams, shallow and contaminated wells, roof collection and cisterns. In 2001, there are hundreds of thousands of rural families that still don't have piped water in their homes. Millions of rural families still have water delivered to their homes. According to the USDA at least 2.2 million rural Americans live with critical quality and accessibility problems with their drinking water, including an estimated 730,000 people who have no running water in their homes. About five million more rural residents are affected by less critical, but still significant, water problems.
- Five, consolidation and privatization are limited solutions for small systems. Consolidation can work in some situations, but only for a small portion of small systems and only when the systems are in close proximity and the economics make sense. Rural Water is the lead proponent of consolidation when it makes sense (when it results in better service for the consumer) and we have consolidated numerous communities in all the states. Consolidation and regionalization that is in the consumers' best interest will happen naturally at the local level regardless of federal policy on issue. Federal policy that favors consolidation over the locally preferred solution is a step in the wrong direction for consumers (i.e. 42 U.S.C. Sec. 300g-3(h) Consolidation Incentive). Privatization is rarely a less costly solution for very small communities. In the very small communities it is, perhaps, more common to see private systems being transferred to public bodies so they can obtain better financing and local governmental control. The missions of private water and rural water systems are fundamentally different, the reason being the lack of profitability in sparse rural populations.

In 1996, this Committee lead by Congressmen Bliley and Dingell, made a significant policy change in the Safe Drinking Water Act. At every opportunity, they ameliorated the Act by including as much flexibility as possible. Nowhere is this more apparent than in the state revolving fund section. Under this approach states were given all sorts of discretion on how to spend the money to meet their local priorities. For example, a state can make grants, can fund set-asides, expand technical assistance efforts, create new prevention programs, increase state staff, or choose to do none of these and retain the traditional low interest loan focus.

Small communities' message here today is that this was a monumental step in the right direction. This flexibility has made state SRFs better and more responsive to nearly every stakeholder. Small systems have seen a level of inclusion and benefits from the drinking water SRF that we could not imagine based on our experience with the wastewater SRF that does not include these flexible provisions.

Some state rural water associations have not been impressed with the way their state has chosen to utilize their discretion. Some states have steered funds to larger systems with less urgent needs, in their opinion, to make fund administration easy and keep bond ratings high. However, this is not a complaint that is appropriate for this committee. Those concerns are best handled in the states and each year locals have a better chance to improve their own state's program.

Kansas is an exemplary case for success in Drinking Water SRF implementation. Many of our small systems are receiving large funding packages from the Drinking Water Loan Fund. The state has made small system funding a priority in Kansas and Kansas has expanded technical assistance to small systems. Assistance is also provided to help small systems through the funding process. The Kansas application for drinking water funding is streamlined and simple enough for a small system operator (with too little time and too much to do) to complete. Kansas has received \$50 million in EPA capitalization grants from 1997 to 2001. Rural Water in Kansas worked for legislative support to add \$5 million in state funds to the new program. Kansas has the highest leveraged program in the nation at 1:4 thereby creating a loan fund of nearly \$212 million. The technical assistance set-aside of 2% have provided \$1,129,000 towards small system technical assistance of which about \$500,000 has been utilized. The EPA grants have also provided approximately \$2.4 million towards Capacity Development which is now beginning to be implemented. The EPA grant has also provided \$2.6 million in state program administration. From 1997 to the present time, the Kansas Dept. of Health & Environment has made a total of 75 loans totaling \$150,131,845. Fifty-one of these loans, or \$67,252,924, were made to systems serving less than 5000 population. The interest rate for the Kansas Drinking Water Loan Fund is set at 80% of the 3 month average of the 20 Bond Buyer for both large, taxing entities and the non-rated rural water district partici-

pants. Loan demand through applications received, exceeds available funding by 100%. Why such demand for funding? First, new regulations drive demand for funding and second, infrastructure of the systems in many cases is obsolete and in a deteriorated state because the materials used 40, 50 or 80 years ago did not have the life expectancy of materials often used today. There is also demand for additional capacity. Again though, while bricks and mortar, pumps and pipes are important, the set-asides are also there to provide assistance, particularly to small systems. The Kansas drinking water administration has exploited the provisions in the SRF to invent one of the best local-state partnerships in government.

In Kansas, our state's drinking water administration has exploited the provisions in the SRF to invent one of the best local-state partnerships in all of government. As any new legislation may be considered, small and rural communities urge you to include a few key provisions dealing with flexibility and targeting of funding that have made the drinking water program more responsive to small systems. The Kansas application for drinking water funding is streamlined and simple enough for a small system operator (with too little time and too much to do) to complete.

Mr. Chairman, I would like to summarize the key elements for small and rural communities in considering any modifications to the drinking water SRFs as follows:

- We urge you to retain the three legislative provisions that ensure communities in the greatest public health and economic need receive prioritization in funding programs. One, the communities exhibiting the greatest need should receive funding first. Second, programs should not be limited to making loans because in many situations, small communities will not have the ability to pay back a loan—even with very low interest rates. Third, a minimum portion of the funds should be set-aside for small systems. This ensures that a state must set up a process for dealing with small communities. Once established, local pressures and priorities will determine the actual portion directed to small systems, which we expect will often be greater than the minimum prescribed. All of these provisions were included in some manner in the drinking water SRF—balancing the federal priorities with the state's flexibility to tailor individual programs and discretion on implementation of each these programs.
- We urge you to review proposals for changes in the SRF with caution. There has been no credible finding that the current SRF is not meeting its mission of efficiently providing resources to the communities with the greatest public health and economic needs. Why would we entertain changes to the SRF when it is not broken?
- We have been told that large system groups believe too high a percentage of the present drinking water SRF funding is going to small communities. However, a significant portion of the funding should flow toward small systems because, generally, they need it more. Rates are often much higher per household in small communities—often from compliance requirements. EPA rules on the horizon will likely triple water rates in rural systems. Also, rural communities often have lower median household incomes. The SDWA axiom in rural areas is: much higher cost per household with much lower income. No large system is facing cost increases on a per household basis comparable to what is facing small systems. It only makes sense that federally subsidized funding would flow toward the communities with the greatest need—that is to small systems.
- There is no need to include additional requirements for applicants including: environmental, land use planning, capacity, actual cost of water, common industry practices, etc. We urge you to exercise caution for increasing demands on applicants as each new demand makes the process too complicated for small systems and therefore less attractive. We believe that the current review process is fully adequate to ensure repayment of loans, progressive environmental planning, and long-term capacity of applicants. Nationalizing policy industry practices and determining actual cost of water could lead to gold plating of water utility practices which is not in the best interests of consumers.
- We urge the Committee to limit the ability of any portion of a water system to be eligible for disadvantage type subsidies or other special treatment. To assist any portion of a system moves the effort from an environmental-public health program to a social program. If particular low-income consumers are having problems paying their water bills, we don't think the SRF should be used as the solution. That may be an issue for agencies other than the EPA. It is important to note that a state can determine a large system disadvantaged as well as a small system. Funding a portion of a system seems to be a way to skirt the current process which is working so well at prioritizing systems most in need. Also, this moves the SRF in a direction contrary to the SDWA's regulatory structure which only applies on a system-by-system scope.

- We urge the Committee to consider including provisions guiding the percent of a project that can be used for engineering/consulting services on projects. USDA has such a provision [PART 1780—WATER AND WASTE LOANS AND GRANTS, §1780.39(b) Professional services and contracts related to the facility]. In Kansas, our research shows that engineering fees are sometimes charged at twice as much in programs that don't have such guidance on engineering fees.
- We urge the Committee to consider allowing states the discretion to extend loan durations to 40 years loans to small communities or regional systems. Due to scarcity of population in regional systems this additional loan time can be the determining factor in making water affordable in regional projects. Also, this will make the fund consistent with the USDA grant and loan program which includes such authority.
- A change that may improve the SRF ability to meet its mission would be to limit corporate water systems' eligibility for state revolving funding. Taxpayer subsidies should be prohibited from profit generating companies or companies paying profits for shareholders/investors. Private companies argue that they have to comply with the same regulations. However, they voluntarily chose to get into this "business" and compliance is not the over-riding principle that should be considered in this discussion. We believe that the distinction in mission between public and private is the core principal that should be considered. Private systems are in the business to maximize profit. Public water utilities were and are created to provide for public welfare (the reason why public water continues to expand to underserved and non-profitable populations). This is a significant difference. And while we believe that maximizing profit is a noble virtue and as American as safe water, we do not think that taxpayers should help the cause of privately owned systems. In addition, the needs of less affluent public water systems and families with no piped water dwarf the current SRF allocations. The state of Florida has a novel compromise to this issue. Florida limits SRF funds to private water systems less than 1,500 people—ensuring funds are limited to the class of private water systems that did not get into the business as a corporate enterprise. Also, this group of private systems could be included in the state's needs assessment which determines allocations under the bill.

How much money is needed? That is completely dependent to Congress' answer to the question: What are the new EPA rules and what are the standards going to be? For example, the coming arsenic rule will increase the number of small systems facing funding challenges. Dozens of small systems in Kansas (thousands across all the states) will need funding to comply with the arsenic regulation.

One municipality in Kansas that will be greatly affected by Arsenic Rule, established at 10 ppb, is the City of Atwood (population of 1,300) surrounded by farmland and an agricultural economy.

Past arsenic water quality results for the City of Atwood has shown a range of 12 to 18 ppb in the three currently used municipal wells. The proposed arsenic MCL of 10 ppb allows the City two general feasible options to attain the MCL. The community has an option to develop new well fields in the Ogallala formation located several miles from the community. However, while Ogallala formation generally provides better water quality and perhaps an arsenic concentration below the 10 ppb, it is a much more cemented and finer formation. This fine formation decreases production of wells. Thus to develop a sufficient municipal water supply, more area for wells is required since they must be a greater distance apart. The estimated cost of this option would be \$2,200,000 based on a five-mile transmission main with four wells to meet daily water demand. A second option available is treatment of the existing water supply sources.

The city presently does not have a single point of entry into the distribution system. Each well is directly connected into the distribution system. All wells are located in separate areas of the existing system. Over 3,000 feet of distance exist between the two farthest wells. In order to implement a point of use treatment plant, a new dedicated transmission main would have to be constructed between the wells. Land and easements would have to be procured to build a treatment facility. Atwood's sulfate concentrations in the range of 90 to 309 mg/L will affect treatment efficiencies in an ion exchange process requiring frequent regeneration. This creates higher operation and maintenance cost (O&M). The estimated treatment facility cost would range from \$1,300,000 to \$2,100,000 depending on the Best Available Technologies (BAT) selected. Atwood could experience a budget increase of \$50,000 to \$75,000 per year with the incorporation of a treatment plant. These budget increases are due to operation and personnel requirements. Special by-product disposal requirements could require more operation costs.

In order to provide funding for capital construction and O&M assuming a 5% interest rate and 20-year loan period that corresponds with the life of a treatment fa-

cility with 700 connections, the monthly water rate would have to increase by \$18 to \$29 per connection. Again, please keep in mind this does not include the current water rate and upgrades currently necessary to keep the system in compliance. This analysis has been made by the city's consultant, Miller & Associates Consulting Engineers, P.C., McCook, NE.

This is a conservative estimate and does factor in all the costs for compliance. Rate increases on this type of a community could be devastating.

However, Mr. Chairman, while no system will be in greater need for federal assistance than Atwood, KS the challenge is how to craft a funding program that will work for those most in need. Cost estimates of the funding needed to sustain a healthy U.S. water supply are staggering. The Water Infrastructure Network, of which Rural Water is a member, estimates an \$11 billion annual funding gap over the next 20 years. This estimate is over 4 times the current combined federal contribution in the USDA, EPA Drinking Water, and EPA Wastewater programs. While it is not essential for all systems to obtain financing through a federal or state program, the fact is that much of the funding needs are caused by ever stringent regulations. The question for Atwood, KS is what is the benefit of reducing naturally occurring arsenic by 2 parts per billion?

Rural Water is not the type of organization that can present an accurate cost figure on the future need for funding. However, we can acknowledge the extreme shortfall in both EPA SRF and the USDA water programs, as indicators that the current needs are not being met. The USDA program, which is the core-funding program for small water and wastewater projects, is currently experiencing a \$3.2 billion backlog. We believe this is the most accurate indicator of need because all of the systems in USDA's backlog have applied for funding. They have met the requirements of USDA's strict needs requirement (including lack of commercial funding availability and high ratios of median household income to water rates).

As stated earlier, in addition to this current need, EPA is proposing more regulations. Many of the regulations will force small towns to come up with millions in financing—many systems will be stressed to comply. I think it is significant to observe a new dynamic in EPA regulations: the regulation of naturally occurring contaminants and the regulations of operations and maintenance in utilities. The result of this new effort by EPA will be to greatly expand the number of systems forced into costly compliance with EPA rules. For example, very few systems were required to treat for EPA's previous rules on organic contaminants, many with anthropogenic origins. However, the forthcoming arsenic rule could capture as many as 4,000 communities; this will greatly drive the demand for additional funding resources. Upcoming EPA rules that may be expensive in thousands of rural communities include: standards for certification of operators, filter backwash, radon, surface water treatment rules, arsenic, disinfection byproducts, ground water disinfection, and others.

The State Revolving Loan Funds are working. Rural Water encourages Congress to consider that whatever changes are considered, please make sure, first, that these Loan Funds target those most in need; second, that the SRFs do not provide taxpayer supported loans to large corporate systems; third, encourage guidelines to keep professional services competitive as in other federal funding programs and last and possibly most important, recognize that new regulations will place more and more demand for further funding just for systems to maintain compliance.

Mr. SHIMKUS. Thank you. I think we are finding the hearing very beneficial, and you are all bringing up a lot of important points.

Now I would like to recognize again Mr. Terry Gloriod. Again, your full statement is in the record, and you have 5 minutes to summarize.

STATEMENT OF TERRY L. GLORIOD

Mr. GLORIOD. Thank you, Mr. Chairman, and thank you for your kind introduction earlier. I am here today representing the National Association of Water Companies, NAWC. NAWC's 200 member private and investor-owned companies in 39 States provide water service to more than 20 million Americans.

Let me begin by commending this subcommittee for conducting this hearing on the important topic of infrastructure. My general purpose is to comment on the needs posed by infrastructure re-

placement, and highlight the solutions to that funding that are favored by NAWC and its partners in the H2O Coalition.

NAWC has much in common with our sister water organizations, including the AWWA, and we share the goal of safe, sufficient, and affordable water for all Americans. NAWC, however, does not believe that the primary funding solution should be Federal grants.

We believe that the only permanent solution to the ongoing costs of infrastructure replacement is self-sufficient water utilities, with appropriate subsidies available for systems in economically disadvantaged communities, and direct assistance to needy customers.

Various reports have attempted to estimate the infrastructure replacement needs, in terms of total investment over the next 20 years. The estimates vary and some reach as high as a trillion dollars.

The need is referred to as a gap because existing water service revenues do not support this level of investment. As others have said the basic reason for the gap is the long life nature of underground iron pipes.

Today, we still receive service from pipes that were installed decades ago, at a fraction of the costs that would be required to replace those same pipes; the original costs of a dollar per foot, compared to replacement costs approaching a hundred dollars per foot, for essentially the same service.

The prospect of wholesale replacement of this first generation of pipes yields the funding gap. We look first at private sector solutions, primarily because in our business investment has always been supported by water rates.

The private sector can help to offset the magnitude of the gap by working toward increased efficiencies, and improved asset management practice, technological innovations, and industry consolidation.

Similarly, public/private partnerships can bring about efficiencies that reduce costs. Today, water rates comprise less than eight-tenths percent of household income, compared to electricity of 2.4 percent, and telecommunications of 2.1 percent.

We believe that water is affordable for the vast majority of Americans, and that current rates lag behind the true value of water. There is a role for the Federal Government.

The establishment of uniform standards of water quality is one example. Another is the ability of the Federal Government to sponsor water research, including research that would help support the use of innovative practices in infrastructure replacement.

So while we ultimately rely on the ability of water rates to support investment needs, including infrastructure replacement, we ask you to consider the following recommendations.

First, improve the Drinking Water Revolving Loan Fund. Within the Drinking Water SRF, Congress should support creative non-governmental solutions to the infrastructure financing challenge by explicitly tying Drinking Water SRF assistance to the utility consideration of consolidating ownership and/or management functions with other facilities, and forming public-private partnerships, or other cooperative partnerships.

Also, Congress should require utilities receiving drinking water SRF assistance to have in place or have plans for a rate structure

that reflects the actual cost of service, taking into account capital replacement funds, and a sound asset management plan conforming to generally accepted industry practices, and including a schedule of investments to meet and sustain performance objectives.

Second, a removal of the cap on private activity bonds. The volume cap on tax exempt debt is arbitrary. Removal of the cap for water and waste water infrastructure projects may be one of the most important modifications that Congress can make to give water suppliers the tools they need to meet the investment requirements posed by infrastructure replacement.

We would seek the endorsement of this committee for that concept. And, third, provide Federal assistance to the needy. While we are opposed to wholesale direct Federal grants to water utilities, we support programs that would give a helping hand to economically challenged communities that simply cannot afford a hike in water rates that might be needed to cover the costs of infrastructure replacement.

In addition, the Low Income Home Energy Assistance Program that provides assistance to disadvantaged Americans in paying utility bills may serve as a model for similar water bill assistance programs.

In conclusion, let me again commend you for the hearing and restate our basic premise that we favor sustainable rates, and I encourage you to review the details contained in our written testimony and we are available for questions. Thank you very much.

[The prepared statement of Terry L. Gloriod follows:]

PREPARED STATEMENT OF TERRY GLORIOD, PRESIDENT, ILLINOIS-AMERICAN WATER COMPANY, ON BEHALF OF THE NATIONAL ASSOCIATION OF WATER COMPANIES

Good Morning Mr. Chairman and Members of the Subcommittee, my name is Terry Gloriod and I am the President of the Illinois-American Water Company. Illinois American serves nearly a million people in 124 communities in Illinois.

I am also the Chairman of the National Association of Water Companies' Government Relations Committee. NAWC is a non-profit trade association that exclusively represents private and investor-owned drinking water utilities. I am offering this testimony on behalf of NAWC's membership—the 200 member companies in 39 States—which provide safe reliable drinking water to more than 20 million Americans everyday.

Privately owned water companies, like all other public water systems, comply with all EPA regulations. However, privately owned utilities also comply with the orders of State Public Utility Commissions, which include setting rates. In addition, our companies pay taxes—not just income taxes, but state and local property taxes—thus contributing to the welfare of the country and their communities in more ways than one.

Mr. Chairman, NAWC commends you and this Subcommittee for conducting this hearing on drinking water infrastructure financing. Due to our concern about this issue and our commitment to finding sound solutions, last year NAWC joined with other organizations to form the H₂O Coalition¹. This coalition was formed solely to work on the infrastructure replacement challenge facing the water industry. It is a group of organizations committed to the long-term self-sustainability of our nation's water utilities and to addressing our nation's looming water infrastructure challenge through a combination of creative asset management, local responsibility and decision making, and limited, targeted federal government involvement.

¹The H₂O Coalition is made up of the National Association of Water Companies, the Water and Wastewater Equipment Manufacturers Association, and the National Council on Public-Private Partnerships.

GENERAL COMMENTS

In the last two years or so there has been a great deal of discussion regarding the water infrastructure financing gap. This “gap” is simply the difference between the estimated dollars needed to replace failing water infrastructure and the dollars currently being spent. There are many estimates of the total need, and some of those are as high as a staggering trillion dollars. The “gap” some have said is perhaps half a trillion dollars. It has been argued that this constitutes a crisis, which the *federal government* and the federal government alone must address today.

We have several problems with this argument. First, any 20-year needs estimate is at best imperfect. The detailed data on our nation’s water and wastewater industry required to make reliable, long range estimates simply don’t exist. The \$1 trillion number is likely a worst case high-end estimate. Other estimates, made by credible sources, have put the number much lower. For example, the American Water Works Association has estimated the drinking water needs at \$250 billion.

Second, the advertised “gap” of one-half trillion dollars is also a worst-case scenario. It assumes that utilities do nothing on their own to fill it, which of course is a difficult assumption to justify. There are many things utilities can, should, and are doing on their own to close the investment gap, including reducing costs through increased efficiencies, improved asset management practices, innovative rate structures, technological innovation, industry restructuring including consolidation, and various revenue enhancement strategies.

Third, the cost of water service in this country is very small in relation to the typical household income. Water and sewer services account for a relatively small share of the average household utility budget (less than 0.8%), particularly in comparison to electricity (2.4%) and telecommunications (2.1%). In many respects, water services are a bargain to average households. As such, one of our most precious resources remains very affordable for almost all of the nation’s citizens. Therefore, before Congress considers a massive infusion of cash for the water industry, it should consider that the cost of providing this needed service is not a burden on most households, and that in most cases users, not taxpayers, can and should pay for infrastructure maintenance and improvements.

Fourth, options and solutions provided by partnerships with the private sector can and should be explored to a greater degree by municipalities. While such partnerships are not right for everyone, there is ample evidence that such arrangements can be hugely beneficial for all involved. Furthermore, they can be sized and formatted to meet specific needs, addressing only those areas municipalities need or wish to be addressed. The most obvious benefit to the customer is cost savings, which range up to 40%. At least part of the water infrastructure replacement challenge we are facing can and should be addressed not by the government, but instead by the private sector.

Fifth, consolidation where possible must be a focus for our industry. There are currently about 55,000 separate drinking water systems in the U.S., some serving millions, but most serving few. According to the EPA fully 85% of all water systems serve less than 3,300 people, and a mere 2% of systems serve more than 50,000. Where possible, consolidation of these many small systems could result in significant savings to the customers. Therefore, for those systems experiencing infrastructure replacement, financial and/or compliance problems, consolidation should be considered before any public monies are sought.

Finally, it is worth considering exactly what the appropriate federal government role is. Water infrastructure has traditionally been a local or regional function. Geography and different treatment needs dictate this. There is no national water “grid”. The federal government, on the other hand, has stepped in where there is a *national* interest in a *national* infrastructure. To think of water infrastructure as integrated on a national level is simply inaccurate. It is in fact many thousands of separate infrastructures across the country, with vastly different histories and needs.

This is not to say that the federal government does not have a role at all. There are areas in which federal activity is necessary and appropriate. Clearly, federal water quality regulations as promulgated under the Safe Drinking Water Act are a proper and necessary federal government activity. Research funding is also a role for the federal government. There are emerging technologies that if proven effective, could reduce the price tag of infrastructure replacement for all water utilities. Without such field research to prove the viability of innovation, utilities may be unwilling to “gamble” capital on new techniques.

RECOMMENDATIONS

The Drinking Water State Revolving Loan Fund (DW-SRF) is a successful government program and it should remain the conduit for government assistance to utilities. Projects have been prioritized for funding based largely on public health-related criteria and funding has been provided predominantly in the form of low interest loans. We believe that with relatively minor reforms, the SRF process will remain the best mechanism for assisting water systems in financing capital improvements related to regulatory compliance and infrastructure replacement.

Some organizations have called on Congress to establish new financing authorities to take the place of the SRFs as a means to address the infrastructure financing challenge. NAWC does not support such proposals. Though there are some improvements that Congress can make to the DW-SRF such as including incentives to move utilities toward self-sustainability, the DW-SRF has proven its ability to help meet our infrastructure financing challenges in an efficient and sustainable manner.

REFORMS TO THE DW-SRF

Within the DW-SRF Congress should support creative non-governmental solutions to the infrastructure financing challenge by explicitly tying DW-SRF assistance to utility consideration of:

- Consolidating ownership and/or management functions with other facilities.—There are over 50,000 community water systems in the United States many of which are very small. In many, but not all, cases the financial challenges facing these utilities can be addressed by achieving economies of scale through consolidation. By tying consideration of consolidation with SRF assistance, Congress will encourage localities to put aside parochial interests, expand their vision and do what is right for the customer.
- Forming public-private partnerships or other cooperative partnerships—Municipalities large and small all over the country have realized great savings and success through partnerships with private firms. These partnerships take many forms, from contracting out small portions of a utility's operations, such as billing or meter reading, to multi-year all inclusive management contracts wherein a private firm runs and manages all aspects of a municipally owned utility, to the transfer of assets to a private company. Cost savings that localities have realized over the years from such arrangements range up to 40%, freeing up much needed capital for infrastructure replacement, without burdening either the customers or the American taxpayer.

Congress should avoid some past mistakes of government assistance programs by requiring utilities receiving DW-SRF assistance to have in place, or have a plan to achieve within a reasonable period of time:

- A rate structure that reflects the actual cost of service, taking into account capital replacement funds², and
- A sound asset management plan conforming to generally accepted industry practices and including a schedule of investments to meet and sustain performance objectives.

These provisions require managers to take an enterprise approach to utility management and move all systems toward self-sustainability. These provisions will force utilities to solve their infrastructure problems in ways that are the least onerous to the American taxpayer, yet are responsible, efficient and effective.

Absent these important safeguards we could relive many of the problems of past government subsidy programs wherein:

1. Small or inefficient utilities were artificially propped up, discouraging consolidation and regionalization;
2. Utilities became dependent on the government funds and needed regular infusions creating greater reliance on government money;
3. Because of the subsidy, the American people got a false impression of the true cost of water, discouraging conservation; and
4. The private sector was effectively barred from participation in the industry, thus denying utilities the benefits of the free marketplace and its associated innovations and economies.

Some will argue that these provisions represent a too heavy-handed government approach to legislating, and are thus a step backward. We disagree. While the DW-

²NAWC agrees with the long-standing policy of the American Water Works Association that "Water utilities should receive sufficient revenues from water service, user charges, and capital charges, such as water development charges, to enable them to finance all operating, and maintenance expenses and all capital costs (i.e. debt service payments)."

SRF is administered through the States and includes some state matching money, the vast majority of the DW-SRF corpus is made up of federal money coming from the American taxpayer. Therefore, the federal government has a responsibility to American taxpayers to be sure their money is distributed and used in an efficient and accountable manner.

To address affordability issues, we encourage Congress to consider assistance directed to individual ratepayers rather than just to utilities. A federal water bill assistance program for low-income families would use federal dollars very efficiently, because assistance would be targeted only to the needy. We believe a water bill assistance program is an appropriate form of long-term assistance, especially to larger utilities, where only some of its customers are likely to be impoverished.

There is some precedence for such a program. The Low Income Home Energy Assistance Program (LIHEAP) provides assistance disadvantaged Americans in paying the heating bills. Such a disadvantaged customer assistance program could be fashioned to work as part of the DW-SRF. A new federal program and new federal funding need not be created.

PRIVATE UTILITY ACCESS TO THE DW-SRF

Though we support the DW-SRF as indicated above, we are concerned that treatment of private utilities on the State level has been uneven and often disappointing. This is a problem that Congress should revisit.

First, currently 13 States have declared privately owned drinking water systems to be ineligible for DW-SRF assistance. This unfortunate consequence is a clear, and in many cases deliberate, violation of Congressional intent that SRF loans should benefit customers of all public water systems, regardless of ownership.

There is a simple way Congress can encourage States to implement the DW-SRF as this Committee intended when it authorized the DW-SRF. Congress should require states that include private company needs in their needs survey to ensure that private companies are eligible for SRF funding. This would be a fair solution for all systems and their customers and would avoid rewarding those state that have ignored Congressional intent.

Another disappointing reality of the DW-SRF is that many states (other than the 13 discussed above) are not making loans to private utilities even though such loans are lawful and allowed in those States. In fact, as of December 2000, in 20 States where private utilities are eligible for assistance no such assistance has been extended to private utilities since the DW-SRF was created. To be fair, some of these states have made few loans to any systems, and/or have few private utilities. Also, generally, privately owned utilities are well managed and maintained and thus are often not the most needy under the current criteria. However, when private utilities comprise about 30% of all community water systems nationwide and serve about 15% of Americans, but receive a mere 3.5% of all DW-SRF assistance, it is clear that some states need to reassess their programs.

Some have argued that privately owned companies, even those serving the public, should not receive federal assistance—not even loans. Congress and this Committee considered that argument in 1996, and concluded that regulation by state public utility commissions would assure that the interest savings from SRF loans would benefit customers—not company shareholders. In fact the National Association of Regulatory Utility Commissioners (NARUC) has joined us in criticizing the failure of some states to comply with Congressional intent.

REMOVE PRIVATE ACTIVITY BOND CAP

One of the easiest and cheapest incentives Congress can provide to address the infrastructure issue in a sound and efficient manner is to remove the existing volume caps on Private Activity Bonds for water and wastewater infrastructure improvement. This simple change will make capital both easier to obtain and less expensive for partnerships between the public and private sector, thus making such partnerships much more economically attractive to all concerned.

We understand that this, being a tax issue, is outside of the jurisdiction of this committee. It is, however, one of the most important modifications Congress can make to give municipalities the tools they need to meet this coming infrastructure challenge.

Since 1986 Congress has limited, under arbitrary state volume caps, the use of tax-exempt financing by private entities working for the public good. The cap has the unfortunate effect of limiting the use of private sector approaches for providing vital services, such as water services. Preliminary modeling indicates that this minor alteration in the tax code would cost the federal government very little, yet leverage huge sums of private capital.

We believe this proposal is far superior to federal grants because it:

- (1) Is far cheaper for the federal government;
- (2) Increases capital available to address infrastructure;
- (3) Does not require massive reliance on scarce federal funds;
- (4) Doesn't subsidize utilities but instead gives them the tools to handle their problems themselves;
- (5) Will not subject long term projects to the uncertainties of the annual appropriations process;
- (6) Is a far more efficient use of resources which will result in fewer dollars coming from the ratepayer and/or taxpayer;
- (7) Is far less likely to lead to over-built and wasteful projects often seen in projects heavily reliant on government grants.

This proposal has precedent. Congress has exempted other environmental facilities (certain waste disposal facilities) from the state volume caps because of a perceived public need. This proposal also has far ranging support. Bi-partisan legislation in the House has been introduced which would make these changes. Also, the U.S. Conference of Mayors, National Association of Counties, and the Water Infrastructure Network (WIN) have endorsed this proposal.

LIMIT DIRECT FEDERAL GRANTS

As I've said, there have been calls to establish a new large federal grant program like the old Construction Grants Program of 1970s and 1980s to address our nation's looming infrastructure financing challenge. NAWC and our partners in the H₂O Coalition oppose this plan and urge Congress to work within the existing DW-SRF mechanisms, including the current 30% limit on grants and grant-like assistance.

Experience teaches us that grants are a very inefficient method of providing assistance to utilities. They send the wrong economic and conservation signals to consumers, encourage—even reward—bad management practices, choke-off innovation, discourage public-private partnerships and other creative business models, send American dollars and business overseas, and ultimately cost the public more than other more creative solutions. In Congressional testimony last year, the Congressional Budget Office said “if the federal government issued blank checks for infrastructure, local drinking water and wastewater systems would lose any incentive to keep capital costs down.” CBO also said “high federal cost shares in the original construction grants program—raised capital costs by more than 30 percent.”³ The following specific problems hobbled the old Construction Grants Program and would likely plague any revival of such programs:

- Procurement regulations discounted quality for the sake of lowest price. Owners were forced to purchase and install equipment that fell short of desirable standards for performance, reliability and overall costs of operations. The objective was not value, merely price.
- The unpredictable nature of the annual appropriations process resulted in an artificial rapid ramping up of business activity when grants were available, followed by a rapid downturn in activity in lean appropriating years. These surges and declines forced out of business many American companies long in the construction and/or manufacturing business.
- Sudden infusions of cash in the form of federal grants, rather than the usual steady and predictable ramping observed in a “normal” economy and market, forced customers to go offshore for materials and services, harming the U.S. industry.
- The EPA construction grants program did not adequately require recipients to establish a capital replacement account to ensure that funds existed to replace the plant when it exceeds its life cycle (which could be contributing to the current funding problem).
- Grant recipients had little “ownership” of their projects resulting in overbuilt systems and wasted tax dollars.
- Due to the federal procurement regulations accompanying grants, innovation nearly came to a halt in the U.S. Much of the innovation the industry has seen over the last 20 years has come from offshore. This phenomenon is directly attributable to the construction grant program.

NAWC acknowledges that in some cases grants are the only viable option or at least the option that makes the most sense. For example grants, or forgiveness of loans, may be appropriate for systems in economically disadvantaged communities.

³ Congressional Budget Office Testimony before the House Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment, March 28, 2001

NAWC also supports targeted assistance for individuals based on economic need. However, we oppose subsidies for entire systems that benefit customers who can afford higher rates in addition to the needy who cannot.

CONCLUSION

Mr. Chairman, we appreciate the leadership role that you and this Subcommittee have taken to address drinking water infrastructure problems. These are long-term challenges, and we look forward to working with this Committee to achieve long-term solutions that will allow the drinking water industry to stand on its own two feet.

In conclusion, Mr. Chairman, thank you very much for the opportunity to present our views, and I would be happy to respond to any questions.

Mr. SHIMKUS. Thank you.

And then last, but definitely not least, Mr. Paul Schwartz, President of the Clean Water Action. Welcome, and you are recognized for 5 minutes.

STATEMENT OF PAUL D. SCHWARTZ

Mr. SCHWARTZ. Good afternoon, Mr. Chairman, and ranking member Pallone. I really appreciate the opportunity to be here and if I am not going to be fast, I hope I can be provocative.

Clean Water Action, who I work for—I have been given a promotion. I am actually the National Policy Coordinator, and not the President—is in 15 States, including in New Jersey as the New Jersey Environmental Federation. And we have 700,000 members.

I also come here today as the co-chair of the thousand member Clean Water Network, and I am on the Steering Committee of the Campaign for Safe and Affordable Drinking Water Coalition, and that includes consumer-vulnerable population groups, public health providers, and traditional environmental and conservation organizations.

I just have a few additional comments. First of all, my members are all rate payers of these gentlemen's fine organizations, and associations, and they drink the water, and pay the public health consequences, and pay the rate bills and the local, State, and Federal taxes that come back to deal with issues that are caused by pollution that they don't create in the first place.

We would like this committee to produce a bill that significantly increases the Federal share going to our communities, and we put a price tag of \$25 billion over 5 years.

We would like to see that money focused not only on core infrastructure needs that we traditionally think about, but also on cost effective and integrated pollution prevention, non-structural, and green infrastructure approaches that will over the long run reduce the costs of our infrastructure needs, and provide quality of life improvements in our communities and neighborhoods.

In 1996, the Safe Drinking Water Act amendments gave the States the right to take 15 percent of their funding and set it aside for drinking water source protection. When we think about protection from water, we often think about the Clean Water Act in that other committee.

But the States are given that choice to do that, and what we found is that over the years EPA data shows that the States have spent only 2 percent of their funds on these source water protection activities.

That type of short-sightedness on the part of our States in figuring out how to work with our communities and to give them the flexibility to put in these cost-effective approaches needs to change.

And we would like to work with the committee to figure out how we can help move from a voluntary perspective to mandating some changes that will extend the scarce SRF dollars to create the most public health protections in water quality improvements.

In addition, we would like to see, in addition to seeing the funds increased to the \$5 billion per year mark, we would note that in conversations across the House and the Senate that there is an almost unwritten assumption that the funding will stop after 5 years.

We would like to see this committee take an approach that commits money for 10 years, and we would like to see this committee look at an approach that would establish a national clean and safe water trust fund.

And that that trust fund would get money from a number of sources, including on the clean water side taking settlements that the government makes that goes to the Treasury and putting them into that fund, and looking at polluter pay solutions that get polluters who are creating the monitoring and the treatment infiltration needs in the first place to put some money into long term solutions so that these gentlemen can mitigate the problems and stop the pollutants from getting to our population.

Security and terrorism was mentioned, and we want to talk a little bit about maintaining the integrity of the SRF fund in relation to security. We think that there is an appropriate role as EPA has acknowledged in their guidance for SRF money to be used for security purposes.

But we think that those SRF dollars take a long time to trickle down into the systems, and that the need that we are looking at, in terms of securing the water supply, is a more immediate need, and that the money from the SRF is not sufficient.

That we need to take a look at things like Title IV in the bioterrorism bill and other appropriations to fit the bill.

And last, there is concerns that we have that the dollars that we are using are not neutral dollars. Just as in the Clean Water SRF, the new pots of money that are being brought to bear on drinking water can go either to do good or ill for the environment.

One of the areas that we would like to see closed, or a loophole that we would like to see tightened by this committee is that currently the drinking water SRF directs dollars to go toward existing ends, which is important.

But EPA allows the States to determine their own definition for reasonable growth, and there is a very wide spectrum of definitions, and so what we see is that in a number of States dollars that should be going into existing public health and environmental needs are going to make sprawl happen.

And so we would like to work with the committee to look at the guidance that EPA has prepared and to look at the statutory language around growth to make sure that these scarce dollars aren't going to fuel something that will be causing more water quality problems.

I thank you for the invitation to speak with you today, and I look forward to working through the myriad of opinions and perspec-

tives that you have in front of you to come up with a workable bill that will put an injection of badly needed dollars into our communities. Thank you.

[The prepared statement of Paul D. Schwartz follows:]

PREPARED STATEMENT OF PAUL D. SCHWARTZ, NATIONAL POLICY COORDINATOR,
CLEAN WATER ACTION

Good day, Mr. Chairman and other distinguished members of the Committee. I am Paul Schwartz, National Policy Coordinator of Clean Water Action, a national environmental organization working for clean, safe and affordable water; prevention of health-threatening pollution; creation of environmentally-safe jobs and businesses; and empowerment of people to make democracy work. Clean Water Action works in 15 states and has 700,000 members across the nation. Additionally, I serve as co-chair of the Clean Water Network's Wet Weather and Funding Workgroup and am on the Steering Committee of the Campaign for Safe and Affordable Drinking Water.

Mr. Chairman, thank you for holding this hearing today on "Drinking Water Needs and Infrastructure." The Committee's sustained focus on drinking water needs and infrastructure is timely and of vital importance to the nation's environment, economy and public health. This hearing is a crucial next step toward strengthening drinking water protections. Clean Water Action believes that the public's health and welfare will best be served if this Committee chooses to:

- Reinvest in American Communities—Dramatically increase the federal dollars going to the Drinking Water State Revolving Fund (DWSRF) available for our aging and inadequate core drinking water infrastructure;
- Integrate traditional core drinking water infrastructure approaches with drinking water source protection strategies;
- Protect our drinking water sources and infrastructure from potential security breaches;
- Create a new source of available federal funds outside of the DWSRF by setting up a "National Clean and Safe Water Trust Fund" that is funded at least in part by a polluter pays component;
- Require meaningful accountability, transparency and public participation.

REINVEST IN AMERICAN COMMUNITIES—DRAMATICALLY INCREASE THE DOLLARS AVAILABLE FOR OUR AGING AND INADEQUATE CORE DRINKING WATER INFRASTRUCTURE

The creation in 1996 of the Drinking Water State Revolving Loan Fund (DWSRF) was a necessary first step in moving our nation's old and outdated drinking water infrastructure into this century. Modeled on the successful Clean Water State Revolving Loan Fund (CWSRF), the DWSRF has already made billions of dollars available to communities across the U.S. to protect the public health. We note, however, despite this increased flow of federal dollars over the past six years, that many drinking water providers do not have the necessary resources to take care of critical drinking water infrastructure needs.

A large chunk of our nation's drinking water treatment works and distribution systems are old and near or past the end of their useful life. This physical deterioration of the nation's drinking water infrastructure imposes an increasing cost burden every year fixes and replacement is delayed.

Our treatment techniques are, for the most part, old and inadequate to meet the requirements of the job in the 21st century. Sand filtration and chlorination were at one time state of the art, but not any more. USGS has recently documented all manner of once exotic contaminants such as pharmaceuticals in our nation's drinking water sources. New and emerging microbes, such as *cryptosporidium* and *giardia* are slipping through sand filtration and getting past chlorine disinfection into our finished water supply.

Polluted rivers, lakes, streams, and aquifers (underground water sources) carry fifty years of chemicals such as pesticides that are not even regulated under the Safe Drinking Water Act (SDWA). Not one of the top ten pesticides used (by volume) on New Jersey lawns, golf courses, and farms are regulated under SDWA. Yet these chemicals are combining with chlorine used for disinfection to create even more potent carcinogens and may be one of the largest contributors to birth defects and stillborn births in the nation.

Out of control sprawl development, large animal feeding operations, naturally occurring contaminants such as arsenic, nuclear weapons production and storage facilities, the list of sources of drinking water contamination goes on and on. Yet our commitment to funding the prevention and cleanup of these problems is going back-

wards in real terms and the gap between what is needed and what we are raising and spending at all levels of government is growing wider and wider.

It has been well established by the USEPA, the Water Infrastructure Network (WIN) and others that there is a gap between all available sources of revenue and the water infrastructure needs in our communities. WIN estimates that we have needs of \$1 trillion dollars and projects that \$23 billion must be invested annually over the next 20 years to begin to close the gap.

Clean Water Action calls on Congress to authorize and appropriate a much-needed immediate injection of \$57 billion spread over the next five fiscal years. This is a small price to pay to live up to the promise of clean, safe and affordable water. The Energy and Commerce Committee should produce a bill that significantly increases the federal share going to the DWSRF to \$25 billion over five years.

The \$25 billion should be used primarily to address core drinking water quality problems by being targeted: (1) to fix, modernize and maintain our antiquated and dilapidated drinking water treatment and distribution systems and (2) to assist in prevention of pollution of the sources of our drinking water.

INTEGRATE TRADITIONAL CORE DRINKING WATER INFRASTRUCTURE APPROACHES WITH DRINKING WATER SOURCE PROTECTION STRATEGIES

Drinking water spending cannot just be targeted to the traditional modes and methods of end-of-the-pipe engineering solutions. Though the 1996 Amendments to the Safe Drinking Water Act (SDWA) acknowledged this by creating a voluntary set-aside for drinking water source protection, this program has not been well used.

In 1996 Amendments to SDWA gave states the option to use up to 15% their DWSRF funds for source water protection projects. This was based on the widespread understanding that source water protection was substantially cheaper and more reliable than the dominant end-of-the-pipe solution once water quality has been degraded. *And yet, recent EPA data show that states have only spent 2% of funds on source water protection activities.*

According to EPA, some states have attempted to direct more funds to source water protection—but have been stymied by the requirement that the funds had to go through “public water supply systems.” Though EPA has issued guidance that three-party partnerships are acceptable, i.e., a landowner, a public water supply system, and a group such as the Clean Water Action, American Rivers or the Nature Conservancy. Nevertheless, there have been few applicants for the source water protection dollars.

This suggests that the “voluntary,” “statement of intent” of the Congress to shift resources away from treatment and toward pollution prevention has been a major failure. Clean Water Action calls on Congress to make two corrections. First, the eligibility for source water protection projects needs to be greatly expanded—to include funding of nonprofit entities directly, and through such programs as linked deposit bank programs or loans to county health departments. Loans could be provided to homeowners and farmers, without the direct involvement of the local municipal water supply system. The reason is that most homeowners are resistant to the involvement of the local utility in their backyard. Most farmers will not turn over ownership of a stream buffer to the local utility, or allow that utility to attach an easement to their deed.

Second, history shows that mandatory (vs. voluntary) financial incentives are required. Congress said in 1996 that it wanted funds spent on source water protection—and that has not happened. If Congress is serious, then “may” should be changed to “must.” Congress should create a separate pool of funds that states may apply for, but take the money back (to be reallocated to states that wish to do more source water protection) after a couple of years if they have not spent it on source water protection. This approach would necessitate States needing to change their own eligibility requirements (sometimes through the legislature), but a “must” approach appears to be necessary to get them to do that.

Clean Water Action is concerned that many DWSRF dollars are going towards promotion of sprawl development. While sprawl may be inevitable, scarce DWSRF dollars should not be going to promote this water polluting use. Core water infrastructure systems, most of which were built using taxpayer funds, are now in need of rehabilitation, replacement and repair. Though the 1996 Amendments to SDWA restrict SRF dollars to be used for existing needs, EPA has left it up to the States to determine what constitutes “reasonable growth.” *We would be happy to work with the Committee to suggest changes to this provision that will keep DWSRF dollars focused on solving water quality problems not creating them.*

PROTECT OUR DRINKING WATER SOURCES AND INFRASTRUCTURE FROM POTENTIAL
SECURITY BREACHES

After September 11th security issues around drinking water protection understandably moved to the fore. Concerned about potential breaches of our drinking water system, EPA, drinking water providers, Congress and environmental, consumer and public health groups all got behind efforts to assess vulnerabilities and to eliminate and reduce threats and risks of all types.

EPA recognized in guidance to the states that DWSRF dollars could be used in some limited ways to address security issues. EPA carefully laid out the ground rules for whether individual security fixes could take advantage of core DWSRF dollars and/or dollars from the State SRF set-aside accounts. Though Clean Water Action supports the use of SRF dollars in this manner we would note that the dollar flow to correct real and present dangers would be at a very slow pace if we just rely on the current SRF accounts. Also, we note that the costs for securing our drinking water infrastructure far outstrip the capacity of our current DWSRF structure. If the DWSRF dollars will help our utilities eliminate hazards, or reduce them then these dollars certainly should be eligible. If these dollars help our drinking water providers meet other public health protection needs or help them come into compliance in other ways or anticipate future rulemakings that are far along in the pipeline then we see little problem in the dollars being spent for these purposes.

However, the DWSRF is not sufficient to meet the needs of securing our drinking water supply, and it should not be used in such a way that would funnel scarce dollars away from existing public health needs thereby exacerbating them. *Congress in passing Title IV of the Bio-terrorism bill saw the wisdom of creating an additional pot of money that should be the primary source of revenue for securing the nation's water supply.* If Title IV is insufficient, Congress should come up with additional appropriations not raid the under funded DWSRF to meet this critical need.

ESTABLISH A NATIONAL CLEAN AND SAFE WATER TRUST FUND

The two bills drafted by the Senate Environment and Public Works Committee, S. 1961 and the House Transportation and Infrastructure Committee, H.R. 3930 reauthorize the Drinking Water and Clean Water SRF accounts for a five-year period, but are silent about the long-term federal interest in funding clean and safe water. Water infrastructure issues, just as our airport and highway infrastructure needs are continuous. Any final bill must provide an ongoing, dedicated revenue stream from sources other than the ratepayers and taxpayers. *The Commerce Committee has an opportunity to play a leadership role in establishing the longer term nature of the federal interest by reauthorizing the DWSRF for a ten year period and by establishing a long-term stable funding source—The National Clean And Safe Water Trust Fund.*

Clean Water Action believes that a National Clean And Safe Water Trust Fund will help needy communities meet critical water infrastructure needs. The National Clean and Safe Water Trust Fund should in part be funded by a polluter pays mechanism that imposes a small fee on those vested interests whose polluting behavior creates the need for water clean up and public health protection in the first place. In addition Clean Water Action supports turning over Clean Water Act enforcement settlements that currently go to the general treasury, to the National Clean And Safe Water Trust Fund.

Increased water infrastructure funding is essential if we are to curb a trend toward a two-tiered water infrastructure. Many cities have lost much of their rate base while their infrastructure deteriorates. Small water systems lack the scale to spread out costs of installing or maintaining new technologies. Not only are millions of people's health on the line, but the basic economies of many cities and whole regions of the country are put at risk.

REQUIRE MEANINGFUL ACCOUNTABILITY, TRANSPARENCY, AND PUBLIC PARTICIPATION

Congress needs to require more accountability as it invests in SRF programs. Any reauthorization of the Drinking Water SRF must incorporate mechanisms that ensure open information and public involvement. Many small and medium sized communities don't know how to access the SRF accounts; all too often it is the politically connected that are able to get funding, not those with the most pressing needs. Meaningful public participation in the decision making process about which projects get funded is usually absent.

Currently there is little meaningful oversight by EPA and little to no real public involvement in the creation of intended use plans (IUPs) and the identification of priorities. Even if no new dollars were appropriated, the States will be spending

over \$200 billion over the next twenty years in their combined infrastructure accounts with very little independent verification of whether or not those dollars are going for environmental and public health good or harm and whether or not these scarce dollars are going to meet our most pressing needs.

In addition environmentally sound principles for project design and siting should be observed. In many cases state NEPA (National Environmental Policy Act)—like procedures are not followed or do not include any real review by the public. With little oversight by EPA and almost no public involvement in the intended use plans (IUPs), there is little indication whether or not federal dollars are supporting real public health, compliance or environmental needs. Effective public participation is the best way to ensure that environmental and fiscally sound choices are made. Ensuring such participation is the best way for Congress to protect and build support for its water investment.

CONCLUSION

Congress needs to use investment in drinking water infrastructure to insure water infrastructure equity, affordability and sustainability while meeting the goals of preserving the environment, enhancing the public's health and helping to lay a new foundation for broad economic prosperity. This process should not be used as a way to revisit important but contentious Safe Drinking Water Act reauthorization issues. Clean Water Action's approach, and we hope your approach, is to stick to the issues before us—to identify needs and to decide how best to structure a new water infrastructure funding program.

The Clean Water Network and the Campaign for Safe and Affordable Drinking Water are united in demanding that any final water infrastructure legislation:

1. Substantially increases funding for state clean and safe drinking water funding projects.
2. Provides significant incentives to states to direct more Clean Water SRF funds to nonpoint pollution, drinking water source protection and non-structural approaches, ensuring that (1) today's greatest source of water pollution (nonpoint runoff) is addressed; and (2) that cost-effective "green infrastructure" solutions are used to repair and improve existing wastewater and drinking water systems.
3. Ensures that SRF funds are not used to subsidize new sprawl development, but instead are used to repair and improve existing wastewater and drinking water systems.
4. Funds SRF projects based on the states' priority system ranking after meaningful public input, by closing the loophole (in the Clean Water SRF) that allows states to fund projects not on their own priority list. Also, tighten-up and make consistent the "reasonable growth" loophole in the Drinking Water SRF.

Thank you for the opportunity to comment. I look forward to working with the Committee in developing any new proposals to address drinking water needs and infrastructure. I would be happy to entertain any questions. My phone number is (202) 895-0420 ex 105 and my e-mail is pschwartz@cleanwater.org

Mr. SHIMKUS. Thank you, Mr. Schwartz. I will recognize myself for 5 minutes, and I will take the prerogative of the Chair, like Chairman Tauzin and Chairman Barton of other committees, will always recognize people from his district who happen to ramble into the hearing.

And I would like to recognize back in the corner the Professional Insurance Agents of Illinois. We are supposed to be meeting right now, but of course you can see all the support I have on the Republican side, and all the support that Frank has on the Democratic side.

So, we are it, and thank you for coming, and hopefully my staff is attending to all of your needs. We appreciate you coming.

And I have great respect for my colleague from Missouri, Karen McCarthy, but as you can see, we have got tap water poured all around here, and I think the whole bottle of water versus tap water is one about convenience and another one about marketing.

And that is an issue that we also need to remember. That it is not always as simple as it seems, and that I think that the bottled

water industry is just very good at marketing something to make a point.

Who here as a provider of water, either to rural areas or to municipalities, is providing unsafe drinking water to their constituents at this time?

Mr. SHIMKUS. No one is volunteering. So you all think that you are providing safe drinking water to our consumers?

Mr. NEUKRUG. It is the safest in the world at any time in history.

Mr. SHIMKUS. Great. It is always an important point to make though. I mean, we all want to get better, and we all want to improve. But the sky is not falling, and the water is safe for drinking and use, and a simplistic point to be made, but I think an important one.

You all are meeting great standards right now, and we can provide partnerships to help, but I just throw that on the table for discussion. And I have one question, and then I will turn the seat back over to the full committee chairman.

Mr. Bella, in your testimony, you state that your organization is committed to the principle of full cost recovery through rates; is that correct?

Mr. BELLA. That's correct.

Mr. SHIMKUS. Would you then be opposed to having water companies commit to this principle in the long run before receiving loans through the SRF?

Mr. BELLA. I think there is a combination here. The problem didn't develop by future rate payers. It was developed by past or shouldered, or passed on by past generations.

That is where the SRF would come in here to help the future rate payers pay something that they really did not cause to happen. So the answer is yes, and it is no also.

Mr. SHIMKUS. And that is why we asked the question. There is going to be a transition, I believe, in the local providers, as I talked to you before the hearing, and you all are doing a great job, and we need to be partners.

There is a State role to refining that and working through this authorization is going to be important, and we need all your inputs, and we appreciate your testimony. And now I will yield to the ranking member for 5 minutes.

Mr. PALLONE. Thank you. I asked the same question of the last panel, but I didn't get a response. So hopefully I will get a response from some of you. If you look at the CBO analysis that was done that was mentioned earlier, and you take the mid-point, which is \$4 billion per year of additional spending to address infrastructure needs, it comes to \$20 billion over 5 years.

And I know that we have heard different things. Mr. Schwartz said 25 and others said different, but I just want each of the panelists to indicate whether they would support a \$20 billion increase in the Drinking Water State Revolving Loan Fund authorization.

In other words, if it was \$20 billion over 5 years, would you support that, and I will start from the left. You can just say yes or no, or maybe.

Mr. RUTHERFORD. Yes, I would support that. We suggested \$3 billion, and we would be very happy with four.

Mr. PALLONE. Thank you.

Mr. BELLA. I would also support that.

Mr. PALLONE. Thank you.

Mr. MOORE. That would be the bare minimum that I think is necessary. Actually, I think the water systems need more than that.

Mr. PALLONE. Thank you.

Mr. NEUKRUG. We have done a very detailed analysis and came to a need of \$28.5 billion, and so we are a little bit on the low side and would be looking more at the \$5 billion per year, and we would appreciate any support you could give us.

Mr. PALLONE. Thank you.

Mr. RONNEBAUM. I am not sure that Rural Water has done an analysis other than in Kansas, and the need is being met and we have a hundred percent excess of applications to the fund from what is presently available.

What is going to drive the need is continuing reduced standards on regulations.

Mr. PALLONE. Do you want to express an opinion on the figure that I gave though, the \$20 billion over 5 years?

Mr. RONNEBAUM. I think Rural Water would support that, but I am not qualified to make that—we have not done any studies to know that.

Mr. PALLONE. That's all right. We don't require qualifications. You essentially said yes. Thank you. Mr. Gloriod.

Mr. GLORIOD. I think the difficulty that I have is that all the numbers that are out there have resulted from sort of macro kinds of studies, looking at a broad brush type approach, and I think we all realize that you don't really know what the need is until you start to investigate individual systems and sort of build that up from the bottom.

And I guess as a basic principle, where that kind of a need assessment lands will dictate what kind of funding gap really is there, and I guess I just am not ready to just take an easy way out and strike an average.

Mr. PALLONE. So what do you think though? Do you think it is in the ball park, the figure that I gave?

Mr. GLORIOD. I think the number is probably higher than the \$1 billion funding level now, but whether it is four times higher, I don't know. It may be twice as high, but I don't know that it goes four times as high.

Mr. PALLONE. All right. Thank you. Mr. Schwartz. Well, you gave us a higher figure.

Mr. SCHWARTZ. I just want to note that on some level people at the table have been accused of looking for money in search of a problem, and I think that when you look at New Jersey, the top 10 pesticides used by volume on our lawns, which is our biggest crop, golf courses, and farms, are not regulated under the Safe Drinking Water Act.

And when you think about out of control sprawl development, large animal feeding operations, and we heard a lot about arsenic today, and nuclear weapons production and storage, and on, and on, and on, there are large numbers of contaminants that are prevalent in our sources of drinking water that we are not even talking about under the Safe Drinking Water Act.

Mr. PALLONE. So you definitely would support the \$20 billion because you indicated that you would like a larger amount?

Mr. SCHWARTZ. Yes, and the needs that we are talking about, the type of need surveys that are done by the EPA, are not looking at things like pollution prevention, and really factoring those in.

So we think that there is a real problem and that we really need to begin to address the problem or what we are going to hear is unfunded mandates and flexibility to the cows come home. We need accountability and water quality, and we need the money by the Federal Government to back that up.

Mr. PALLONE. All right. I appreciate that, but the answer is yes to the \$20 billion?

Mr. SCHWARTZ. Yes.

Mr. PALLONE. And let me just ask this, and again I don't know that we can get through everybody in 5 minutes, but I had said to the first panel my concern that if we don't have a significant increase in the level of authorization, as well as appropriations, what is that going to mean in terms of safe drinking water.

Will it be safe and whether or not companies, utilities, will be able to meet these infrastructure needs. Some of them may be able to raise rates significantly, and others may not.

So I don't know if anybody would like to express whether it is going—because, you know, it kind of goes to the suggestion that right now that drinking water is safe, but can we be sure that it isn't if we don't have a significant increase.

Can these utilities afford to impose the extra burden on the rate payers? You are a city councilman, and so you are probably in the best position. Go ahead.

Mr. MOORE. Well, Congressman, your colleague, Congressman Shimkus, asked us if we were providing safe water, and of course all of us responded that indeed we were.

The reason that we are here today is that we would like to continue to provide safe drinking water in the years to come, and we see a scenario where because of these pressing infrastructure needs that down the road that might become much more difficult for us to do. So we are trying to head off a crisis and we are trying to plan ahead, and we are here to ask for your help.

Mr. PALLONE. Mr. Bella.

Mr. BELLA. One of the—we provide basically two products. One is the physical water, and the second product is the reliability of the supply of that water. That is the way that we look at that.

And the reliability is another aspect that will be—that SRF and this kind of funding addresses. Whereas, the water and the quality of the water, now we have been doing that pretty much on our own, but the reliability going forward is going to be the most important thing that we do, the reliability of bringing that product to the consumer is what this is really all about in my estimation.

And until you have stood out by a ditch on December 24th, and it is 10 degrees out, and there is two men in a hole and the bonnet of a 110 year old valve blows off, and they are in freezing water, and all the models and everything just go away. And that is what we have to deal with and that's why I appreciate your offer to express that here.

Mr. PALLONE. Not everybody has to respond, but is there anybody—well, you want to, I guess.

Mr. NEUKRUG. Yes. I think the drinking water industry is made up of real professionals, and I think the safety and reliability of drinking water in the United States will remain, irrespective of what Congress does.

The issue though is competitiveness, and when I am talking about this, I am talking about competing needs for funds. Obviously the reliability and safety of drinking water is the utmost need for reliability.

What do you lose? Increased deferment of infrastructure replacement, and perhaps a delay in CSO programs, and perhaps you don't get the environmental benefits that Paul Schwartz is looking for.

There is something within the municipality and utility that we will have to give up, and I pray for all of us that it is not the quality or reliability of the drinking water.

Mr. PALLONE. Thank you.

Mr. GILLMOR. Thank you. I want to thank John Shimkus for all of his help today, and Mr. Pallone as well, and particularly I appreciate the witnesses today, your help and your testimony, and your expertise.

We are going to have to adjourn now so that the Oversight and Investigations Subcommittee can learn about nuclear safety, and we will have I think, however, some questions that we may submit to you and hopefully you can send us your answers in writing. So thank you very much and we stand adjourned.

[Whereupon, at 12:52 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows:]

ATLANTA CITY COUNCIL
ATLANTA, GEORGIA
April 9, 2002

The Honorable PAUL E. GILLMOR, *Chair*
The Honorable FRANK PALLONE, JR. *Ranking Member*
Environment and Hazardous Materials Subcommittee
Energy and Commerce Committee
U.S. House of Representatives
Washington, D.C. 20015

DEAR REPRESENTATIVES GILLMOR AND PALLONE: I am Clair Muller, a Councilmember from Atlanta, Georgia and a member of the Energy, Environment and Natural Resources (EENR) Steering Committee of the National League of Cities (NLC) for many years.

I have concerns about language in S. 1961, the Water Investment Act of 2002, a proposal being considered in the Senate, which states, that in order to access new money local governments should bill for the full cost of service, certify that our assets are managed, consider consolidation of services and explore public/private partnerships. *I would strongly urge you not to include similar language in any proposal you develop to provide enhanced federal financial assistance for municipal drinking water infrastructure repair, rehabilitation and replacement.*

While I am sure other cities have varied experiences, I must speak today for Atlanta.

In 1995 Atlanta was sued for violation of the Clean Water Act and we are currently under a strict Consent Decree with EPA and our state EPD with deadlines set at 2003, 2005, 2007 and beyond *at an estimated cost of \$4 billion.*

We have raised our water/sewer rates every year for the past 6 years to the point that we now have an "affordability" issue with EPA.

We are complying with a City asset review now.

As City Utilities Chair for the City of Atlanta, I have advocated for many years consolidating our drinking water system with our county—which owns, with At-

lanta, half of a much smaller system than Atlanta's system. That city/county system is totally privatized and very successful. The contracts are short (3-4 years) to maximize the benefits to the governments and the ratepayers. Every time a contract is re-negotiated, savings are found for the utility and the ratepayers.

By contrast, the City of Atlanta (under a former Administration) privatized the operation and management of our water system, a system serving a population of 800,000, for 20 years. The customer service has been a disaster and the requests for more dollars due to extra projects are constants.

Please do not assume that privatization is a silver bullet. If a city is operating appropriately, there is no way a private for-profit company can do a better job than a municipality. Yes, privatization can work, as it does with our city/county system, but local governments must have the flexibility to make these good moves or bad mistakes on their own. Do not impose upon us day-to-day operations.

Sincerely,

CLAIR MULLER, *Atlanta City Councilmember,
City Utilities Committee Chair,
NLC EENR Steering Committee Member,
Georgia Municipal Association Boardmember,
Atlanta Regional Commission Boardmember,
Atlanta/Fulton Water Resources Commission Vice Chair*



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

JUN 11 2002

OFFICE OF
WATER

The Honorable Paul E. Gillmor
Chairman
Subcommittee on Environment and Hazardous Materials
Committee on Energy and Commerce
U. S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

On April 11, 2002, I had the opportunity to testify before the Environment and Hazardous Materials Subcommittee regarding drinking water infrastructure needs. At that time, I responded to a number of questions, including some which required a more detailed response in written form. I am now enclosing written responses to those questions, and copies are being sent to the Subcommittee members who posed the questions.

I trust that these responses are satisfactory, and I again appreciate the opportunity to be of service to the Subcommittee.

Sincerely,

Benjamin H. Grumbles
Deputy Assistant Administrator

Enclosure

cc:

Honorable Heather Wilson
Honorable Gene Green
Honorable Ernest L. Fletcher

Responses to Questions & Supplemental Information
 Subcommittee on Environment and Hazardous Materials
 House Energy & Commerce Committee
 Hearing on Drinking Water Needs and Infrastructure on April 11, 2002

Questions from Congresswoman Wilson

1. *"What kinds of reductions in death does the EPA expect in New Mexico with implementation of this [10 ppb arsenic in drinking water] health standard? Mrs. Wilson provided an estimate of two deaths over a seven-year period at a cost of \$400 to 500 million to the State of New Mexico.*

Under the Safe Drinking Water Act (SDWA), EPA projects risks, costs, and benefits (such as deaths avoided) on a national basis. The Agency has insufficient information to project deaths avoided on a state-by-state basis. Also, in addition to reductions in deaths, EPA considers reductions in nonfatal illnesses to estimate the benefits of a drinking water standard. In table III.D.3 (p. 7009) of the January 22, 2001, final arsenic rule (66 FR 6976), EPA estimated the range of annual total lung and bladder cancer cases avoided for a drinking water standard (i.e., a maximum contaminant level, or MCL) of 10 ppb to be 37.4 to 55.7 cases. Over a seven-year period, this would be 262 to 390 cases avoided, and over the suggested amortization period of 20 years for capital costs, the range is 748 to 1,114 cases avoided. Based on the mortality rates for lung and bladder cancer, slightly more than one-half of this range are estimated to be fatal cancer cases, i.e., 131 to 195 deaths avoided over a seven year period, and 374 to 557 deaths over the 20-year period.

It should be noted, however, that these are statistical projections. The actual number of cases avoided could be more or less. It is also extremely important to recognize that there are a substantial number of other cancer and non-cancer illnesses that are expected to be avoided by reducing arsenic to the level required by the final rule. These illnesses include skin, kidney, liver, and prostate cancers, and arsenic-related cardiovascular, pulmonary, immunological, neurological, and endocrine effects.

Arsenic treatment costs will vary by size of population served by a system, with larger systems having more opportunities for economies of scale. The capital cost estimate of \$400 to \$500 million which you cited appears to be based on cost estimates prepared for the State of New Mexico that may reflect outdated information. These estimates were submitted by the city of Albuquerque as a comment on the June 22, 2000, (65 FR 38888) proposed rule. In the preamble to the January 2001 final rule, EPA summarized its review of an American Water Works Association Research Foundation (AwwaRF) report titled, "Cost Implications of a Lower Arsenic MCL". EPA's comments on the AwwaRF report are germane to the New Mexico estimates, because the same approach and assumptions were used to estimate capital costs.

EPA determined that the capital costs for activated alumina in the AwwaRF report were significantly overestimated due to an error in vessel costs. The vendor quote used for vessel costs was actually the cost for a complete treatment system. By assuming that the cost was only for the vessels, the costs for other components are double counted for treatment with activated alumina. This error also applies to both the throw-away activated alumina process for small systems, and the regenerated activated alumina process for large systems. EPA also believes that the unit costs for medium-size systems were overestimated because larger system costs were inappropriately extrapolated to smaller systems.

Thus, the Agency continues to believe that capital costs for New Mexico would be significantly lower than \$400 to \$500 million. For example, total capital costs for all systems affected by the arsenic rule are estimated to be just under \$900 million. Conservatively amortized over 20 years (actual useful life of arsenic treatment technologies is several years longer), the annual capital costs are \$45 million. These are national costs for the approximately 4,100 systems affected by the rule, of which about 2 % are in New Mexico. In the summer of 2001, EPA's national cost estimates and assumptions were reviewed by the National Drinking Water Advisory Council. The Council concluded that EPA produced a credible estimate of the costs given the constraints of present rulemaking, data gathering and cost models.

2. *"With respect to treatment technologies, have there been any large scale demonstrations of the treatment technologies that are currently available, and what large-scale demonstrations projects do you have for innovative new technologies in your R&D plan?", and "Does the EPA have an R & D [research and development] road map for what are the most promising technologies for reducing the costs of arsenic removal?"*

Response:

The Agency has developed an Arsenic Treatment Technology Research and Technical Assistance Program to provide a total of \$20 million over the next two years for research and development of more cost-effective technologies, optimization of current treatment technologies, and delivery of technical assistance and training to operators of small systems. The program will help small systems meet the new arsenic standard, and reduce compliance costs. The program was outlined in a March 2001 Report to Congress titled, "Small System Arsenic Implementation Issues".

This \$20 million initiative complements, and is in addition to, projects sponsored by the American Water Works Association Research Foundation (AwwaRF). The AwwaRF funded 26 projects valued at approximately \$9 million, and included treatment studies at two large systems, Phoenix and Tucson, Arizona. These projects were funded in conjunction with the Arsenic Research Partnership, which is a collaboration between the USEPA, the Association of California Water Agencies, and AwwaRF.

The "road map" detailed in EPA's Arsenic Treatment Technology Research and

Technical Assistance Program consists of the following five major components:

- Small Business Innovative Research (SBIR): EPA issued a solicitation on January 31, 2002, for projects under its SBIR Program that would provide new innovative low cost treatment technologies for removing arsenic from drinking water.
- Treatment Technology Demonstrations: In fiscal years 2002 and 2003, full-scale treatment technology research demonstrations will be initiated on a large-scale basis. It is anticipated that this program will lead to approximately 20 demonstration projects at geographically diverse public water supplies to evaluate the performance, reliability, and cost of various commercially available arsenic removal technologies over a period of one year. Small systems are targeted because these systems are most impacted by the new standard. The demonstration projects are anticipated to begin by November 2002.
- Environmental Technology Verification (ETV): Shorter-term performance verification studies of commercially-ready arsenic adsorption technologies will be conducted under EPA's existing ETV Program. A solicitation is currently being evaluated. A second solicitation is planned for May 2003.
- Enhanced Internal Research: EPA is enhancing ongoing arsenic research to emphasize management of residuals from arsenic treatment, improved analytical methods, treatment process optimization and distribution system studies.
- Training and Technical Assistance: EPA is assisting States, Tribes and utility operators by developing training materials, software and design manuals, and by providing direct training and technical assistance on how to meet the new standard. EPA has conducted workshops at five sites, including Albuquerque, New Mexico. Three more workshops are scheduled for later this year.

More information on the Arsenic Treatment Technology Research and Technical Assistance Program can be obtained at the EPA website:
<http://www.epa.gov/ORD/NRMRL/arsenic/index.html>.

Question from Congressman Green:

I was looking at the list for my revolving fund in Texas, and we have 70 million available, but the requests are \$606 million for the revolving loan fund. Is that pretty typical of urban States? Because I know that Texas and California, and New York, are high usage States, and might they have that much shortfall?

Response:

Generally, states are experiencing a greater demand for funding than what they have

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available in their DWSRF programs from Federal grants, state match, bond proceeds, repayments and earnings. EPA collects annual information from states in order to assess the funds available in each state as of June 30. Using data from the period ending June 30, 2001, (state fiscal year 2001) and information from state annual Intended Use Plans (IUP) for 2000 and 2001, approximately \$5 billion is available to fund \$21 billion in projects identified in IUPs. With no additional funding, states would be able to fund less than 25 percent of the project costs identified in state IUPs. This number is likely conservative (i.e., would be lower) because some states only included the list of projects which they could reasonably expect to fund in the next two or so years rather than all systems that have expressed interest in the program. Additionally, some of the data in the IUPs is dated and many states have identified many more projects requiring funding in the past two years.

Large states like California, New York and Texas can face large gaps between the funding available and projects identified in their IUP. The data showed that these three states could meet 5, 19 and 40 percent, respectively, of the demand identified in their IUP with funding they had available through June 30, 2001. However, small states are also challenged. West Virginia, Kentucky, Montana, and North Dakota are among the small states that can only fund less than 20 percent of the projects identified in their IUP. About 14 states appear to be meeting their demand with the funds they have available, but (as indicated above) it is likely that some have not provided a full accounting of projects from utilities that have expressed interest in the program.

Question from Congressman Fletcher:

"And the other question I have is that we also have concerns about testing that is both done on the State and Federal levels that requires duplicate testing and increased operating costs. And if you could comment, Mr. Grumbles, and maybe the GAO and CBO could talk about their estimates, and do they take into account or how much consolidation do they take into account in their estimates?"

Response from Ben Grumbles: *"And we recognize that when it comes to the Safe Drinking Water Act implementation costs, often times the infrastructure is a huge cost, but there is also the very substantial cost of monitoring and also testing. And we recognize the need to minimize the duplication and avoid those costs. But if I could, I would like to provide a more direct and detailed response to your questions for the record."*

Supplemental Response:

Regular water quality monitoring is necessary to determine if consumers of a particular water system are drinking water that meets public health standards. EPA has tried to balance public health needs with flexibility to reduce costs where possible. When EPA promulgates regulations, we examine the costs of monitoring and analysis, and investigate cost effective ways

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to minimize the monitoring and to implement alternatives.

The Total Coliform Rule provides basic protection from microbiological contamination and acute threats to health through distribution system monitoring. The monitoring requirements are based on population served by the system – systems serving fewer people are required to collect fewer samples. For example, a small water system serving 4,200 people takes five samples per month. The cost of analysis is approximately \$20 per sample. However, the rule offers a cost-saving option. As long as the system has no history of total coliform contamination and a sanitary survey (a visit, usually by State personnel, to ensure that proper protection is in place) is conducted once every five years, monitoring may be reduced to only one sample per month.

EPA has provided monitoring flexibility for contaminants with chronic health effects, so costs can be reduced where appropriate. EPA has developed the Standardized Monitoring Framework for its regulations for chemical contaminants. Monitoring for these contaminants can be very expensive – as little as \$15 for arsenic to over \$500 for dioxin. Because these contaminants have chronic effects, based on lifetime exposure, regular monitoring is less frequent than for microbial contaminants. The Standardized Monitoring Framework requires ground water systems to monitor once every three years, and surface water systems (where the contaminant concentration can change more rapidly) to monitor annually.

Most small drinking water systems have significantly reduced their chemical contaminant monitoring through monitoring waivers. If the water system can show little or no concentration of a contaminant, its monitoring frequency can be reduced to as little as once every nine years. The system can also reduce monitoring entirely for certain contaminants, such as pesticides, if the system can show that the pesticide has never been used in the area.

In addition to this monitoring relief, EPA's regulations allow a state to reduce the monitoring burden on a consecutive system, i.e., a system that buys its water from another water system. EPA's regulation (in 40 CFR 141.29) allows the state to treat these interconnected systems as a single system for monitoring purposes, where appropriate.

