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WATER INFRASTRUCTURE FINANCING

HEARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

ON

INNOVATIVE FINANCING TECHNIQUES FOR WATER INFRASTRUCTURE IMPROVEMENTS

OCTOBER 31, 2001

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WATER INFRASTRUCTURE FINANCING

WEDNESDAY, OCTOBER 31, 2001

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON FISHERIES, WILDLIFE AND WATER,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:38 a.m. in room 406, Senate Dirksen Building, Hon. Bob Graham (chairman of the subcommittee) presiding.

Present: Senators Graham, Corzine, Crapo, Bond, Chafee, and Jeffords [ex officio].

OPENING STATEMENT OF HON. BOB GRAHAM, U.S. SENATOR FROM THE STATE OF FLORIDA

Senator GRAHAM. I will call the hearing of the Subcommittee on Fisheries, Wildlife and Water of the Committee on Environment and Public Works to order. I extend a good morning. I understand that we have already had our instructions as to how to evacuate this committee room if necessary. That is just one of the several new aspects of our life here in the U.S. Congress.

One of the other aspects is that our committee schedules have been disrupted by recent events. This meeting that we are holding today has been scheduled twice before but has had to be delayed because of unexpected developments.

I want to extend my appreciation that the members of the committee and particular to the witnesses who have been so flexible and patient awaiting the time that we could hear your very valuable comments.

Over the last 2 years there has been much discussion about water and wastewater infrastructure and the need to modernize our current system. This subcommittee has held three hearings, largely under the leadership of Senator Crapo, focusing on the need for infrastructure investment, the types of problems facing local communities and the effectiveness of our Federal aid programs.

There is no question that our infrastructure needs are great. In each of the States represented here today we could cite a long list of special needs. The Federal Government has a role in water and wastewater infrastructure with its annual capitalization of the Safe Drinking Water and the Clean Water State Revolving funds.

It is likely that the Federal Government will continue to provide assistance to States as they seek to maintain the superior service that our water system provides to our citizens. However, I also believe that there are still questions to be answered as to exactly how

and in what situations the Federal Government may choose to provide that assistance.

Today, the subcommittee will seek to answer some of the questions by hearing recommendations and suggestions by our witnesses on two main issues. First, we will discuss what the Federal Government can do to facilitate some of the innovative financing techniques that are either already in use by local communities and water utilities or in use in other areas of infrastructure such as transportation.

Second, we will discuss ways that the Federal Government may encourage the use of new financing techniques that may stretch Federal dollars applied to water and wastewater infrastructure. I recognize that some of the most effective approaches may relate to tax policy. As modifications to the tax code are under the jurisdiction of the Finance Committee, we will not be focusing on these items in detail today.

However, with several other members of the Environment and Public Works Committee, I serve as a member of the Finance Committee and we will be glad to share any ideas that take the form of tax code changes with our fellow members of the Finance Committee.

In closing, I want to assure everyone that this issue is a priority of this subcommittee. We intend to hold one or two additional hearings this fall if time permits, and to develop legislation over the next several months.

I encourage anyone who has concerns or suggestions on these issues to contact the subcommittee over the next few weeks. If you have written testimony you would like to submit for the record, the record will remain open for 1 week.

With our Ranking Member, Senator Crapo and Senator Bond and the other members of this subcommittee, we are committed to making significant progress on this issue and to do so early in 2002.

Thank you very much.

Senator Crapo.

OPENING STATEMENT OF HON. MICHAEL D. CRAPO, U.S. SENATOR FROM THE STATE OF IDAHO

Senator CRAPO. Thank you very much, Mr. Chairman. I appreciate your rescheduling this twice-postponed hearing. I guess three times really is the charm in this case. But the issue is of such critical importance that I think everyone in America appreciates your commitment to make sure that we continue our focus on the issue.

I also appreciate our witnesses joining us here today to examine the EPA financing support programs for infrastructure projects. I have said a number of times that in my opinion the issue of our clean water and particularly the infrastructure needs that we face in it as a nation right now are one of the highest, if not the highest, environmental issues that we face in this country.

One of the most significant environmental issues that we face and what this committee's work will generate will be one of the most important improvements to our environment or efforts to improve our environment that we can take here in Congress. That is the importance I place on this issue.

This is the fourth in a series of hearings that this subcommittee has held, as the Chairman has already indicated. We have been looking at the myriad of issues surrounding the water infrastructure needs of our country surrounding the water infrastructure needs of our country to make sure that this committee is prepared to do the important work that is necessary to assure clean water in our Nation.

In our initial hearing we examined the magnitude of the water and wastewater needs projected over the next 20 years. Although the estimates varied considerably, all witnesses acknowledged that the problem is extremely large.

While there is disagreement on the scope and who the contributors to the problem are, it is evident that all sides are looking to Congress for providing assistance in safe and cost-effective water and wastewater programs for the public.

We have also looked at how those resources are being made available by the Federal Government, focusing on the EPA. In addition to financing State loan programs, the agency has provided direct grants to communities, research on pollution and contamination prevention and technology, operator training and certification and technical assistance.

With our current budget restraints and so many competing needs, we all recognize that there are going to be limits on what Congress can do. Therefore, we need to be sure that we maximize the available resources that we have.

A number of stakeholder reports have outlined a series of recommendations, everything from improvements in administering funds to new programs that encourage innovation to promoting public-private partnerships to better asset management.

I look forward to hearing the success of those ideas in the past and all of your recommendations for future steps that we can take.

In addition, knowing what hindrances exist that prevent innovative uses of resources will help this committee better understand the limitations on utilities and administrators to providing the best and most effective services possible.

I also want to take a moment to welcome Tracy Mehan here today. Although we had a chance to visit with you earlier during the confirmation process, this is the first opportunity that I have had to work with you to focus more closely on your observations and expertise on our water and wastewater infrastructure issues.

With the magnitude of the challenge before us, it is important that we begin a real dialog on how to best utilize the resources available to the EPA, to the States and to the communities.

With that, I want to thank you again, Mr. Chairman, for holding the hearing and all of our witnesses for not only appearing here today, but for the significant amount of effort that you have put into this issue already.

Senator GRAHAM. Thank you, Senator.

Senator Bond.

OPENING STATEMENT OF HON. CHRISTOPHER S. BOND, U.S. SENATOR FROM THE STATE OF MISSOURI

Senator BOND. Thank you, Mr. Chairman, I am not sure whether we feel more reassured that the leader in the Intelligence Com-

mittee is chairing this committee, knowing how we ought to be intelligent about the threats or whether we ought to consider ourselves more of a target. One way or another, we appreciate your having the hearing.

I am delighted to welcome my old friend, Tracy Mehan from Missouri. He has an outstanding record. He has done a great job. Tracy, don't blow it.

I asked to be able to make a statement because the water infrastructure financing is something that is very important to me and with another hat that I wear.

Yesterday I introduced a Concurrent Resolution with Sherwood Boehlert in the House to commemorate the 30th anniversary of the Clean Water Act, which will occur on October 18, 2002. I would hope that we could set as a goal to pass a new water funding bill by the 30th anniversary next October.

There is no question but that we have tremendous, increasing needs for additional resources for water spending, improving the wastewater infrastructure, providing clean and safe water for our families. We need to assess the vulnerability of our drinking water systems, provide protection from terrorists, all of this must be done and it isn't going to be cheap.

Recent surveys from the EPA and outside groups say that we need to spend at least $300 billion over 20 years to maintain our water systems.

In another committee, I have in the past served as chairman of the Appropriations Subcommittee for VA-HUD which includes the funding for EPA. Every year that I chaired that committee the administration came in with cuts to SRF. They had wonderful boutique programs they wanted to fund instead of the State revolving funds, which is the only way of getting the money out to make it continue to evolve and eventually to buildup to meet the needs. And we restored it.

This is the year the Administration, using the same OMB from the past, came in with an idea to rob the SRF for combined sewer overflow funding. Senator Mikulski, with my strong support is going to restore it. We put a measly $1.35 billion in for clean water and $850 million in for safe drinking water.

Mr. Chairman and members of the committee, we are not going to get there unless we find some other creative ways of financing or get the Administration and OMB, with the pushing of EPA, to make a significantly higher recommendation and work with our colleagues on the Budget Committee to get us the money and the appropriations leaders to give us a bigger allocation because we are fighting against veterans medical care, housing needs for the poor, and there are a lot of other places that compete for these dollars. We don't have the dollars.

We also know as we look down the road, the regulatory requirements. We have got bills for expensive concentrated animal feedlot operations, total maximum daily load, and sanitary sewer overflow. Right now we are debating how we are going to ratchet down the limit on arsenic in water, and what we do for small communities.

These are all going to cost a heck of a lot of money, and we don't have it. I would say just one community, maybe Tracy has been there, Pickering, MO in Nodaway County in northwest Missouri,

don't blink because you will miss it if you go through. In the 2000 census they lost 15 people. They are now down to 156. It is on Highway 148 out of Maryville. It is an old railroad town. The train doesn't stop there any more. They pulled up the rails. There are two churches and one elementary school. Most of the workers there are on a minimum wage. The major business is a junkyard. The total city budget is $25,000 a year with no paid city workers.

They have no sewer system. The houses have a septic system and the gray water from tubs and sinks goes into the ditch at the road. The waste leeches out of the septic tanks into the ditch. The storm water becomes dirty storm water. You know, they can't afford $1 million for a sewer system. They want to do the right thing. They want to meet the Clean Water Act standard. They want to meet the EPA regulations. No one in Pickering wants to drink arsenic in their water. But they just don't have the means of funding it.

We need to look at communities like that. We have the community of Lebanon in southwest Missouri with 10,000 residents. They face millions of dollars in sanitary sewer overflow costs. Then we go to the large cities like St. Louis where it's water system is aging.

Everybody in our State needs to clean up the wastewater and have safe drinking water. There just is not enough money in the budget now. I hope this committee under your leadership, Mr. Chairman, can put us on the path of figuring out how we get the resources that are vitally needed in what I think is one of the most pressing environmental problems we have in our country today.

I appreciate the time. I wanted to share this with you because I believe it is of greatest concern.

[The prepared statement of Senator Bond follows:]

STATEMENT OF HON. CHRISTOPHER S. BOND, U.S. SENATOR FROM THE STATE OF MISSOURI

Mr. Chairman, thank you for holding this hearing on improving the utilization of available water and wastewater infrastructure funding. The cost of providing clean and safe waters for our families is overwhelming local communities large and small. Therefore, we must explore all creative and flexible financing options to fund drinkable and fishable waters.

Yesterday, I introduced a Concurrent Resolution with Sherry Boehlert in the House to commemorate the 30th anniversary of the Clean Water Act on October 18, 2002. 1 believe it would be a wonderful goal for us to set to pass a new water funding bill by that 30th anniversary next October.

We certainly have the need for an increased authorization for water spending. Recent surveys from EPA and outside groups say we need to spend at least $300 billion over 20 years to maintain our water systems.

To traditional infrastructure maintenance and improvement we can now add infrastructure protection. Assessing the vulnerability of our drinking water systems and providing protection from terrorists will not be cheap, but it must be done. These numbers are only for water infrastructure. There are a host of additional regulatory requirements coming down the pipe as well. We also have bills for expensive Concentrated Animal Feedlot Operations, Total Maximum Daily Load, and Sanitary Sewer Overflow proposals. We are currently debating placing new burdens on localities for additional Arsenic controls. All of these proposals are well intentioned, but they also have very high real costs.

Let me put a Missouri face on the challenges communities face. You all have communities like these in your States, but it's good to remind ourselves of our local problems as we debate these arcane financial methods.

The town of Pickering is in Nodaway County in northwest Missouri. According to the 2000 census, they lost 15 people and are now down to 156 residents. If you drive up Highway 148 out of Maryville, you will see Pickering on the left side of the road.

Pickering is an old railroad town, but the train doesn't stop there anymore. It couldn't anyway, because they pulled up the rails and ties years ago.

There are two churches and one elementary school in town. Pickering residents are hard workers, but most make barely over minimum wage. Pickering has exactly one business—a junkyard. Thus, almost all city tax revenues are from property taxes. The total city budget is $25,000 per year. There is no police department, no fire department, no library. There are no paid city workers.

The reason I bring this up is because Pickering has no sewer system. Houses have septic systems. Gray water from tubs and sinks goes into the ditch at the road. But many septic tanks don't have proper drainage, and their waste leaches into the ditch. Storm water becomes dirty storm water.

As the financial experts can imagine, a town with 150 residents and an annual budget of $25,000 can't afford $1 million for a sewer system. A town with no city employees is hard pressed to fill out reams of paperwork for loan programs. A town that size can't afford matching requirements. Tripling water rates still won't be enough to pay for the water system they need.

Pickering wants to do the right thing. Pickering wants to meet Clean Water Act standards. Pickering wants to meet EPA regulations. I'm sure no one in Pickering wants to drink Arsenic in their water.

Pickering wants to provide clean and safe water for its residents. Pickering is willing to pay more for clean water, but sometimes good intentions and desire just aren't enough. We have to keep Pickering in mind when we talk about how to finance water improvements. We also have to remember mid-sized communities such as the 10,000 residents of Lebanon in southwest Missouri. They face millions of dollars in sanitary sewer overflow costs. We also can't forget the aging system that more than a million residents in St. Louis depend upon for every drink of water they take.

All of these Missouri families and all the families in your States deserve clean and safe water, but they need our help. These people are depending upon us for a new water spending authorization to meet their needs.

I urge my colleagues to come together to help meet these water needs. Mr. Chairman, thank you for hosting this hearing and I look forward to further Committee action on paying for clean and safe water.

Senator GRAHAM. Well, thank you, Senator. I appreciate your long commitment, your experience and your passion for this issue. We will try to work together to achieve your very lofty goals and to do so within that timeframe of the 30th anniversary of the Clean Water Act.

Senator Chafee, do you have an opening statement? I also understand that you wish to introduce one of our witnesses.

OPENING STATEMENT OF HON. LINCOLN CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator CHAFEE. Yes, thank you, Senator Graham. I agree with my colleagues on the importance of this issue. Certainly wastewater and water treatment and innovative financing is important. Of all the priorities, as Senator Bond said, that confront us, certainly that is one of the highest priorities.

I, myself, think it is an area that we can export to developing countries once we get good at it ourselves, that are wrestling under the same challenges we have.

Yes, I am pleased to introduce Paul Pinault, who is executive director of the Narragansett Bay Commission, which is faced with combined sewer overflow problems in Providence. We have an aging sewer system—old brick sewers. When we have a rain event, of course, you have a discharge of completely untreated wastewater into our beautiful Narragansett Bay. It is very, very expensive in terms of trying to remedy that, of course.

Paul has worked for the Narragansett Bay Commission since 1982 and is the Commission's executive director since 1991. He was

recently appointed the American Metropolitan Sewerage Agency's vice president.

Welcome, Paul. I'm glad you are here.

Senator GRAHAM. Thank you, Senator Chafee.

Our first witness today will be Mr. Tracy Mehan. Mr. Mehan, if you would please take a seat at the table? Mr. Mehan is the Assistant Administrator for Water at the Environmental Protection Agency. This will be his first, albeit twice delayed, appearance before the subcommittee.

We welcome you. Congratulations on the responsibilities which you have assumed. We look forward to hearing your comments.

Mr. Mehan, for each of the witnesses, I'm going to ask if you could limit your oral presentation to 5 minutes. If you have further detail that you would like to submit, it will be reported fully in the record. Then, at the conclusion of your remarks, members of the committee will ask questions.

STATEMENT OF TRACY MEHAN, ASSISTANT ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC

Mr. MEHAN. Certainly. Thank you, Mr. Chairman, members of the subcommittee. I have submitted written comments at length that go over this very well-trodden path, I know, long before my arrival on the scene and deals with the very daunting challenge of the infrastructure needs of this country in the area of wastewater and drinking water.

Basically, I would like to share just a few thoughts generally with you. If the committee has any interest, I would be happy to address any security issues, although I understand that is the subject of a hearing tomorrow, too.

Basically, Mr. Chairman, our success in improving drinking water and surface water quality is the result of many programs and a partnership by local, State and Federal Governments in partnership also with the private sector. But our cooperative investment in water infrastructure and pipes and treatment plants and the like has, more than any other single effort, paid dramatic dividends for water quality and public health these last 30 years.

EPA has decided to undertake a broader review of needs and spending for water and wastewater infrastructure, as I am sure you know, including estimating whether there is a quantifiable gap between future needs and current spending.

This analysis, which is known to everyone as the "gap analysis" has actually gone out for independent peer review. Those peer reviews have been completed by several external experts. We are reviewing those now and we hope to finalize the analysis and have it ready for public release later this year.

We think that will be a significant contribution to the public dialog on this very pressing issue.

We recognize at EPA that effective decisionmaking concerning water infrastructure financing can benefit from a better understanding of the broader context of this effort. We believe that key components in the broader context of water infrastructure need to be more fully evaluated and include the following, and these aren't going to be a surprise to those of you, such as yourself, Mr. Chairman, who have been interested in this issue.

Just the growth of our population, of course, steady growth and shifts in population create substantial pressure on local governments to provide expanding drinking water and sewer services. That is a fairly obvious point.

The aging of the infrastructure, again, is something known to everyone on this committee. Many sewerage and drinking water pipes were installed between 50 and 100 years ago and these pipes are nearing the end of their useful lives.

That current treatment may not be sufficient is another point to be made. In 1998, States, tribes and interstate commissions assessed water quality and 44 percent of the Nation's estuaries and 35 percent of the rivers and streams assessed areas to be impaired.

Wastewater treatment facilities and combined sewer overflows were two of the leading causes of impairment. Wastewater treatment efficiencies may be leveling off which, when combined with population and economic growth, could have the effect of reversing hard-won water quality.

A June 2000 EPA report, Progress in Water Quality, as it was titled, estimates that by 2016 pollution levels could be similar to levels observed in the mid-1970's if there is no increase in treatment efficiency. Again, that is a worst case scenario, but nonetheless a sobering prospect to be contemplated.

We are facing, of course, the issue of declining research and development. Innovation, research and development are essential elements of promoting the use of more effective, efficient and affordable technologies in water and wastewater treatment.

A recent EPA report on private/public R&D expenditures, associated with water pollution abatement showed that expenditures decreased by half from the early 1970's to the 1990's.

Of course, we have increasing operation and maintenance costs. As the size and complexity of water and sewer systems increase and facilities get older, the cost of operations and maintenance tend to increase, although there is maybe a silver lining here.

As I had mentioned during my confirmation hearings, the staff and myself are very taken with the possibilities of asset management, a concept, for instance, that has been pushed in countries such as Australia that are showing some 20 percent reduction in cost if there is an effective asset management in place over time. We are going to have a handbook put out on it. We are planning four seminars and workshops. There are two sides of that coin.

Finally, the whole issue of affordability. Senator Bond, of course, mentioned the case of Nodaway County. Although water has historically been underpriced, some systems may find it difficult to replace or update aging water and sewer systems and keep household user charges at affordable levels, especially for low-income households and communities.

Clearly, if I have learned anything during the arsenic discussions I have been privy to the last few months, this issue of affordability is one we are probably going to need to revisit over time, and sooner rather than later.

A number of stakeholders groups, of course, have called for a significant increase in Federal investment in wastewater and in drinking water infrastructure. Certainly there will be a continuing role for the Federal Government in helping to meet the challenge

of extensive infrastructure investment need. But it cannot be the only solution.

The solutions will have to be multifaceted with Federal, State, local, public and private investment of time, energy, money, research and perhaps most needed, innovative thinking and bold actions.

We must encourage States and local governments to think strategically as they plan for forthcoming rules and program requirements, infrastructure repair and replacement and overall protection of the water that sustains their communities.

We are working with Administrator Whitman to develop principles for engaging in this dialog and some other thoughts that we hope to roll out in the near future. One of these principles that I had mentioned in my confirmation hearing and which I just want to reaffirm is the centrality, if you will, or the importance of maintaining the integrity of the State revolving loan funds.

Referring to Senator Bond's comments, as a former State official for 13 years, this builds on the best of good efficiency as well as good federalism. It is a process that has worked. The SRF loan study that we have done indicates that we get four times the purchasing power versus grants. That is not to say there is not a role for target grants or loan principal forgiveness and other enhancements such as that.

But again, the SRF works. It has worked and we very much believe that is a core value that needs to be maintained throughout the debate and the dialog to come.

I would be happy to deal with any other questions you might like on this or the security matter, Mr. Chairman.

Senator GRAHAM. I would like to ask some questions about the current authority of EPA to create incentives for innovative financing without the requirement of change in law, what actions would the EPA take to energize State and local governments to use new forms of financing for their water and sewer infrastructure?

Mr. MEHAN. As you indicated, there are limitations and whether we are dealing under the current regime or some different statutory regime makes a big difference. We need to be engaged in sort of a quality exercise, a continuous improvement exercise with all the stakeholders.

One example that comes to mind that I think we can look for flexibilities we have not had in the past in the SRF is the Ohio's link deposit program where the State purchases a certificate of deposit at a favorable rate from a bank and then makes loans directly to the farmers. This allows the farmers to deal with the local bank at the same time the bank assumes responsibility for loan repayment and further protects the SRF assets.

It gets into a whole area that we think is very cost effective, which is best management practices for nonpoint sources. It quite frankly can get much more bang for the buck than an end-of-the-pipe control. Those sorts of things we need to keep trolling for and engaging with stakeholders to experiment with.

A key issue—it is not a financing issue, but it relates to it on the drinking water side—is the whole issue of the multiplicity of drinking water, community systems. I think we have 3,000 gas utilities,

3,000 electric utilities and 54,000 community drinking water systems in this country.

Now, a lot of people like having a small system close by, but it is at least an option to be considered as to whether some consolidation of systems within proximity to each other might better allow a single system to bear costs and amortize those costs over time.

So, again, I don't know if there is any one silver bullet, but I think we need to be in a robust engagement on these topics and explore whatever efficiencies and innovations that we can. I just had a conference yesterday sponsored by the administrator's Office on Innovation in Government. It is as much a process as it is discreet work products. I am certainly pledged to do that.

There are certainly things we can do, I think, changing the rules of the game under the SRF that would improve it, but working within the current rules is a challenge and we will continue to do what we can.

Senator GRAHAM. A comment on one aspect of what you just said in your reference to the fact that there will be a hearing on security tomorrow.

There have been some suggestions that in terms of infrastructure such as water, electricity, gas supplies, that we might be moving into an era where we would begin to emphasize smaller units of generation or distribution from a physical standpoint, not speaking of an organizational standpoint so that you would not put, for instance, a whole city at risk because it was dependent on a single water treatment plant.

I think that is an issue that we are going to have to factor into all of our considerations, including the impact that that might have on financing facilities in the future.

In the minute and 33 seconds that I have left for questions, could we move beyond what the EPA can do within its existing authority to what would be any of EPA's recommendations, let us say your two or three first priorities for changes in existing law that we had increase the efficiency with which Federal funds were used for water and sewer infrastructure.

Mr. MEHAN. Well, again, focusing on the SRF, which is sort of the core value, as I articulated, there are a number of things. There is a lot of discussion between the clean water and the drinking water SRFs. We think that authority ought to be made permanent. I think that is an efficiency that would give States flexibility to put the money where they need it and consistent with their overall needs, again, utilizing the best of efficiencies under a federalism context.

We also think that similar to the drinking SRF, the clean water SRF ought to have authority to forgive a portion of loan principal for disadvantaged communities. Again, this affordability issue is crucial.

When you look at, again, the debate over arsenic, it is not the larger systems, although they have concerns, but the real crunch is with the smaller systems. While we like the revolving loan concept of the SRF, we understand there are unique circumstances involving extremely small and disadvantaged communities where consistency has to yield to reality. We understand that. We think that makes sense there.

We think also the idea of drinking water SRF loans for disadvantaged communities that go to 30 years over the 20 years would be a practical specific thing that could be considered and would present some relief where it is needed.

We also think that wastewater treatment works that are privately owned, but which treat municipal wastewater are currently not eligible under the clean water SRF. We think they should be eligible. We need to look at privatization. We need to look at those other options, whether it is consolidation or privatization, and those are not the tools in every case. Sometimes they fit. Sometimes they don't, but we ought to at least utilize that technique where it is appropriate.

Finally, we would suggest expanding eligibility, the clean water SRF to include more water conservation activities which, again, is not just good environmental, but it is good economic practice and over time you can get two birds with one stone.

So, those would be just some ideas. I don't mean to say that that is exhaustive. But again, focusing on a core area for us, the SRF, those would be sort of concrete specific things we would recommend.

Senator GRAHAM. Thank you very much. On your last point about relationship of conservation to financing of infrastructure, I would note that Senator Harkin has indicated that in the farm bill which is now being developed there will be a substantial emphasis on conservation. I would think it would be worthwhile for EPA to look at that proposal from the perspective of how it might serve to assist with some of our water-related issues, particularly the nonsource pollution questions.

The order of questions will be Senator Crapo and then Senator Chafee.

Senator Crapo.

Senator CRAPO. Thank you very much, Mr. Chairman, I appreciated your reference just now to the conservation title of the farm bill. I have a proposed conservation title that I am working with Senator Harkin on and I agree with you that those are going to be very critical elements that we deal with in that context as we work on the infrastructure needs of our clean water needs in this country.

Mr. Mehan, the Environmental Financial Advisory Board has indicated recently in a letter to Administrator Whitman that a 20 percent reduction in infrastructure costs is attainable by applying a more cost-effective management strategy and technique. The EFAB has gone on to recommend that the revisions to State and municipal procurement practices for planning, designing, building and operating water and wastewater facilities could be used to achieve a significant portion of these cost reductions.

Are you familiar with that letter?

Mr. MEHAN. I am generally. I am planning a meeting with the EFAB. I am very interested in their proposals. As to the 20 percent reduction, I think that gets back to the Australian experience we talked about in terms of asset management. I am very much looking forward to an engagement with that board. One of my old colleagues and friends who I have total respect for, Steve Moffut, who

is director of the Missouri Department of Natural Resources sits on that board and a few other folks that I have very high regard for.

So, I think all those are very legitimate recommendations that we need to consider very, very seriously.

Senator CRAPO. If I understand you correctly, the EPA does support the idea that design build or design built operating procurement standards or procurement practices could reduce the cost for environmental compliance.

Mr. MEHAN. That is right. Administrator Whitman, Governor Whitman, has, I know cited those kinds of examples often in her own comments on this issue.

Senator CRAPO. Did you see a role for the EPA under your existing authorities or do we need to address this question statutorily to allow the EPA to encourage States to consider alternative procurement practices such as these we are talking about?

Mr. MEHAN. I don't have a firm view on it. I think they should have that authority, whether they need laws or not. That would be the only question I would want to explore. But certainly as an end point or a State to be desired, I would certainly agree with that and would agree that we need to do whatever it takes to get that flexibility.

Senator CRAPO. Thank you. Shifting to another issue now, you had mentioned, I think both in your original comments as well as in your response to Senator Graham's question, the issue of grants or loan forgiveness versus the full operational loan program.

In my evaluation of this, depending on what kind of financing structure that we end up with, assuming that we still have some form of a revolving loan system, well, I guess even if we go to some of the other proposals or some other approaches, the question still arises as to how we deal with the small communities.

One of the other aspects of the farm bill that I have introduced is a program called Project Search to help small communities such as that described by Senator Bond to get access to grant moneys. These are communities that have failed to qualify, even for the other programs but have persistent needs, mandates, and enforcement procedures without the financial resources or economies of scale to deal with the issues.

So, I have concluded that we do need to have some type of a program to help those small communities that simply can't make a go of it, even under a loan program.

I understand your testimony to indicate that you tend to agree with that. Could you elaborate? Have you or the EPA analyzed the extent of this problem and made any determinations as to what nature or size of effort will need to be undertaken with regard to these small communities?

Mr. MEHAN. Not with the degree of specificity that I could give you some programmatic thoughts. Again, when I talk about the SRF I want to be clear, I deal in presumptions based on principle and experience. The SRF loans, the revolving nature of the SRF is where we start as a presumption.

We understand that this affordability issue is crucial. The cumulative impacts of regulations and higher expectations in terms of environmental performance takes its toll. Whether some sort of targeted grant program through the SRF or whether it is loan forgive-

ness or other things are certainly fair items or items for discussion, for legitimate discussion and debate.

We know it is a problem. We need to define it more. We need to give it some focus and walk through the very alternatives. Again, our concern is we don't want to throw the baby out with the bath water. We have a tremendous program here that has worked, has a proven track record and we wouldn't want to do violence to it in trying to deal with another legitimate problem or concern.

Senator CRAPO. I see my time has expired.

Senator GRAHAM. Thank you, Senator.

We have been joined by our Chairman, Senator Jeffords, and by Senator Corzine. The next questioner in order of appearance is Senator Chafee.

Senator CHAFEE. Thank you, Senator Graham.

I would just like to follow up also on the smaller communities. In Rhode Island we have a rural community of about 2,000 users that have their water affected by MTBE. Of course, they are having trouble dealing with that, the same as Senator Bond talked about, the difficult of getting into the bureaucracy by a small community where I think they have three employees or something in applying for the SRF and the like.

Is there any effort by the EPA to encourage these small communities to merge with larger ones and profit from economy of scale? Is there any initiative in that area?

Mr. MEHAN. We very much believe it is a crucial direction. In fact, I just met with the board of directors of ASDWA, the Association of State Drinking Water Administrators. It is funny, we were talking about variances and affordability and exemptions and they pretty well thought those things were pretty much at the margin. They said the single biggest thing that could be done is consolidation. They saw that as the biggest issue, although there are a lot of countervailing arguments, local control and you know, sort of like the home rule arguments you can get into.

So, we encourage that. We don't feel that it is our position to be prescriptive or to be heavy-handed. We just think it is a fact. You know, these 54,000 community water systems are a fact and if somebody wants to look at options, State and local governments want to look at options, that is an option that ought to be considered.

Whether we go from 54,000 to 3,000 or 54,000 to 30,000, I have no idea what the right mix is, but it is certainly something we would consider. Quite frankly, the government, and by that I mean both the legislative and executive branch, by continuing to demand higher environmental performance on a national basis, as we do in the Safe Drinking Water Act, sort of sends an implicit message that you ought to be looking at this option as you buildup these cumulative costs and expectations.

We want to pursue that. We want to encourage the economic research that would maybe elucidate that point better and again we don't see ourselves absolutely mandating it or imposing it, but it is certainly an option we want people to look at.

Senator CHAFEE. I am sure you are right that there is always the inclination to keep control of your own area. As you said, home

rule, but I am sure if there were some incentives it would help relinquish that control.

Mr. MEHAN. Absolutely, Senator.

Senator GRAHAM. Thank you, Senator.

Senator Corzine.

Senator CORZINE. Thank you, Mr. Chairman. I appreciate your holding this hearing.

OPENING STATEMENT OF HON. JON S. CORZINE, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator CORZINE. Thank you. I would start out by saying that the State of New Jersey and the folks within the State government think this is one of the most effective programs. We have had enormous success.

We have some of the same kinds of problems that I think others do with small communities and there needs to be this consolidation effort. I think we have 569 communities in New Jersey, from very large ones to very small ones. It seems to me that there must be some means for us to think about how we can consolidate some of the same power of leverage that is occurring in these revolving funds and still maintaining the loan arrangements which, I think, brings discipline to the process, or at least our people feel that it does.

I certainly encourage as much thought and would love to be a party to some of that process where we may be able to bring some regionalization, if you will, which doesn't deprive the local communities of their ability to express themselves, but have access at these funds.

Then I would put in a plug that in a world where we are looking for stimulus to be laid down, this is certainly one of those areas where a lot of projects are on the table and could be in the ground very quickly. I certainly hope that we will consider that.

I wonder if you feel like these SRF funds are being utilized uniformly across the country. Are people in other States, do they feel consistently positive about it drawing down this? That is the first question I have. If they are not, are there things that we ought to do to the program that would make that happen?

I presume this flexibility issue is primary. Maybe some of these questions were asked ahead of time. I would certainly like to hear your comments on it. Maybe we need to give you more flexibility on that.

Mr. MEHAN. Senator, I did, in fact, go through four or five examples of improvements or enhancements to the SRF that would be useful.

Senator CORZINE. I can check the record.

Mr. MEHAN. Yes. But going back to your original point, what is the universal feeling, again, I am speaking now as a former State official. I worked in Missouri and Michigan and my conversations with State officials throughout the country, States such as New Jersey, I think uniformly they view the SRF as a winner. It is the gun that won the West for the last 30 years, so to speak, in terms of water quality improvement.

It is also showing great strides on the drinking water side in more recent years. So, that is where you start. As I described,

maybe before you came in the room, my presumption is that is where we want to protect the integrity of the SRF revolving loan concept.

Now, that is only a presumption. There are, obviously, unique needs of the smaller, disadvantaged communities that require us to maybe sharpen our pencils and scratch our heads a bit and see what we can do, whether it is principal loan forgiveness or whether it is some targeted disciplined grant program, I couldn't rule any of those out.

Senator CORZINE. Have any of the States used any regionalization or consolidation efforts that are not unlike the question that Senator Chafee was asking?

Mr. MEHAN. I can't speak. I am not sure, for instance, what States might be doing in areas through their public service commissions and things like that. I can tell you that recent conversations just as of last week in Baltimore with State drinking water, they all view consolidation as the way to go, even more useful in the long run than variances and exemptions, although I think there is more we can do under the Safe Drinking Water Act with exemptions if we look at this affordability issue.

But I don't think they have really perfected the way how you tee this up. There are countervailing arguments here in terms of local control and people wanting to keep some control of their destiny at the local level.

So, it is an education process. It is a persuasion process. It is at least making clear to people that we do have an extensive system there that may be some modicum of streamlining.

Senator CORZINE. Thank you.

Senator GRAHAM. Thank you, Senator.

Senator Jeffords, our committee chair has joined us. He has a statement and also questions.

OPENING STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Senator JEFFORDS. Thank you very much, Mr. Chairman. I am very pleased to be with you. Mr. Mehan, thank you for being with us also. I want to echo the comments of many of our colleagues by saying that the water and wastewater infrastructure is a critical issue facing our communities, with estimates of the potential gap between the need for infrastructure replacement funding and available funding ranging from $300 billion over the next 20 years to $1 trillion over the same period.

It is clear that the Nation's water system will face many changes and challenges in the coming decades. My State of Vermont is one of the most rural areas in the country, an area of small towns and cities surrounded by an open and working landscape.

Vermonters wish to maintain this pattern. Most of our towns have less than 5,000 people and lack the administrative and budgetary capacity to undertake water and sewer infrastructure projects on their own. Our cities are some of the oldest in the country, as you know.

My question to you is relative to small systems. Can you expand on your previous comments related to small systems? Do you see

any need to differentiate between rural and urban systems and their unique needs?

Mr. MEHAN. Well, urban or rural—if they are disadvantaged, they are pushing the limits of affordability, or if the technical requirements of the accumulated laws and regulations are outstripping their capacity to sustain an adequate program—they are going to need help. I think for the most part we are talking about smaller rural communities.

We are looking at these issues from many perspectives. We are watching to see where Congress is going with this. We are looking at this affordability issue which, as I say, I think we are going to be revisiting that over time because that plugs in not just to the general policy questions on the wastewater side, but also specific statutory exemptions that may or may not be available under the Drinking Water law.

So, any and all things, whether it is some rejiggering of the SRF, principal forgiveness, targeted grants, I could research on low-cost or efficient technologies, say in the case of arsenic. Whatever it is, we are open for business in that area. Again, the arsenic thing has brought this to the fore, certainly for me, but it has been an ongoing problem since I have been working on drinking water issues since 1989.

So, yes, it would be a shame for us to disregard these small communities which ends up then delegitimizing, in political terms, if you will, what is a wonderful national program under the Safe Drinking Water law and for that matter the Clean Water Act.

Senator JEFFORDS. Thank you. Thank you, Mr. Chairman.

Senator GRAHAM. Thank you, Mr. Chairman.

Mr. Mehan, we thank you very much for your testimony today and your ideas. We look forward to a close partnership with you and EPA as we proceed to develop the reauthorization bill for the Clean Water Act.

Mr. MEHAN. As do I, Senator. Thank you.

Senator GRAHAM. Thank you very much.

If the second panel would please come forward. Mr. Stephen E. Howard is the senior vice president of Lehman Brothers. Mr. Rick Farrell is the executive director for the State of Wisconsin, Department of Administration. He is presenting testimony in his capacity as the executive director, Council of Infrastructure Financing Authorities. These are the entities that administer State revolving fund programs.

We are most appreciative that each of you could join us today.

Mr. Howard, we look forward to your remarks.

STATEMENT OF STEPHEN E. HOWARD, SENIOR VICE PRESIDENT, LEHMAN BROTHERS, NEW YORK, NY

Mr. HOWARD. My name is Steve Howard. I am a senior vice president with Lehman Brothers in New York. I have spent the last 20 years of my career at Lehman working with a variety of local, State and regional governments and private companies financing the development of infrastructure projects, including environmental projects, water, solid waste and clean water as well as drinking water, transportation facilities and other public facilities such as jails and schools.

The primary function that we provide in the process is to maximize and leverage to the maximum extent possible cash-flows that are available to pay for these assets and bring capital markets' discipline to the process of developing this infrastructure.

Most of the projects that we finance involve partnerships between the public sector and the private sector where the private sector would come in and enter into short-, medium- or long-term contracts to design, build and on the these assets.

I will not be addressing the issue of State revolving funds. That is not an area of expertise for me personally. I have colleagues in my office who can address that in future hearings. I am here just to discuss the concept of financing public-private partnerships, which I think is of interest to the committee.

At one end of the spectrum you have structures that utilize traditional governmental purpose bonds—primarily general obligation bonds of local governments to finance these assets. Under the current tax laws, generally speaking, local governments can enter into short- and medium-term contracts with private companies to design, build and run these facilities.

At the other end of the spectrum you have private companies such as water utilities under some form of State regulation that finance water infrastructure projects in particular on their own balance sheet, in some cases utilizing taxes and bonds and in some cases utilizing their own equity or taxable debt.

So, those are really the bookends of the options for financing water infrastructure. In the middle between these bookends are a variety of approaches that are employed to finance infrastructure projects. In some cases the financing of projects, particularly in the area of solid waste and transportation, is significantly facilitated by the availability of private activity bonds for those infrastructures.

The key issue in this sort of middle category of financings is that the tax provisions allowing for the use of private activity bonds allows for a significant transfer of operating and technology risks to the private sector, where the private sector can come in and optimize labor and capital and really enter into a long-term arrangement where it can manage the asset over a long period of time, in the course of what was referred to earlier.

We have more limitations in the water sector because of the limited availability of private activity bond use for this sector. So, we don't have the ability to leverage in the water sector to the extent we do in solid waste and transportation.

As I mentioned earlier, we have the bookends on the right-hand side. We would have the use of pure private financing, in some cases taxable and in some cases equity with pre-tax returns in the 15 to 20 percent range.

On the other end of the spectrum we have pure public financing in the 5.5 to 6 percent range for tax exempt debt and even lower with the use of State revolving funds and grants and loans. It is the middle category that we are trying to optimize, as I mentioned before.

What is that?

Senator GRAHAM. That is the floor bell that we are hearing. What I think we are hearing is——

Mr. HOWARD. I thought that was my buzzer. That is not my 5-minute limit?

Senator GRAHAM. That is the floor. It signals that there is a quorum call, which is the essence of a time out for the Senate.

We will allow you another minute.

Mr. HOWARD. OK. Let me just then wrap up very quickly.

In this middle category of financing options the true benefit for the use of private activity bonds involving private companies is primarily for small- and medium-sized communities and in some cases for large communities as well.

These types of approaches are not, again, applicable in all situations, but we have seen a tremendous preponderance of use of short-term operating agreements between private companies and local small- and medium-sized communities in the last 5 to 10 years.

In the area of infrastructure generally, as I mentioned, we have the use of private activity bonds for solid waste, airports and ports, but not for water and wastewater. Specifically by that I mean we do not have the availability of the use of these bonds without the use of what we call private activity bond cap that, as most of you are probably familiar, is a limitation on the use of taxes and financing by private companies that have entered into long-term contracts or have ownership of the assets.

Using solid waste as an example, in the mid-1980's it was viewed to be a serious disposal crisis similar to what we are faced with today in the water infrastructure with the huge financing needs. What was done back then was to pull solid waste facilities out from under the tax exempt bond cap for private company involvement in the financing and development of these assets.

As a consequence we saw in that sector very easily over the next 10 years $20 billion of investment in state-of-the-art assets to properly manage that particular waste stream. We feel that the same approach, if it were applied to the water sector, would significantly facilitate the development of this wastewater infrastructure, particularly for small- and medium-sized communities that can really benefit from entering into partnerships with the private sector.

Senator GRAHAM. Thank you, Mr. Howard.

We will hear from Mr. Farrell and then open for questions. I would like to take my prerogative to say that Mr. Farrell has had a long experience with the Congress, working closely with our former colleague, Lawton Chiles, and then following him in his administration as Governor of Florida.

I have very high regard for his dedication and intellect and I am pleased that he is now serving the State of Wisconsin and the Association of SRF agencies. I am pleased that he is going to be sharing his insights with us today.

STATEMENT OF RICK FARRELL, EXECUTIVE DIRECTOR, STATE OF WISCONSIN, DEPARTMENT OF ADMINISTRATION, ON BEHALF OF THE COUNCIL OF INFRASTRUCTURE FINANCING AUTHORITIES, WASHINGTON, DC

Mr. FARRELL. Thank you, Mr. Chairman. I haven't left my Florida roots. The president of our association is in Wisconsin. I am still here.

My name is Rick Farrell. I am here today in my capacity as executive director of the Council of Infrastructure Financing Authorities. CIFA is a national organization made up primarily of State and local officials engaged in the development and financing of water and wastewater pollution control projects and the operation of State revolving funds for infrastructure financing.

Our organization numbers among its members 44 States and other municipal and private-sector participants in environmental finance. An important part of CIFA's mission is to foster innovation and encourage the exchange of information concerning best practices in infrastructure financing among the States, between the States, the national government and the private sector.

The State revolving funds are arguably the most successful environmental program ever. Their proven track record argues strongly in favor of the SRFs as the primary mechanism for delivery of environmental infrastructure construction subsidies.

The Federal-State partnership and the successes it has created would be undermined by the onset of separately delivered programs or other alternative funding mechanisms. Separate grant programs complicate the funding process at the local level and can serve to delay project initiation as communities hold out for the prospect of a grant.

Programmatically, it makes the most sense to provide all infrastructure construction subsidies, be they in the form of subsidized loans, grants or grant equivalents such as principal forgiveness through the SRF structure which is already established and has been successfully functioning in all the States since 1989.

This saves overhead costs and reduces the confusion in communities trying to access a multitude of programs. Using the SRF to target subsidies, perhaps with grants as well as with loans, extends valuable infrastructure dollars, a key goal.

Efficiency gains achieved by the SRF programs translate into more and more efficient infrastructure construction than can be achieved by comparable grant programs. The success story of the SRF is clearly a model that should be built upon.

Indicative of the vitality of the SRF program to facilitate financial innovation is the capacity it affords to leverage the funds. Leveraging in the SRF context means that States have the ability to use the Federal capital grants as well as their matching share as collateral to borrow in the public bond market for purposes of increasing the pool of available funds for project lending. This option allows the States to use the funds as security or a source of revenue for the payment of principal and interest on bonds so long as the bond proceeds are deposited back into the SRF.

The use of the assets of the SRF to generate new moneys which can be used immediately to fund more projects underscores the true financial strength of the SRF model. Leveraging the SRF can dramatically increase the funds available for lending. Close to $9 billion has been added to the loan pool by the 24 States that have leveraged their funds.

This compares with $18.3 billion in Federal capital grants thus far. The successful leveraging occurring with the SRFs has allowed us to address serious problems much more quickly than anyone

had anticipated by delivering substantially I could amounts of affordable capital sooner to meet critical infrastructure needs.

There are examples of leveraging that demonstrate a multiple effect of project financing levels at two to four times the original investment.

An example of the utility of flexibility is illustrated by the fact that among all the States and territories operating revolving funds, no two are structured precisely alike. Yet all share the same water quality objectives. The SRFs are successful because their underlying concept is based on program management and service delivery at the State and local level with broad accountability at the Federal level.

I believe a useful question for the subcommittee to examine is why leveraging is not an option for more States and to examine the underlying issues and concerns of the States in this regard.

Taking in note the chairman's comments at the beginning of the hearing that the jurisdiction doesn't extend to tax law, we do want to point out that any comprehensive review of means available to maximize water infrastructure funding should include consideration of the arbitrage rebate rules as they affect the leveraged SRF programs.

The States that operate leveraged SRF programs are compelled by the arbitrage rules to either limit the rate at which funds can be invested or rebate to the Treasury the net earnings on those proceeds of the SRF funds that are considered under these rules to be bond proceeds. This greatly reduces the resources available to fulfill the fund's purpose of providing below-market financial assistance to help communities meet Federal standards for their water programs.

CIFA estimates that in the absence of these restrictions, the affected States could earn an additional $100 to $200 million annually on their SRF capitalization funds which, when leveraged, would permit an additional $200 to $400 million annual investment in needed water projects.

Concluding, I want to point out that our position is that any congressional initiatives targeting water and wastewater infrastructure funding affecting current SRF operations or expanding the mission of the SRFs should be developed with the recognition that innovative methods of addressing water and wastewater needs are more likely to originate at the State rather than the Federal level. The States are closer to the problems that need to be addressed and the States are capable of tailoring their approach to best meet their unique needs.

The best hope for discovering and realizing innovative financing approaches is to give the States wide latitude within the constructs of appropriate accountability in designing and implementing their locally-tailored solutions.

Thank you.

Senator GRAHAM. Thank you, Mr. Farrell.

Mr. Howard, you talked about private activity bonds and the role that they had played in other areas of infrastructure such as transportation. Could you suggest how you think private activity bonds might be part of the package of innovative financing for water and sewer infrastructure?

Mr. HOWARD. In transportation, solid waste facilities and port facilities there is a specific exemption for the use of private activity bonds to finance those projects without having to require the use of what is a fairly limited resources at the State level and that is private activity tax exempt bond cap allocation.

I am sure most of you are familiar with that. There are per capita limits at the State level for the use of private activity bonds. It so happens in the water sector privatized water projects that use of private activity bonds are subject to this rather limited resource at the State level. They have to compete against other infrastructure asset categories.

Just to give you a sense, in 1999 there was a total private activity bond cap availability nationwide of $15 billion and only $1.5 billion was used for the exempt category that qualifies for water facilities. But that is total across all private use. So, water was even a subset of the $1.5 billion.

So, it is a tremendous limiting factor in the use of that financing vehicle for water infrastructure.

Senator GRAHAM. Recently, the Congress extended private activity bonds for school construction and created a separate educational category. It was only 10 cents per resident of the State, so it is not a large program but it is the beginning of what could be a larger program.

Would you suggest that we should have a separate private activity bond category for water and sewer as we do now for schools?

Mr. HOWARD. Well, I would suggest that it be added to the current category under which solid waste, ports and transportation facilities qualify. It is really a very simple change to the code to just insert water facilities, privatized water facilities.

The school category is a slightly different exemption. It doesn't directly apply to the same approach that is used in water, solid waste and port sectors.

Senator GRAHAM. From your experience in other areas such as transportation, are there any other ideas that you think this committee should consider to use proven innovative financing techniques that might be valuable for water and sewer?

Mr. HOWARD. Using transportation as one example, some of you may be familiar with several programs that have been put together. One of them that comes to mind is the TIFIA program which was put together several years ago for the purpose of providing subordinated Federal loans to buttress financing a variety of unique projects to investment grade level so that you could enter the capital markets.

That program has met with varying degrees of success. It is a highly specialized program that is very tailored to given projects around the country. I think with a broader use of that type of financing technique, where we leverage off of subordinated Federal loans in a capital structure for any given project in the water sector, where the projects are more typical than unique, I think would be a tremendous asset.

Senator GRAHAM. Senator Crapo.

Senator CRAPO. Thank you, Mr. Chairman.

Mr. Farrell, in your testimony you talked about the issue of Federal oversight and the question that I have, if I understand it right,

you have a concern that excessive oversight or one-size-fits-all Federal regulatory regimes can be counterproductive in terms of cost effectiveness.

Could you expand on that a little bit and also indicate what type of reforms we might consider here at the congressional level?

Mr. FARRELL. The interesting thing, the States organized around the State revolving fund almost uniquely to each State. Every State has set up their own structure. So, one-size-fits-all is a problem right to begin with because States have approached this where there are bond banks, there is financing authority, some States do this within their environmental departments. They regard the State revolving funds essentially as a State program in which the Federal funds flow into that and then it is supposed to revolve.

There had been some concerns by my organization during this time that EPA was moving to set standards and requirements that seemed to go beyond accountability. In the last couple of years I think a lot of progress has been made in that regard. Our member States feel that EPA is responding to the fact that these programs are more mature and that the States are doing a good job.

But there are some areas where we could see continued progress, in areas like self-certification and others where we would like to work with EPA to make sure that the appropriate accountability is there but at the same time that the States have the flexibility to, for instance like moving funds back and forth between the programs, moving the administrative funds, those types of issues that when you add them all up gives the States a lot more flexibility than they currently have.

But I do want to emphasize that we think the situation has improved a great deal in the last 2 years from where it was 3 or 4 years ago.

Senator CRAPO. So, in the context of whether there needs to be any activity at the congressional level, I am hearing you say that it can pretty much be solved and is being solved by the EPA in terms of its management, with the exception of some of the reforms we have already talked about to the fund itself.

Mr. FARRELL. Right. We would not have any specific legislative recommendations at this point, as long as we continue to make the kind of progress that we think we are making with EPA.

Senator CRAPO. All right. Thank you.

Mr. Howard, I recognize, as has already been indicated, that tax policy is not within the jurisdiction of this committee, although we do have some who can have influence on tax policy on other committees on which they sit.

We have frequently heard that infrastructure financing can be improved by things such as Mr. Farrell mentioned, the changes in the arbitrage rules. I believe you talked about the adjustments to the tax exempt volume caps for private activity bonds and so forth.

First of all, do you agree with Mr. Farrell on the arbitrage issue and second, are there any things other than the arbitrage and the caps issue that we should consider?

Mr. HOWARD. I do agree on the arbitrage issue. It is a foregone opportunity for certain programs like the revolving funds where we are basically putting several hundred million dollars, we are pulling that away from the assets that are generated at the local level.

Another area that doesn't necessarily involve legislative change is the facilitation of the transfer of these assets from the public sector to the private sector. That was codified to a certain extent in Executive Order 12803. It really deals with the handling of assets that were funded either in whole or in part with grants, Federal grants, particularly relevant in the wastewater sector where we had a tremendous amount of asset investment in the 1960's and 1970's. It was funded in part by Federal grants.

It is those assets, particularly with small- or medium-sized communities, that are currently in need of updating modernization, have not been properly maintained, that would be in some cases better suited to shifting over to private management in one form or another.

The problem is that if you enter into long-term contracts or you shift the control of those assets under some sort of long-term lease or sale to the private sector, you run amuck of repayment obligations potentially under it has Federal grant program.

There is a process that is set up by EPA and with OMB to deal with this. But it has been somewhat cumbersome for communities to sort of weed their way through. It has been very time consuming. That is not to say it is impossible to get through it. It can be a major hurdle.

Senator CRAPO. Thank you. My time has expired, but before I relinquish, I wanted to indicate to Mr. Howard that the first time I ever testify before Congress that buzzer went off also. Only you handled it better than I did because I just quit.

Mr. HOWARD. Thank you, Senator.

Senator GRAHAM. Mr. Chafee and then Senator Corzine.

Senator CHAFEE. Thank you, Mr. Chairman.

Mr. Farrell, you said in your testimony, "I believe a useful question for the subcommittee to look at is why leveraging is not an option for more States and to examine the underlying issues and concerns of the States in this regard."

I know you expanded on it a little bit in your statement, but I guess what you are saying is what we could do on the Federal level more and maybe just expand on that now.

Mr. FARRELL. Yes, Senator. Keeping in mind that obviously the decision to leverage is a State decision and the State Legislature has to decide. In other words, there may be State issues revolving here about how they view leveraging or about how they view going to the bond market. I think that has to be put out there first, that you wouldn't want to require the States to go this way.

But the 24 States that do leverage have had very promising results. More money has been put out into projects. I think the issue that I was suggesting, and we would love to work with the committee on this, is: What are the impediments for the States; and whether there are some issues relating to EPA oversight in a statute that may be preventing some States from participating.

Senator CHAFEE. What comes to mind quickly as the impediments?

Mr. FARRELL. Well, a lot of it has to do with the sophistication of the States and whether they need some assistance in that regard. You will find leveraging is more common to the larger States

that are in the bond market more regularly. So, there may be some need for some assistance in that regard.

There was some feeling earlier on in this process that there was a bias against leveraging on the part of EPA. I think that is totally turned around but some States may feel that this is not an area that they want to go in.

But we have not done—and it may be useful to do it—sort of done a survey of the States to sort of raise that question of what do they think the problems are that might move them more to leveraging.

Senator CHAFEE. I am glad you volunteered to work with us in the subcommittee and I look forward to doing that. Thank you.

Senator GRAHAM. Senator Corzine.

Senator CORZINE. Thank you.

Mr. Howard, being an enterprising investment banker, you have probably had people say no to these leveraging concepts. I will ask you the same series of questions that Senator Chafee had. Why are only 24 States taking advantage of this?

Are there bond cap limits or debt limits?

Mr. HOWARD. You are referring to the State revolving fund?

Senator CORZINE. Yes.

Mr. HOWARD. Again, I am not an expert in that particular area. I would, I think, echo what Mr. Farrell said, that communities and States each have their own financing philosophy and my experience working with a variety of different communities across the State is that each community has a different view on leverage.

Some communities are much more comfortable with issuing bonds and some communities are much less comfortable. I think the unique thing about the program is that it is a great match of Federal local partnership in using this financing structure. I don't think it is reasonable to expect that all 50 States would take advantage of it given the different approaches that each State takes to financing its infrastructure.

Senator CORZINE. Could one of the blockers be the same thing that we were talking about in another area, this great dispersion of size? You said the size of States. But again, smaller communities are not getting the same kind of exposure and expertise to the leveraging concepts. Are there programs again that we ought to get back to some kind of consolidating.

Mr. HOWARD. I would refer you back to my very limited expertise in how State revolving fund programs work. I do have some limited experience working with small communities that just simply couldn't meet the requirements of the State revolving fund program, so it just wasn't an option for them. The requirements vary from State to State.

Senator CORZINE. It sounds like we have a program that works but needs to be adjusted pretty significantly with regard to this particular area. It would be great if we could all sit down and figure out ways that might be flexible enough to allow others to take advantage of this, these smaller communities that have these problems. It ought to be a serviceable issue.

Senator GRAHAM. Thank you, Senator.

I just would like to ask a final question of Mr. Farrell and Mr. Howard, if you would like to comment.

When the original idea of revolving funds for infrastructure were developed, they were frequently developed at the State level. Florida had a State-administered revolving fund to assist local governments with water and sewer, even before the Federal Clean Water Act was enacted.

At the time the feeling was that the principle financing need of local governments was during the period of planning and construction of the plant; that once the plant was in operation and had a revenue stream that it could be financed on a permanent basis through more conventional sources.

It seems to me that in recent years an increasing amount of the revolving fund is being used for permanent financing. The first witness, Mr. Mehan, suggested that the length of the loan authorized be expanded to 30 years.

I guess maybe I am old fashioned in that I think the principal challenge that most local governments have is getting that financing during the period where the plant is not producing any revenue.

What is your feeling about whether we should extend the length of time that loans can be made and therefore make it more likely that the loans will be used as a source of permanent financing as opposed to focusing on what I thought was the primary purpose which was the development and construction period financing?

Mr. FARRELL. Well, Mr. Chairman, I think you are correct in the primary purpose. I think what you are seeing is that as perhaps needs like smaller communities, disadvantaged communities and so forth become apparent and there are some questions as to whether the SRF is meeting those needs, then I think the question becomes are there other strategies within the context of the SRF that could meet those problems.

An extension of a 30-year loan might be amenable for a smaller community that has a different set of needs, also for things like principal forgiveness. In other words, keeping the SRF model, but looking at sort of alterations of it to meet particular things where perhaps it is not producing what you need to produce. I think the primary goal is as you stated it.

Senator GRAHAM. Mr. Howard.

Mr. HOWARD. I would just add that we have seen a shift in capital markets financing toward 30-year financing away from 20 years for basic infrastructure projects. I would say that any liberalization of the program to extend the term of the loans, particularly for these types of assets, because they are 40- and 50-year assets, they are not 20-year assets, I think makes a lot of sense.

Senator GRAHAM. Are there any other questions? Thank you very much, Mr. Howard, Mr. Farrell. We appreciate your contributions. As we move toward more specific legislative proposals we would look forward to the opportunity to continue to take advantage of your expertise. Thank you.

I'm glad, Mr. Farrell. I'm sorry for Wisconsin, but glad for the Nation that you are fully focused on this.

Our third panel is Mr. Peter L. Cook who is the executive director of the National Association of Water Companies, Mr. Harold Gorman, the executive director of the New Orleans Sewerage and Water Board and he is appearing on behalf of the Association of

Metropolitan Water Agencies, and Mr. Paul Pinault, who was introduced earlier by Senator Chafee, who is the executive director of the Narragansett Bay Commission. He is speaking on behalf of the Association of Metropolitan Sewerage Agencies.

Mr. Cook.

STATEMENT OF PETER L. COOK, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF WATER COMPANIES, WASHINGTON, DC

Mr. COOK. Thank you, Mr. Chairman. My name is Peter Cook and I am the executive director of the National Association of Water Companies. NAWC is a nonprofit trade association that exclusively represents private- and investor-owned water utilities in the United States. I am offering testimony on behalf of the NAWC membership. There are 200 members in 41 States that provide safe, reliable drinking water to more than 20 million people in America every day.

Thank you very much for the opportunity to present NAWC's views on innovative financing techniques that could be used to address the infrastructure replacement challenge that the water industry faces. These views are also shared by the H_2O Coalition.

A number of suggestions are described in detail in our written testimony which we have submitted. However, before summarizing our suggestions, I must explain the context within which our suggestions are made.

We believe the only sound, long-term strategy for financing the repair, replacement and upgrading of water infrastructure is to have the utility customer pay for these capital needs in their water bills. We believe water utilities like gas, electric and telephone utilities should be self-sustaining by charging their customers the full cost of services that they are providing.

Since the Federal Government doesn't pay for gas, electric or telephone infrastructure, why should it pay for water infrastructure? The failure of the utilities to charge for full cost of service will most likely lead to an open-ended direct Federal subsidy of water services in this country with grave consequences to the U.S. Treasury over the long term.

Now, where full cost of service rates are not affordable to some customers, and this is very true in the small systems as our previous panelists have said, we support a water bill payment assistance program like the LIHEAP program for home energy bills that has been used very successfully in this country for many years.

Such a program would subsidize only those who have a true financial need. Now, where we have entire communities that are disadvantaged like many of the small water systems in this country, forgiveness of principal and interest on SRF loans may be appropriate in grants in some cases.

So, we definitely may need to have a separate program for the small systems and I am talking primarily about the larger systems with economies of scale when I say they need to be charging full cost of service.

Those who are persuaded that government should assume a major role in financing infrastructure have argued for a massive grant program to utilities. We think this is about as far from inno-

vation as you can get. One need only review the history of the wastewater construction grant program in the 1970's to see that grants breed dependence and subsidize everybody's water rates, including those who can afford to pay the full cost of service rates.

This is neither an efficient use of Federal resources nor one that is likely to have an end. Revolving loans which do not have these negative characteristics make a lot more sense to us. We support their continued use to help utilities meet the infrastructure challenge.

In addition to revolving loans, there are other financing techniques that are available to utilities, all of which will help utilities keep their rates as low as possible. The private sector offers many innovative financing techniques, often through partnerships with the municipal sector.

We recently published a report on the role of the private sector in the drinking water industry and that report studies various forms that the private sector involvement in the water business can take from outright ownership of an asset to various long- and short-term contracts.

The report found that when a municipality pursues partnerships with the private sector operating costs can be reduced by 10 to 40 percent. It is obvious that cost savings of this magnitude can make a very big difference in rates.

Also this report showed that costs could be cut while actually improving drinking water safety. Of the 41 percent of the facilities that were out of compliance in the study before privatization, 100 percent were in compliance after privatization.

If the full power of the private sector is unleashed to help this coming infrastructure challenge, we will all be winners. However, to help unleash the power of the private sector, there is an issue that should be dealt with, though unfortunately it is not under the jurisdiction of this committee.

That is to remove the existing volume caps on private activity bonds for water and wastewater improvements. These caps limit the use of tax-exempt financing by private entities working for the public good. 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. This proposal has the support of the Conference of Mayors, among others.

I understand that this being a tax issue is outside the jurisdiction of this committee. It is, however, one of the most important modifications Congress can make to give municipalities the tools that they need to meet the coming infrastructure challenge.

Preliminary modeling indicates that this minor alteration in the tax code could cost the Federal Government very little, yet leverage huge sums of private capital. This proposal has precedent. Congress has exempted other environmental facilities as we have heard before, certain solid waste facilities from the State volume caps because of perceived public need.

I know some of you, including you, Mr. Chairman, also sit on the Finance Committee. I encourage you to consider this change in the tax code as soon as possible.

In conclusion, Mr. Chairman, thank you very much for the opportunity to present our views. I would be happy to respond to any questions at the appropriate time.

Senator GRAHAM. Thank you very much, Mr. Cook.

Mr. Gorman.

STATEMENT OF HAROLD J. GORMAN, EXECUTIVE DIRECTOR, NEW ORLEANS SEWERAGE AND WATER BOARD, NEW ORLEANS, LA, ON BEHALF OF THE ASSOCIATION OF METROPOLITAN WATER AGENCIES

Mr. GORMAN. Good morning, Chairman Graham, Senator Crapo and members of the subcommittee. My name is Harold Gorman and I am the executive director of the Sewerage and Water Board of New Orleans and a Board member of the Association of Metropolitan Water Agencies, which is one of 40 national organizations that make up the water infrastructure network.

We would like to thank you for hosting this important hearing and thank you for advocating $5 billion in grants for water and wastewater systems as part of the Economic Stimulus Package. We estimate that these funds could be absorbed in the economy next year alone and create 200,000 jobs.

We would also like to thank the committee and subcommittee leaders for calling on President Bush to include in the administration's budget for emergency supplemental appropriations, the estimated $155 million needed to help drinking water agencies conduct vulnerability assessments and develop emergency response plans as soon as possible.

The urgency and high degree of sophistication required the security assessments and emergency response in this new environment we all work in warrant Federal assistance.

I would also like to thank Senator Jeffords for introducing legislation to authorize funding for research on security matters. The foresight of Senator Jeffords will provide water suppliers with cutting edge technology to better protect consumers.

Dating back to 1899, the Sewerage and Water Board of New Orleans provides water, sewerage and drainage service to a half a million consumers. The board is structured as a freestanding business. There are no generally government subsidies and no commingling of funds among our drinking water, wastewater and drainage system. Each system must pay its own way.

Unfortunately, to meet the needs of our $1.2 billion capital infrastructure program without Federal grants the Board will have to raise drinking water rates over the next 5 years by nearly 50 percent and sewer rates by 90 percent.

But New Orleans is one of the poorest cities in the Nation and our customer's utility bills already exceed the EPA recommended ratio of utility cost to household income. Twenty-eight percent of the city's residents live below the national poverty level. This is second only to the Bronx.

High rate increases will only push working families in New Orleans and many other cities into a deeper financial hole. Currently, the primary Federal funding program is a drinking water SRF. But it was not created to address infrastructure repair, replacement and refurbishment. The intent was mainly to provide a means to

help small systems better comply with the Safe Drinking Water Act and correct threats to public health.

Many large system projects do not qualify for the SRF because when a 100-year-old water pipe burst in downtown New Orleans, there is no violation of the Safe Drinking Water Act and usually no public health threat. It is just another pipe that needs to be replaced.

Unfortunately, there are thousands of miles of old pipes throughout our Nation's cities. What is needed is an investment program that not only helps small systems but also recognizes the challenges facing large systems.

AMWA and our WIN partners have asked Congress to authorize and appropriate $57 billion over a 5-year period for both drinking water and wastewater infrastructure. This investment program should include a strong grants component and ample opportunity for large systems to participate in innovative programs such as principal forgiveness, credit guarantees and refinancing of high interest debt.

Another proposal to solve the gap is privatization, ranging from asset sales to outsourcing. At the Sewerage and Water Board we have outsourced almost 40 percent of our business. The U.S. privatization scene is dominated by a handful of foreign-owned firms, namely two French multinationals, Vivendi and Suez, two British firms, Thames Water and the Kelda Group and RWE, a German utility firm that expects to complete its purchase of the American Waterworks Company next year.

The American players are OMI, a CH2M Hill company and a handful of smaller firms. There does not appear to be either a strong or a weak record of success related to privatization, but one of the differences between public and private operation is that investor-owner utilities are ensured the opportunity to earn a profitable rate of return. Public water agencies instead reinvest their revenues into their systems.

Whether a municipal system privatizes should always be a decision for local-elected officials. The Sewerage and Water Board is a good example. We are now undergoing a managed competition process under which the Board's employees will bid alongside private firms to operate the system.

Reengineering and increased efficiency of water systems has also helped to stretch available dollars through reengineering, reorganization, reducing staff and installing state-of-the-art technology, public water systems have saved millions of dollars and still satisfy customer expectations and EPA regulations.

But in spite of new heights of efficiency, the savings generated will not resolve the infrastructure funding crisis facing New Orleans and other American cities.

One of the most innovative ways to stretch local, State and Federal dollars would be to encourage voluntary regional partnerships among water systems. A partnership could include physical infrastructure connections among utilities of various sizes near each other or it could involve a financial, managerial or technical support connection among utilities regardless of distance from one another or it could involve a combination of both.

Another means of helping to stretch available dollars is research into more efficient and effective means of infrastructure improvement and repair.

With the American Water Works Association, we recommend Congress consider identifying a small portion of water infrastructure funds for such research. In some ways the challenge we face today is not much different than faced by our predecessors 100 years ago.

Funding of the major urban water systems in 1900 was accomplished almost exclusively with local dollars. But funding projects today must reflect the tax structure of 2001. The Federal Government must join with the urban centers of this country to help upgrade our water infrastructure. As the U.S. Conference of Mayors president and New Orleans mayor, Marc Morial said in testimony earlier this year, "Local infrastructure needs are no longer simply a local concern. These needs are of national significance, of national economic importance and of substantial cost exceeding local capital resources."

AMWR believes the recommendations outlined here will help resolve the $11 billion per year drinking water infrastructure gap and keep American infrastructure strong and secure.

We look forward to discussing these future ideas with you. Thank you.

Senator GRAHAM. Thank you very much, Mr. Gorman.

Mr. Pinault.

STATEMENT OF PAUL PINAULT, EXECUTIVE DIRECTOR, NARRANGANSETT BAY COMMISSION, PROVIDENCE, RI, ON BEHALF OF THE ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES

Mr. PINAULT. Good morning Chairman Graham and Senator Chafee. It is a pleasure to be here this morning to provide comments to your subcommittee. As Senator Chafee noted, I am also the vice president of AMSA. AMSA represents the interests of more than 260 publicly-owned wastewater treatment facilities across the country which provide service to the majority of the United States sewered population.

At the outset, I would like to thank the members of this subcommittee for their hard work in making water infrastructure a national priority and for the continued commitment to meeting the Nation's clean and safe water needs as we confront the funding challenge together.

I would like to thank Senator Jeffords and the supporters of the bill introduced yesterday that provides much needed research and development funding for drinking water and wastewater infrastructure security. I and AMSA sincerely hope this measure passes swiftly with the full bipartisan support it merits.

While infrastructure security demands require local governments to stretch limited dollars even further, it becomes increasingly clear that adequate financial resources to communities like mine are the most essential elements to maintaining our Nation's water and wastewater infrastructure.

Yet, since 1980, according to studies by both the U.S. EPA and the private sector, Federal contributions for water and wastewater

infrastructure projects have declined by an astounding 75 percent. Despite this funding drop, I assure you that the wastewater utilities are being extremely innovative in order to get the most out of the limited dollars available.

My commission has had a positive experience with the State revolving fund, borrowing approximately $72 million to date. This has enabled us to fund a significant portion of our sewer system projects.

The commission's debt service as a percentage of total operating budget is currently 22 percent this fiscal year. By 2006 it will be 54 percent as a result of $350 million in planned capital projects over the next 5 years. It will cost about $750 million to complete those projects.

It is daunting to think that the 54 cents of every dollar the commission receives will go to debt service rather than operations.

However, without the SRF the number would be much higher if we had to borrow at full market rates.

Capital funding needs are driven by the dual forces of aging infrastructure and increasingly stringent environmental regulations, not operational costs.

The commission and its fellow AMSA members around the country have a 6-year documented record of reducing operational costs. However, no amount of operational streamlining or belt tightening can offset the cost of replacing critical clean water infrastructure.

Absent serious reform and increased funding to the SRF, the commission will be forced to borrow at market rates. This will make it extremely difficult to fund meaningful wastewater infrastructure projects. The commission's ratepayers have been paying their fair share of the cost of service provided, but it is increasingly clear that they cannot sustain additional substantial rate increases. Twenty-two percent of the households in our district fall below the Federal poverty line.

In January of this year the commission raised rates 25 percent, primarily to pay for a portion of the first phase of our combined sewer overflow project which we initiated this summer. We will have to apply again within the next 6 months for additional rate increases to meet growing debt capacity needs.

For our demographic group, these increases represent substantial financial hardship. Many communities simply cannot afford to pay back SRF loans. These communities should be afforded a full range of funding options including grants to meet their infrastructure needs.

Simply put, the SRF Program is not and will not be adequate to ensure continued compliance with our Nation's water quality laws, regulations and goals. On a national level public utilities are putting key innovations to work, such as pooled borrowing and the restructuring of debt.

Environmental management systems and asset management are becoming essential tools to ensure wastewater utility competitiveness nationwide.

AMSA, in cooperation with EPA and the Water Environment Federation is currently engaged in a joint project to develop a comprehensive EMS guidance for wastewater utilities that will provide

a key tool to ensure a more integrated cost-effective management approach for utilities in the near future.

At the same time AMSA is also collaborating with EPA on developing a nationwide asset management program for wastewater utilities which is scheduled to be implemented at the beginning of next year.

Despite these key innovations, available funding options have been narrowed to loans only. AMSA supports the recommendations contained in the recent water infrastructure WIN Now report calling for a next generation SRF. By creating one centralized financing program States can eliminate duplication, streamline government and save money.

AMSA and the 40 organizations in the WIN effort support the inclusion of $5 billion in grants for ready to go infrastructure projects in the Economic Stimulus Package. We also support a 5-year, $57 billion funding plan to capitalize State-administered grant and loan programs for water and wastewater infrastructure.

While understanding the need to consider other potential long-term options beyond the 5-year period.

Mr. Chairman, Senator Chafee, we look forward to working with you to resolve these problems. We are available to answer any of your questions.

Senator GRAHAM. Thank you very much, Mr. Pinault.

Mr. Cook, in your written testimony you talked about the gap between infrastructure needs and available funding and then suggested that one of the ways to reduce that gap would be through a series of actions such as innovative rate structure and use of new technologies.

Could you give me what you think is the best example of a community in America that has used those techniques and has effectively reduced the gap between need and available resources?

Mr. COOK. Yes, Mr. Chairman. The State of Connecticut Public Utility Commission has a very active program to identify marginal small water systems and to consolidate them with larger water systems. Typically these are investor-owned drinking water systems that are members of my association.

The Public Utility Commission has a legal authority to ask a private water company under their jurisdiction to take over a small system and to make the necessary investments to bring that small system up to the standards that the EPA regulations and State regulations require.

For its trouble, the Public Utility Commission will often offer the private company that takes this burden on a slightly higher rate of return on the money that they invest and essentially also allow them to set up a uniform rate structure so that the cost of providing this fully competent service in the small system is covered on the backs of all of the customers of the water utility, a much larger group of people than just the small community. So, universal rates are a very effective way of doing this.

Of course, there are precedents in the telephone business where rural telephone service was provided through various add-ons to everybody else's telephone bill. So, there are precedents for this and that happens to be a very effective way of solving these kinds of problems.

Senator GRAHAM. What has been the effect in the State of Connecticut of this program? How many of these smaller firms have merged now with the larger ones?

Mr. COOK. I believe we are talking now about a dozen cases, but we will be happy to provide for the record more specific information from our member in Connecticut with the names and the numbers for you.

Senator GRAHAM. Very good. Thank you.

Mr. Gorman, in your written testimony you raise some concerns about the manner in which individual States are operating their State revolving fund. You mentioned a concern that some States discourage large systems from participating and that some State's formulas do not adequately take into account the cost-of-living differentials.

Your comments are somewhat in contrast to several of our previous witnesses who were urging greater flexibility at the State level and less Federal direction as to how the State revolving funds were operated. Are you advocating that there should be some additional Federal constraints or parameters on the States as they administer their SRF programs and if so, what do you think those parameters should be?

Mr. GORMAN. No, sir, we don't believe that we should ask the States to follow some rigid Federal guideline. I think each State knows its needs best. I think our concern is that the SRFs tend to be a very small pool of money and rightly so, the States are going to deal with the smaller systems who have the greatest critical needs. That is our situation in Louisiana where we have attempted in the past to use SRF funds, but our requests have been so huge that it dwarfed the entire budget available to the State.

Senator GRAHAM. That last comment somewhat gets back to the issue that I raised at the end of the last panel. That is that the original concept of the State revolving fund, at least I know this was the case when the State of Florida established its fund, was to use it for the period of financing that was most difficult for local governments and that was while the plant was still under planning, design and construction. Once the plan became operational and was generating income, it would then be shifted to a permanent source of financing and those initial funds during the preoperational period would be returned to the State revolving fund and be available for other communities.

As an increasing number of communities are now using the State revolving fund for essentially permanent financing instead of having the money roll over in maybe a 3- or 4-year period, it is now 20 years and there are even suggestions that it be longer than 20 years.

Has that been a factor in the fact that Louisiana has not had funds to deal with the needs of the larger systems?

Mr. GORMAN. I think that is the case. I think the needs of the small towns are so enormous that what few funds are available are being judiciously allocated to the small communities in greatest need.

Senator GRAHAM. Mr. Pinault, in your comments you recommended the creation of long term sustainable and reliable sources of Federal funding for clean and safe water. What would

be some of your ideas as to what the sources of that permanent financing might be?

Mr. PINAULT. Through the Water Infrastructure Network they have discussed and evaluated a number of options but they do not have a specific recommendation at this time. But we do know that without Federal contributes the local governments cannot do it alone. As I said, the WIN effort has recommended the $5 billion in support of that for the Economic Stimulus Package and the $57 billion over 5 years.

Exactly where the source of funds will come from, they are still discussing that with the 40 members in their group. They will be glad to share their ideas and thoughts as soon as they develop them.

Senator GRAHAM. Thank you, we look forward to receiving that further suggestion.

Senator Chafee.

Senator CHAFEE. I would just like to thank the chairman and the panelists. It was compelling testimony. Mr. Gorman and Mr. Pinault, you are on the front lines of trying to balance the needs of your ratepayers. Thank you.

Senator GRAHAM. Thank you very much, Senator. I also wish to thank each of you for your contributions to the communities that you serve as well as your contribution to our understanding of these issues today. I hope that we can take the opportunity to call on you over the next few months as we begin to move these various suggestions into specific legislation.

If there is no further business to come before the subcommittee, I thank all of the witnesses who have educated us today. The meeting is adjourned.

[Whereupon, at 11:25 a.m. the subcommittee was adjourned, to reconvene at the call of the chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF G. TRACY MEHAN, ASSISTANT ADMINISTRATOR FOR WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY

INTRODUCTION

Good morning, Mr. Chairman and Members of the Subcommittee. I am Tracy Mehan, Assistant Administrator for Water at the U.S. Environmental Protection Agency. I welcome this opportunity to discuss the Nation's investment in drinking water and wastewater treatment facilities to protect human health and the environment.

As a Nation, we have made great progress over the past quarter century in reducing water pollution and assuring the safety of drinking water. The Clean Water Act and the Safe Drinking Water Act have served us well and provide the solid foundation we need to make sure that all Americans will continue to enjoy safe drinking water and clean river, lakes, and coastal waters.

Our success in improving drinking water and surface water quality is the result of many programs and projects by local, State and Federal Governments in partnership with the private sector. But our cooperative investment in water infrastructure—in pipes and treatment plants—has, more than any other single effort, paid dramatic dividends for water quality and public health.

I would like to take a moment to recognize the events of September 11. This hearing was originally scheduled for the thirteenth of September and, as such, this testimony was developed prior to the tragic events of September 11. Reviewing the testimony again after 1 month, I was struck by how much the world, even the somewhat circumscribed world of the water industry, has changed. As you know, EPA has established a Water Protection Task Force to accelerate work that had been ongoing on critical infrastructure protection. For the last month, my staff has been working

diligently with other Federal agencies, States, and water industry representatives to ensure that measures are in place to protect our population from security threats that could endanger our drinking water supplies or pollute our Nation's waterways.

But this morning I want to move forward with our original testimony and give you a brief overview of the progress we have made in improving water quality and challenges we still face. I will summarize what EPA knows about the need for future investment in clean water and drinking water facilities.

Clean and Safe Water—Accomplishments and Challenges

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

Thirty years ago, the Nation's waters were in crisis—the Potomac River was too dirty for swimming, Lake Erie was dying, and the Cuyahoga River had burst into flames. Many of the Nation's rivers and beaches were little more than open sewers.

The 1972 Clean Water Act has dramatically increased the number of waterways that are once again safe for fishing and swimming. The Act launched an all-out assault on water pollution, including new controls over industrial dischargers, support for State efforts to reduce polluted runoff, and a major investment by the Federal Government to help communities build sewage treatment plants.

The Federal Government has provided over $80 billion in wastewater assistance since passage of the Clean Water Act, which has dramatically increased the number of Americans enjoying better water quality. The economic and social benefits of improved water quality are readily evident all across the country. Some of the most dramatic improvements are seen in urban areas such as Boston, Cleveland, St. Petersburg and Baltimore, where the efforts to restore the health and vitality of our waters has also led to economically vibrant, water-focused urban environments.

The dramatic progress made in improving the quality of wastewater treatment since the 1970's is a national success. In 1968, only 86 million people were served by secondary or advanced treatment facilities. Today, of the 190 million people served by wastewater treatment facilities, about 165 million people are served by secondary or better treatment.

We have also made dramatic 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, growing concern for the presence of contaminants in drinking water around the country prompted Congress to pass the Safe Drinking Water Act. 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 place as of 1994. In the past decade, the number of people served by public water systems meeting Federal health standards in place as of 1994 has increased by more than 23 million.

Despite past progress in reducing water pollution, almost 40 percent of the Nation's waters assessed by States still do not meet water quality goals established by States under the Clean Water Act. On a national scale, States report that the leading sources of pollution include agriculture, municipal point sources, and urban runoff and storm sewers. Other sources, ranging from factories to forestry operations, cause water pollution problems on a site-specific basis. Point-source pollution has been so greatly reduced that now non-point sources (i.e., diffuse runoff) are the leading cause of water pollution.

Clean Water and Drinking Water State Revolving Loan Funds

The primary mechanism that EPA uses to help local communities finance water infrastructure projects is the State Revolving Fund (SRF) established in the Clean Water Act and the Safe Drinking Water Act. The SRFs were 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 programs, EPA makes grants to States to capitalize their SRFs. States provide a 20 percent match to the Federal capitalization payment. Local governments get loans for up to 100 percent 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, funds invested in the SRFs provide about four times

the purchasing power over 20 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 2.6 percent (the average rate during the year 2000) saves communities 25 percent compared to using commercial financing at an average of 5.8 percent (see Chart 1).

The Federal Government has provided more than $18 billion in capitalization grants to States for their Clean Water SRFs through FY2001. With the addition of the State match, bond proceeds, and loan repayments, the cumulative funds available for loans from the Clean Water SRFs were more than $34 billion of which $3.4 billion was still available as of June 30, 2000.

Since 1988, States have made over 9,500 individual loans for a total of $30.4 billion. In 2000, the Clean Water SRFs issued a record total of 1,300 individual loans with a value of $4.3 billion (see Chart 2). The Clean Water SRFs have provided about $3 billion in loans each year for several years and are widely considered a tremendous success story.

In 1996, Congress enacted comprehensive amendments to the Safe Drinking Water Act which created an SRF program for financing of drinking water projects. The Drinking Water SRF was modeled after the Clean Water SRF, but States were given broader authority to use Drinking Water SRFs to help disadvantaged communities and support drinking water program implementation.

Through fiscal year 2001, Congress has appropriated $4.4 billion for the Drinking Water SRF program. EPA has reserved $83 million for monitoring of unregulated contaminants and operator certification reimbursement grants. Through June 30, 2001, States have received $3.65 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 have made close to 1,800 loans totaling $3.7 billion. Approximately 74 percent of the loans (39 percent 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 $575 million of SRF capitalization grants for other activities that enhance the management of water systems, protect sources of drinking water, and support the drinking water program. Although the Drinking Water SRF is considerably newer than the Clean Water SRF, it is showing the same promise as an infrastructure financing success story.

Congress should consider adding some of the flexibilities of the Drinking Water SRF program to the Clean Water SRF program and should extend the provision which allows States to transfer funds between their Clean Water and Drinking Water SRFs in order to allow States the flexibility to better direct funds toward priority needs.

Water Infrastructure—Future Needs

The Clean Water Act § 516 (b)(1) and the Safe Drinking Water Act § 1452 both require that EPA periodically develop a "needs survey" to identify needed water infrastructure investments.

In February of this year, EPA released its second report on drinking water infrastructure needs showing that $150.9 billion is needed over the next 20 years to ensure the continued provision of safe drinking water to consumers.

The survey found that water systems need to invest $102.5 billion, approximately 68 percent of the total need, in what the report calls "current needs." In most cases, current needs would involve installing, upgrading, or replacing infrastructure within the next few years to enable a water system to continue to deliver safe drinking water. A system with a current need, therefore, usually is not in violation of any health-based drinking water standard. For example, a surface water treatment plant may currently produce safe drinking water, but the plant's filters may require replacement due to their age and declining effectiveness, if the plant is to continue to provide safe water. Future needs account for the remaining $48.4 billion in needs; for example, 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.

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, or to ensure continued compliance with specific Safe Drinking Water Act regulations (see Chart 3). Transmission and distribution costs are the largest category, at 56 percent of the total need, or $83.1 billion. Treatment projects make up the second largest category of needs (i.e., 25 percent) and have a significant benefit for public health.

Approximately 21 percent, or $31.2 billion, is needed for compliance with current and proposed regulations under the Act. Nearly 80 percent of the regulatory need is to comply with rules which protect consumers from harmful surface water microbial contaminants, such as Giardia and E. coli. Most of the total needs derive 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.

EPA's most recent survey of clean water infrastructure needs was released in 1996, and we plan on releasing a new clean water needs survey in 2002. The 1996 clean water needs survey estimated needs of $140 billion, including $26.5 billion for secondary treatment projects, $17.5 billion for advanced treatment, and $73.4 billion for various types of sewage conveyance projects, including collectors, interceptors, combined sewers, and storm water, and $10 billion for nonpoint pollution control projects (see Chart 4).

EPA is working to supplement the 1996 clean water needs survey as more accurate information becomes available. For example, the Agency has developed a model that better predicts costs associated with reducing sanitary sewer overflows.

BROADER CONTEXT OF WATER INFRASTRUCTURE FINANCING

Over the past year, several stakeholder groups including the Water Infrastructure Network, the Association of Metropolitan Sewerage Agencies, and the American Water Works Association issued reports estimating water infrastructure needs. These estimates were all substantially above those of EPA's Needs Surveys. Generally, these cost estimates differ from EPA's because the methodologies and definitions for developing them differ. For example, EPA Needs Surveys include only projects that are eligible for SRF funding under the Clean Water Act and Safe Drinking Water Act. Also, EPA requires that costs included in the Needs Surveys be established by planning or design documentation.

The Agency also decided to undertake a broader review of needs and spending for water and wastewater infrastructure, including estimating whether there is a quantifiable gap between future needs and current spending. This analysis B known as the Gap Analysis B has just recently undergone independent peer review by external subject matter experts. We expect the final analysis will be ready for public release later this year.

EPA recognizes that effective decisionmaking concerning water infrastructure financing benefits from a better understanding of the broader context of this effort. Key components in the broader context of water infrastructure that need to be more fully evaluated include the following:

• *Population Growth:* Steady growth and shifts in population put substantial pressure on local governments to provide expanded drinking water and sewer services. While EPA does not provide funding for projects related to population growth per se, this is an important factor for locals.

• *Aging Infrastructure:* Many sewage and drinking water pipes were installed between 50 and 100 years ago, and these pipes are nearing the end of their useful lives.

• *Current Treatment Issues:* In 1998, States, Tribes, and interstate commissions determined that wastewater treatment facilities and combined sewer overflows were two of the leading causes of impairment to estuaries. A June 2000 EPA report A Progress in Water Quality estimates that by 2016, pollution levels could be similar to levels observed in the mid-1970's if there is no increase in treatment efficiency.

• *Research and Development:* Innovation, research, and development are essential elements of promoting the use of more effective, efficient, and affordable technologies in water and wastewater treatment. A recent EPA report on public and private R&D expenditures associated with water pollution abatement ("A Retrospective Assessment of the Costs of the Clean Water Act 1972–1997") showed that expenditures decreased by half from the early 1970's to the late 1990's. The Federal investment in drinking water research has increased substantially over the past 5 years.

• *Increasing Operation and Maintenance Costs:* As the size and complexity of water and sewer systems increase, and facilities get older, the costs of operations and maintenance tend to increase.

• *Affordability:* Although water has historically been underpriced, some systems may find it difficult to replace or update aging water and sewer systems and keep household user charges at affordable levels, especially for low-income households and communities.

A number of stakeholder groups have called for a significant increase in Federal investment in water and wastewater infrastructure. Certainly, there will be a continuing role for the Federal Government in helping to meet the challenge of exten-

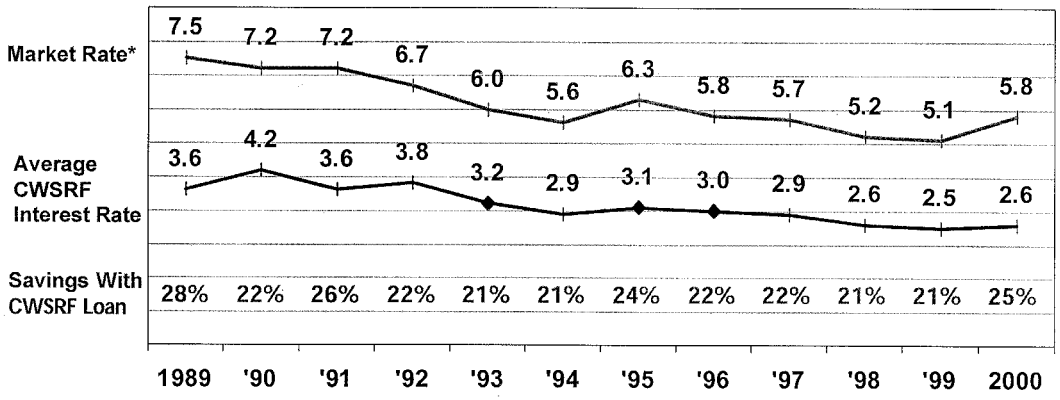
sive infrastructure investment need, but it cannot be the only solution. The solutions will have to be multi-faceted with Federal, State, and local, public and private investment of time, energy, money, research, and, perhaps most needed, innovative thinking and bold actions. We must encourage States and local governments to think strategically as they plan for forthcoming rules and program requirements, infrastructure repair and replacement, and overall protection of the water that sustains their communities.

Ensuring that our water infrastructure needs are addressed in a sustainable manner will require a shared commitment on the part of the Federal, State and local governments, private business, and consumers. Governor Whitman and I are committed to working in partnership with Congress, States, local governments, the private sector, and others to better understand the water infrastructure challenges we face and to play a constructive role in helping to define an effective approach to meeting these challenges in the future.

CONCLUSION

We believe that the SRF mechanism has proven to be a powerful and effective tool in helping States and utilities achieve their public health and environmental goals. As your Committee continues to study water infrastructure needs, the Administration would like to encourage a constructive dialog on the appropriate role of the Federal Government in addressing these needs. Thank you, Mr. Chairman, for giving me the opportunity to speak with you this morning.

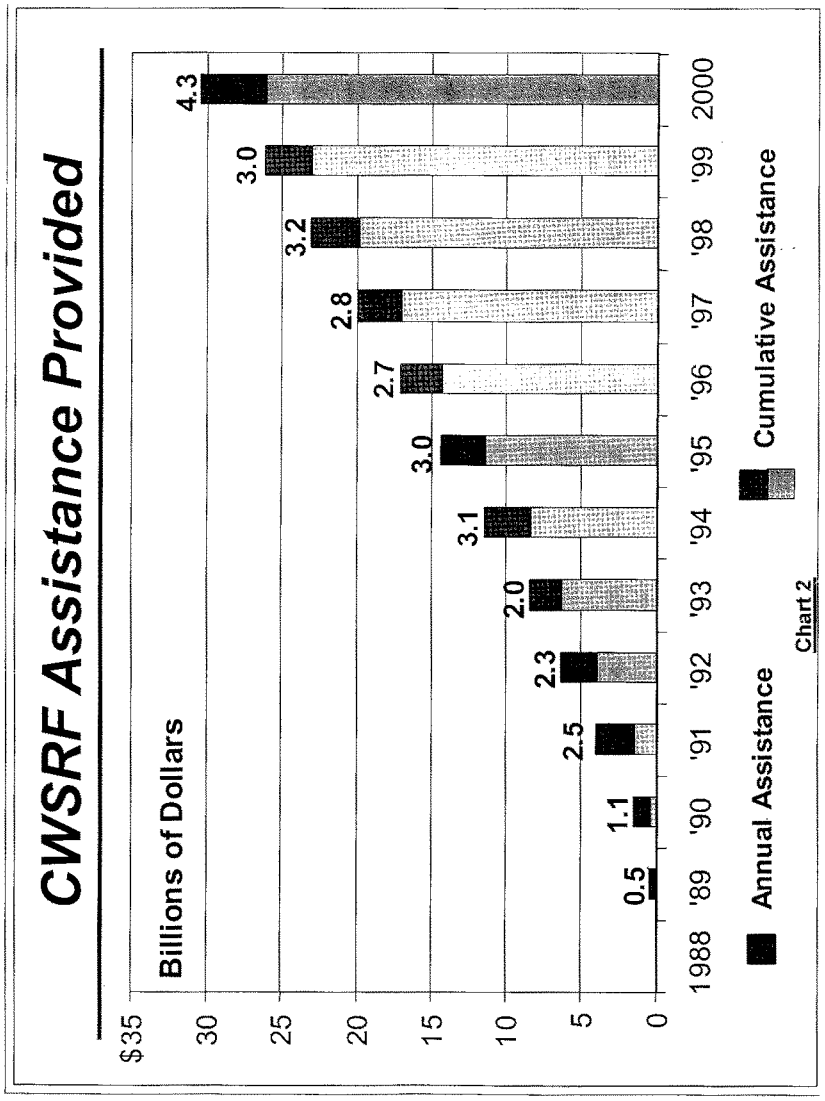
Savings Provided By SRF Loans



*Market rate is measured as the Bond Buyer 20-Bond GO Index.

For example: In 2000, a community would save 25% by financing its project with a typical 20-year loan from a state CWSRF at an average interest rate of 2.6% instead of using commercial financing at an average 5.8% rate

Chart 1


CWSRF Assistance Provided
Billions of Dollars
$35
30
25
20
15
10
5
0
0.5
1.1
2.5
2.3
2.0
3.1
3.0
2.7
2.8
3.2
3.0
4.3
1988
'89
'90
'91
'92
'93
'94
'95
'96
'97
'98
'99
2000
Annual Assistance
Cumulative Assistance
Chart 2

Drinking Water Needs (1999)
Total Need $150.9 Billion

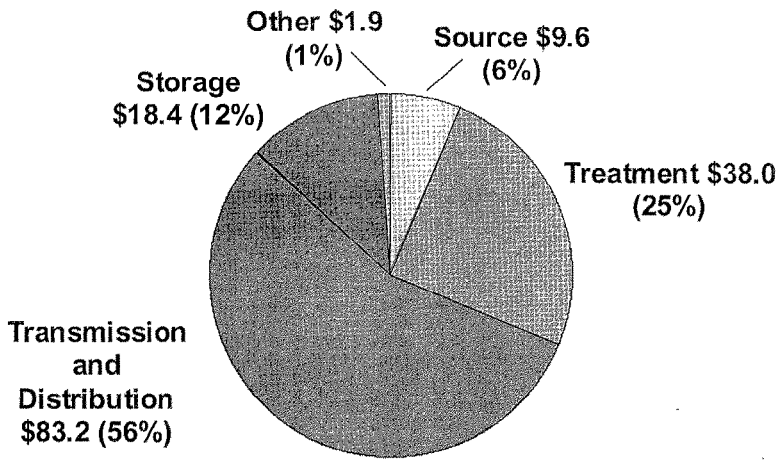
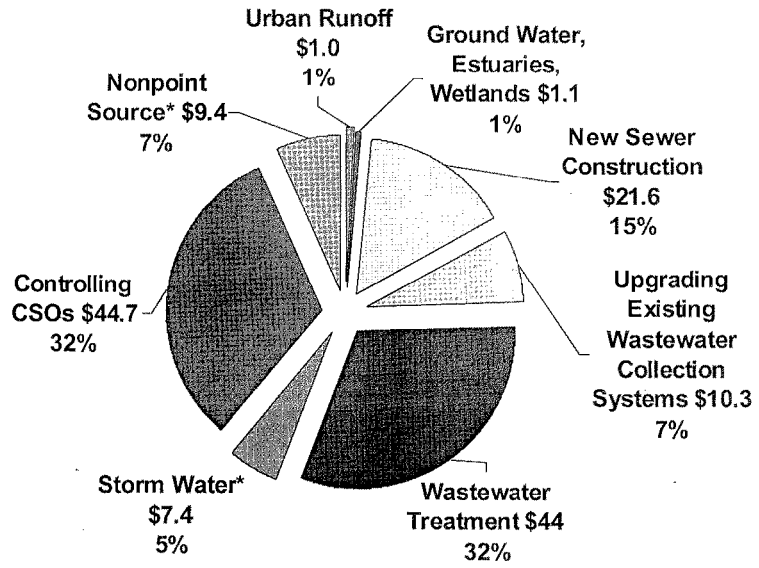


Chart 3

Clean Water Needs (1996)
Total Need $139.5 Billion



*Modeled Needs

Chart 4

STATEMENT OF STEPHEN E. HOWARD, SENIOR VICE PRESIDENT, LEHMAN BROTHERS, NEW YORK, NY

OVERVIEW OF INFRASTRUCTURE PROJECT FINANCING OPTIONS FOR PUBLIC/PRIVATE PARTNERSHIPS

FINANCING APPROACHES FOR PUBLIC/PRIVATE PARTNERSHIPS

There are four basic structuring approaches based on project ownership and operation.

	Ownership	Operation	Agreement	Model
I	Public	Private	3 to 5 years	Operations Only
II	Public	Private	15 to 25 years	Design/Build/Operate
III	Private	Private	25+ years	Build/Operate/Own/Transfer
IV	Private	Private	NA	PUC/Monopoly

Structures II and III are generally considered to be true models of public/private partnerships.

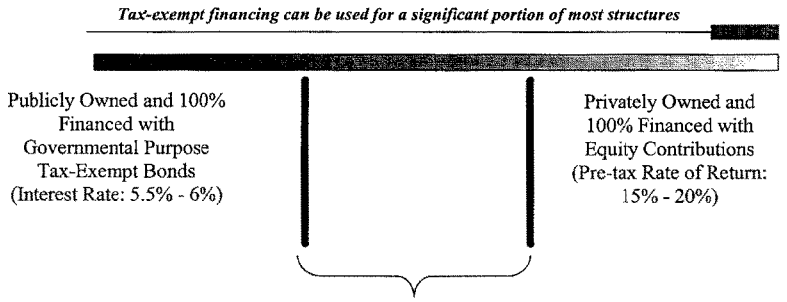
The public sponsor maintains interface with service recipients and sets user rates.

The public sponsor and the private partner enter into a short- or long-term operating agreement for a wholesale service under a predetermined, negotiated fixed price service fee structure.

Under structure IV, the private company provides service with no direct public sponsor involvement.

Financing Options for New Projects

- **There is a broad spectrum of financing options:**



Between these two extremes, a variety of structures utilizing tax-exempt debt, taxable debt and equity funding are possible

FINANCING OPTIONS FOR NEW PROJECTS—CONTINUED

Ownership and Credit Structure

• Public Ownership: Pledge of system revenues/operating agreement
• Private Lease/Ownership: Pledge of project revenues/operating agreements/assets

Operating Agreement Term

• The new IRS regulations ("97–13") have extended the permissible management contract term for certain publicly-owned infrastructure assets financed with governmental purpose bonds from 5 years to 20 years.
• Qualifying Assets with operating agreements that do not comply with 97–13 and/or with terms longer than 20 years must be financed with private activity tax-exempt bonds.

Capital Improvement/Expansion Responsibility

Construction, Acceptance and Operation Risk Allocation

Availability of Grants and Revolving Loan Funds

Public Ownership

• 100 percent governmental purpose or private activity tax-exempt debt financing possible.
• Many publicly-sponsored projects have direct access to capital markets as well as grants and revolving loan funds.
• The taxable and tax-exempt municipal bond market provides single source of debt funding for construction and permanent financing

Private Lease/Ownership

• 80 percent to 90 percent taxable/tax-exempt private activity bonds, balance equity financed.
• May include some combination of construction loan and permanent financing.

Tax-Exempt Project Debt

The tax-exempt market has been an increasing source of "off-balance sheet" financing for large infrastructure projects.

Construction and operating period term financing for non-recourse project credits with minimal negative arbitrage is possible.

Public ownership structure (including 63–20 and 501(c)3 corporations) is possible to eliminate tax-exempt volume cap requirement for certain types of projects, but limits operating flexibility.

Tax-exempt financing for privately-owned projects will be subject to tax-exempt volume cap.

TAX-EXEMPT FINANCING AVAILABILITY

Asset class	Governmental purpose no bond cap	Private activity no bond cap[1]	Private activity with bond cap
Water/Wastewater	X		X
Solid waste	X	X	X
Airport	X	X	
Surface transportation	X		
Ports	X	X	
Housing	X		X
Education	X		
Healthcare	X		

[1] Public ownership
[2] Private ownership

TAX-EXEMPT PROJECT DEBT: INVESTOR PERSPECTIVE

Constrained market and essential service characteristics of many infrastructure projects assure strong credit fundamentals.

Strong credit fundamentals carry over to highly-structured nonrecourse transactions with construction and operating risks properly allocated among project participants.

Demand-based essential service infrastructure project financings can be highly leveraged.

Construction risks are viewed as manageable for most asset categories.

Highly-regarded private companies active in the infrastructure market are important contract counterparties.

CONCLUSION

Tested and proven financing structures exist to finance public/private partnerships with tax-exempt bonds under existing tax laws.

Infrastructure projects can be structured as public/private partnerships to optimize development, construction and long-term operation, as well as appropriate sharing of risks between the public and the private sector.

Highly-regarded private companies active in the infrastructure market facilitate the structuring of long-term public/private partnerships for most asset classes.

An experienced, professional project team which includes legal, technical and financial expertise is crucial to determine the optimal public/private partnership implementation plan.

STATEMENT OF RICK FARRELL, EXECUTIVE DIRECTOR, COUNCIL OF INFRASTRUCTURE FINANCING AUTHORITIES

My name is Rick Farrell and I am here today in my capacity as Executive Director of the Council of Infrastructure Financing Authorities.

CIFA is a national organization made up primarily of State and local officials engaged in the development and financing of water and wastewater pollution control projects and the operation of State Revolving Funds for infrastructure financing. The organization counts among its members 44 States, the District of Columbia and the Commonwealth of Puerto Rico. The people who represent the member entities of CIFA are some of the most respected finance officials in the country, and bring countless years of experience in the public and private sectors to bear in their day-to-day functions.

We appreciate the opportunity to share our views with the Subcommittee on the important issue of improving utilization of available water and wastewater infrastructure funding. With the ever-increasing projections of need for environmental infrastructure of all kinds it is clear that available resources must be utilized in ways that maximize their effect.

I note the particular focus on financial innovations. Our members have been in the forefront of creating and implementing financial structures that effectively stretch the available Federal and State dollars while operating within the limits of statute, Federal oversight, and fiscal responsibility. An important part of the CIFA mission is to foster such innovation and encourage the exchange of information concerning best practices in infrastructure financing among the States, and between the States, the national government, and the private sector.

I want to first address the context in which the effort to foster innovation and new approaches takes place. As Congress considers the policy and funding questions deriving from the enormous anticipated capital needs for wastewater and drinking water infrastructure, it is our strong view that the foundation for future progress must remain the State Revolving Fund programs. It is vital as well as sensible that the SRF partnership between the Federal and State governments continue as the basic mechanism for water infrastructure assistance to local units of government throughout the country.

The State Revolving Loan Funds are arguably the most successful environmental programs ever. Since 1989, the Clean Water SRF has provided $33.6 billion in low-interest loan funding for over 9,500 individual projects, while the Drinking Water SRF has provided $3.2 billion in assistance, both loans and grants, for over 1,500 projects in a little less than 4 years.

The proven track record argues strongly in favor of the SRFs as the premier mechanism for delivery of environmental infrastructure construction subsidies. With congressional support and cooperation of the Environmental Protection Agency the SRFs are positioned to facilitate the next wave of initiatives and activities to assure water quality, and will do so in a cost-effective, efficient, and creative manner.

Consistent with our strong support for the SRF model, we are opposed to the creation of independent grant programs operating outside of the State SRFs. The Federal-State partnership and the successes it has created would be severely threatened by the onset of separately delivered grant programs, earmarking, and other alternate funding mechanisms. Separate grant programs not only complicate the funding process at the local level but often also serve to delay project initiation because the prospect of a grant diminishes the incentive to pursue other assistance such as a state-revolving fund loan. These unintended consequences of delaying project initi-

ation and creating unrealistic expectations are often exaggerated in the case of economically distressed communities where the needs are often most urgent.

Programmatically, it clearly makes most sense to provide all infrastructure construction subsidies, be they in the form of subsidized loans, grants, or grant equivalents such as principal forgiveness, through the SRF structure that is already established and has been successfully functioning in all the States since 1989. We should strive for fewer, not more programs to make accessing them easier for potential applicants. This saves overhead costs and reduces the confusion to communities trying to access a multitude of programs. Economically, it also makes most sense to provide infrastructure construction subsidies to local communities through the SRF programs since they can provide this assistance more efficiently than can independent grant programs. The goal should be to provide the subsidies necessary to get projects completed, not to provide grants to all. Using the SRFs to target subsidies—perhaps with grants as well as with loans—extends valuable infrastructure dollars, a key goal for us all. Efficiency gains achieved by the SRF programs translate into more infrastructure construction than can be achieved by comparable grant programs. The success story of the SRFs is clearly a model that should be built upon.

Indicative of the vitality of the SRF program to facilitate financial innovation is the capacity it affords to leverage the funds. Leveraging, in the SRF context, means that States have the ability to use the Federal capital grants, as well as their matching share, as collateral to borrow in the public bond market for purposes of increasing the pool of available funds for project lending. This option allows the States to use the funds as security or a source of revenue for the payment of principal and interest on bonds, so long as the bond proceeds are deposited back into the SRF. Security for the bonds may be provided by any of the SRF assets including anticipated future revenues from loan repayments. The use of the assets of the SRF to generate new moneys which can be used immediately to fund more projects underscores the true financial strength of the SRF model.

Leveraging the SRF can dramatically increase the funds available for lending. Close to $9 billion has been added to the loan pool by the 24 States that have leveraged their funds. This compares with $18.3 billion in Federal capital grants thus far. The successful leveraging occurring with the SRFs has allowed us to address serious problems much more quickly than anyone had anticipated by delivering substantially increased amounts of affordable capital sooner to meet critical infrastructure needs. There are examples of leveraging that demonstrate a multiplier effect of project funding levels at two to four times the original investment.

The Clean Water SRF program authorizing legislation establishes a state-operated program that utilizes Federal capitalization grants and State matching funds to achieve the mutually desired water quality goals. After more than 10 years of successful program operation it is clearly the experience of CIFA member States that the more latitude and operating flexibility the States are allowed, the greater is our ability to accomplish the environmental and financial goals of the program. An example of the utility of flexibility is illustrated by the fact that among all the States and territories operating revolving funds, no two are structured precisely alike, yet all share the same water quality objectives. While we recognize and acknowledge that the significant levels of Federal dollars involved call for considerable accountability on the States' part, we also assert that excessive oversight and "one-size-fits-all" administrative control by the Environmental Protection Agency can have the effect of stifling our ability to innovate and create program structures that best accomplish our common goals. The SRF's are successful because their underlying concept is based on program management and service delivery at the State and local level with broad accountability at the Federal level. This model should be protected, allowed to flourish, and emulated in other program areas.

I believe a useful question for the Subcommittee to look at is why leveraging is not an option for more States and to examine the underlying issues and concerns of the States in this regard. While the ultimate decision with respect to leveraging is and must remain within the purview of the State governments, there are aspects of Federal policy and EPA requirements which, if modified, would likely serve to facilitate expanded leveraging. Lessening the administrative restraints and requirements of the SRF programs would also serve to make the programs more efficient, while remaining accountable under the precepts of the authorizing legislation. Examples of these limitations include the ability to freely transfer funds between the Clean Water and Safe Drinking Water SRFs, required pre-approval for certain financing techniques, including simple leveraging, and the various conditions that must be satisfied by all recipients of funds made available directly from Federal capitalization grants.

While mindful that the jurisdiction of the Committee does not extend to tax law, I feel it is important to point out that any comprehensive review of means available to maximize water infrastructure funding should include consideration of the arbitrage rebate rules as they affect the leveraged SRF programs. In this context, arbitrage is the difference between the interest rates at which tax-exempt bonds are issued and the rates at which the proceeds are invested. The States that operate leveraged SRF programs are compelled by the arbitrage rules to either limit the rate at which funds can be invested, or rebate to the treasury the net earnings on those portions of the SRF funds that are considered under these rules to be bond proceeds.

This greatly reduces the resources available to fulfill the funds' purpose of providing below-market financial assistance to help communities meet Federal standards for their water programs.

CIFA estimates that in the absence of these restrictions, the affected States could earn an additional $100–$200 million annually on their SRF capitalization funds which, when leveraged, would permit an additional $200–$400 million annual investment in needed water projects.

The arbitrage rules, which were enacted before State revolving funds came into existence, were intended to prevent abusive arbitrage practices, including "over-issuance" of bond indebtedness beyond the amount to be spent for a particular project as well as early issuance before bond proceeds are actually needed. Such practices are not an issue in the case of SRFs, whose earnings, by law, must be retained in the revolving funds and can only be used for the fund's purpose of financing water and wastewater facilities. Funds in an SRF, whether capitalization grants, loan repayments, or earnings on invested moneys, can be expended only for eligible projects listed on the State's current-year Intended Use Plan, and Federal moneys are made available only to the extent that verifiable project spending has or will occur. Prompt loaning out of bond proceeds and other available fund assets is ensured by the oversight and program audits required by the U.S. Environmental Protection Agency. These restrictions placed on SRFs by Federal law assure that exemption from arbitrage rebate requirements will not lead to the abuses that inspired the arbitrage rules.

In conclusion, it is our position that any congressional initiatives targeting water and wastewater infrastructure funding, affecting current SRF operations, or expanding the mission of the SRFs, should be developed with the recognition that innovative methods of addressing water and wastewater needs are more likely to originate at the State, rather than the Federal, level. The States are closer to the problems that need to be addressed, and the States are capable of tailoring their approach to best meet their unique needs. The best hope for discovering and realizing innovative financing approaches is to give the States wide latitude, within the constricts of appropriate accountability, in designing and implementing their locally-tailored solutions.

STATEMENT OF PETER L. COOK, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF WATER COMPANIES FOR J. JAMES BARR, PRESIDENT AND CEO, AMERICAN WATER WORKS COMPANY

Good Morning Mr. Chairman and Members of the Subcommittee, I am here to testify for J. James Barr, President and CEO of the American Water Works Company.

American is the largest regulated water utility business in the United States. The Company's utility subsidiaries and affiliates serve approximately 10 million people in 23 States. We can trace our roots back to 1886, though some of our subsidiaries have roots going back even further. Today, the Company remains committed to continued growth and is involved in a number of industry consolidation and privatization initiatives including water and wastewater system acquisition, contract operation and public/private partnerships.

Mr. Barr is also Chairman of the Board of the National Association of Water Companies (NAWC). 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 members in 41 States—which provide safe reliable drinking water to more than 20 Million Americans everyday. I'm pleased to report that NAWC has members in nearly every State represented on this Subcommittee; Florida, Idaho, Montana, Missouri, Nevada, Virginia, New York, Rhode Island, New Jersey, and Colorado.

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, including rate schedules. 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 these hearings on improving the utilization of available water and wastewater infrastructure funding. This is an important part of the larger water infrastructure financing issue. We also commend you for tackling this important larger question.

Due to our concern about this issue and our commitment to finding sound solutions, earlier this year NAWC joined with other organizations to form the H_2O Coalition[1]. This coalition was formed solely to work on the coming infrastructure replacement challenge facing the water and wastewater 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 only limited, targeted Federal Government involvement.

GENERAL COMMENTS

In the last year 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* must address today.

We have several problems with this argument, some of which I will discuss in greater detail today, and others that have already been the subject of this Subcommittee's previous hearings.

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 recently estimated the drinking water needs about ⅔rds lower.

Second, the advertised "gap" of one-half a trillion dollars is a worst-case scenario. Setting aside the fact that the "need" upon which the "gap" is based is probably overstated (as discussed above), the financial "gap" the Federal Government is being asked to fill assumes that utilities do nothing on their own to fill it. This 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 .8 percent), particularly in comparison to electricity (2.4 percent) and telecommunications (2.1 percent). 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 massive grants for the water industry, it should consider that the cost of providing this needed service is not a burden on most households.

Fourth, 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 percent of all water systems serve less than 3,300 people, and a mere 2 percent 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 these systems having infrastructure replacement, financial and/or compliance problems, consolidation should be considered before any public moneys 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

[1] The H_2O 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.

a national interest in a national infrastructure; highways and airports are good examples. To think of water infrastructure as integrated on a national level is simply inaccurate. It is in fact many thousands of separate infrastructure 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 limited areas in which Federal activity is appropriate. Clearly, Federal water quality regulations as promulgated under the Safe Drinking Water Act are a necessary and appropriate Federal Government activity.

Some will argue that the broad water infrastructure issue constitutes an unfunded Federal mandate that the Federal Government has a responsibility to address. This is not the case. There is no Federal mandate regarding water infrastructure as we are talking about it today. There clearly are mandates represented in the Safe Drinking Water Act and Clean Water Act regarding health and environmental standards, but those are different issues and not the topic being discussed today.

THE ROLE OF THE PRIVATE SECTOR

The private sector has long played a vital role in our Nation's water infrastructure and stands ready to do much more. The privately-owned drinking water utility business traces its roots back to before the very existence of our Nation. However, outright private ownership is but one-model localities can pursue as a means of addressing their infrastructure challenges. Another large and growing option is contract operations, wherein the municipality retains ownership of the asset, in this case a water utility and its infrastructure, but the management and operations of the facility are contracted out to a private company.

History has shown that the private sector can and does provide water customers efficiency and sustainability through market-based solutions. Privately-owned utilities have been on the cutting edge of technical innovation and research. Particular needs in particular communities can be met by the private sector through a range of public-private partnership models. All of this can and is done while maintaining accountability to the public and complying with all Federal and State regulatory requirements.

The National Association of Water Companies recently published a report on the role of the private sector in the drinking water industry. That report studied the various forms that private sector involvement in the water business can take, from out-right ownership of an asset to various short and long term contracts. The report found that when such creative solutions are pursued by a municipality, operating costs can be reduced by 10 to 40 percent. It is obvious that with such cost savings, the need to look to the Federal Government for assistance is greatly reduced if not eliminated. It is also worth noting that in those cases where the acquired company was not in compliance with EPA regulations, the utility was quickly brought into compliance.

Other studies confirm this potential. Standard and Poors recently reported that the water companies rated by them—which is virtually all of the larger privately-owned utilities—spend on average about 40 percent of their annual capital outlays on modernizing and expanding their infrastructure. My company alone has invested $6 billion since the early 1970's, or roughly $2,000 per customer. If more utilities around the country were doing this, there might not be any reason for us to be here today.

Privately-owned utilities can also bring many creative solutions to infrastructure problems, often in partnership with States in municipalities. In Indiana, the Indiana Department of Environmental Management requested the Indiana-American Water Company, one of my Company's subsidiaries, to take over the troubled Prairieton Utility and made $500,000 in State Revolving Loan funds available to them.

This creative solution was good for all involved: the customers are receiving safe, more reliable water at rates they can afford, the State of Indiana has addressed a potential health and environmental problem, and Indiana-American has increased its business. Indiana-American has a similar story to tell in Gary, Indiana, where about 1,000 people have been receiving service from potentially contaminated wells. Working with the State, Indiana-American Water company will extend service to those customers, solving problems all around.

There are also instances where private water companies have been working with localities to extend service to needy areas. Another American subsidiary, the West Virginia-American Water Company worked with the Boone County Service District to extend vastly improved water service to approximately 30 communities. Similarly, in Fayette County West Virginia, West Virginia-American worked with the

county to extend water service to approximately 1200 families that had never before had public water supply through the installation of over 63 miles of new distribution facilities.

The industry has seen great growth in the last few years in the field of contract management. Unlike out-right asset ownership, under a management contract arrangement, the municipality retains ownership of the asset but contracts with a private provider for services. These services can be very limited and specific such as billing. However, the major growth has been in long-term (as long as 20 years) full service contracts where the private firm is responsible for all aspects of running the utility. These contract arrangements can take many forms but what they have in common is great savings to localities. A few years ago, United Water contracted with the city of Atlanta to manage their water system, saving the citizens of Atlanta $400 million or 45 percent over the life of the contract. There are literally dozens of examples of such savings from contracts signed across the country resulting in savings to U.S. citizens of hundreds of millions of dollars: Milwaukee, WI, 30 percent savings; Seattle WA, 40 percent savings; Tampa FL, 21 percent.

CHALLENGES FACING THE INDUSTRY

It is clear that the private sector can do much to help the Nation's utilities contend with their infrastructure issues either through direct ownership and operation or in partnerships with municipal utilities. If the full power of the private sector is unleashed to help this coming infrastructure challenge, we all will be winners:

- Americans will continue to enjoy clean and safe water for generations to come at reasonable and reliable rates;
- Congress and the Federal Government will have performed their role successfully, without the need for huge, budget-breaking grants; and
- Both public and private water utilities will be successful in meeting the various challenges facing the industry, including infrastructure replacement.

However, to fully unleash the power of the private sector there a few issues which should be dealt with, though not all are under congressional jurisdiction.

Public Perception

Probably the No. 1 hurdle facing the expansion of the private and investor-owned water industry is the public's attitude regarding private ownership and/or management of a resource as vital and basic as water. This is largely the private water utility's problem to contend with, and we do so by performing responsibly and professionally, and educating the public on our industry. We raise awareness of our industry by educating the public and key decisionmakers. When people learn of our long history, our generally exemplary health and environmental records, and our leadership within the industry working with EPA and Congress, their concerns about the private sector fade. As an example of this, many private water utilities led the way in consumer relations by publishing consumer confidence reports long before Congress mandated them. Then when Congress mandated the reports for the entire industry, we worked with EPA to share our knowledge and experience on the matter so all utilities could better contend with what was for some of them a new challenge, but for us was business as usual.

Private Activity Bonds

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.

I 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 few dollars coming from the ratepayer and/or taxpayer;

(7) Does not require the average taxpayer to pay for services he/she does not directly enjoy; and

(8) 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. I know some of you, including you Mr. Chairman, also sit on the Finance Committee and I encourage you to consider this change in the tax code as soon as possible.

This proposal also has far ranging support. Legislation in the House, H.R. 2207, 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.

Water Industry Litigation

A disturbing trend has been observed recently in many parts of the country, which could directly affect the ability of all utilities (both publicly- and privately-owned) to face the infrastructure financing challenges. This trend involves coordinated litigation aimed squarely at America's water industry, and the drinking water quality regulatory system under which it has operated for many years.

Massive civil lawsuits involving hundreds of plaintiffs have been organized and commenced against water suppliers in several States for allegedly supplying contaminated water even when these utilities have been in full compliance with State and Federal drinking water quality standards. These suits have targeted both privately-owned and municipal water systems.

To address this problem the entire drinking water industry has come together to support legislation to deter unfounded lawsuits. We are not interested in protecting water suppliers who are not meeting State and EPA health standards; we are however interested in offering some protection to those suppliers who are meeting all standards yet getting sued anyway. Therefore, we, along with five other associations representing public, private and rural utilities support legislation that would make compliance with Federal drinking water standards a defense in lawsuits involving contaminants covered by such standards.

If Congress does not pass such legislation the repercussions could be extremely costly to our industry and the public. This at a time when there are other pressing needs, including infrastructure replacement, compliance with new standards for contaminants such as arsenic, and heightened security measures due to increased threats of terrorist attacks. Even if utilities prevail in the vast majority of the lawsuits, the legal defense costs will be substantial. These costs will eventually have to be borne by the customers of the water utilities, increasing their costs without providing any commensurate benefits, and increasing the chance water will become unaffordable, the last thing we need in this era of infrastructure replacement. In addition, if juries in 50 States decide that EPA's standards aren't safe enough, juries will become the de facto standard setters, thus undermining both EPA's standard setting process and Congress's oversight of that process. Finally, the public's confidence in their own drinking water supply could be unnecessarily and perhaps irrevocably harmed.

Procurement Practices

The water and wastewater industries could see pronounced savings if creative procurement practices, common in the private sector for years, were more widely available and utilized by municipalities. It has been estimated that communities could realize savings of as much as 40 percent, and significantly speed up the process by using these creative procurement practices as compared to more traditional procurement approaches. There are, however, some roadblocks to these practices which Congress and EPA can assist in eliminating.

The traditional procurement practices separated the various phases of a project into distinct steps, to be managed and handled separately. Some of those steps were bid out to contractors and some were not. A fairly typical model saw a three-step process: (1) planning, (2) design, and (3) construction, with management and operations considered separately and typically performed by municipal employees.

However, it has been shown that significant costs can be realized by combining two or more steps of the process and bidding them out. Examples of these compressed procedures include design-build, design-build-operate, and design-build-finance-operate (yet all are often called integrated project delivery methods). By having the designer, constructor, and/or operator working together, perhaps for the same contractor, an efficient dynamic is created resulting in savings. For example:

1. Time (and therefore money) is saved because many steps are compressed;
2. Innovation is encouraged by requiring performance-based standards and allowing the designer to be the builder;
3. Confusion and problems are reduced throughout the process, even in operations, because fewer parties are involved, perhaps as few as one; and
4. Liability and responsibility is clear, thus reducing any possible litigation costs and complexities in the case of non-performance.

Many communities have benefited from these creative practices. They include Seattle, WA; Wilmington, DE; Jersey City, NJ; Newport, RI; Franklin, OH; Charlotte, NC; and Cranston, RI. However others are either barred or stymied from pursuing theses alternatives due to lack of knowledge, local and State restrictions and/or outright bans.

To address this problem this Committee can instruct EPA to assist in educating communities about these alternatives, and to consider incentives to localities to use these creative procurement practices.

State Revolving Loan Funds

Congress can also help with some of the problems private systems, including small systems are facing in a number of States. Many States have declared privately-owned drinking water systems to be ineligible for drinking water State Revolving Fund (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. Right now, 14 States are ignoring Congress, and denying their citizens equal access to the DW-SRF.

Another disturbing fact is that many States (other than the 14 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. 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 percent of all community water systems nationwide and serve about 15 percent of Americans but receive a mere 3.5 percent of all DW-SRF assistance, it is clear that something is wrong.

Some have argued that privately-owned companies, even those serving the public, should not receive Federal assistance—not even loans. Congress 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 these States to comply with congressional intent.

We believe the best way to encourage States to implement the DW-SRF as Congress intended is to reduce the DW-SRF allocation of those States disallowing private utility access by the amount of "need" attributed to private utilities and to reallocate those funds to States that are in compliance. Unfortunately, EPA has refused to modify its SRF allocation process, so that congressional action may be necessary.

CONCLUSION

Mr. Chairman, we appreciate the leadership role that you and this Subcommittee have taken to address drinking water infrastructure problems, and we also appreciate the concern that you have expressed regarding the need for cost-effective solutions. 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.

RESPONSES FROM PETER L. COOK TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. You made a strong case for the benefits of public private partnerships and you have cited several examples of municipal water systems that are using this approach to reduce their costs. How do you account for the savings associated with these examples? How could the Federal Government incentivize this type of arrangement?

Response. The savings from public-private partnerships in the water sector can be seen in the reduction of both operating and capital costs. First, the private sector often can improve procurement practices for the major inputs of production (purchased water, chemicals, energy, and so on). Larger private companies can use purchasing power to lower unit costs. Second, the private sector often can deploy labor more efficiently and lower total personnel costs. The labor force may be reduced over time (typically through attrition, rather than reductions in force) although the professional and wage opportunities for workers usually expand. Third, the private sector emphasizes the efficient utilization of modern technologies for water treatment and distribution. The use of the appropriate and most efficient technology can reduce total costs, often while improving quality and reliability. Fourth, market-based models and associated partnerships can lower capital costs by introducing competitive practices and innovative financing methods to major construction projects. Fifth, larger private companies can help achieve economies of scale by providing managerial and operating services to multiple water systems, with or without physical interconnection. Finally, investor-owned utilities can assume total responsibility for providing water service and therefore release the municipality from this function altogether. The private water company remains closely regulated by State drinking water agencies (as to safety and health) and the public utility commissions (as to rates and finances).

The Federal Government can provide a variety of incentives to encourage pubic-private partnerships in the water sector. First, the Federal Government can more aggressively encourage all States to make private water companies eligible for Drinking Water SRF loans, as current law allows. Similarly, Congress can allow private water utility access to the Clean Water SRF. Second, the Federal Government, through the Environmental Protection Agency (EPA), could provide information and guidance on privatization in the water sector. Third, the Federal Government could support research and demonstration projects that provide models for privatization. Finally, the Federal Government can explore taxation, accounting practices, and financing policies that would level the playing field between private and public providers of water service (see discussion of private activity bonds below).

The Federal Government should also avoid putting in place disincentives to public-private partnerships, such as direct grants to water utilities. Such grants can discourage public-private partnerships and creative problem solving by municipalities.

The "scorecard" below, put together by Public Works Financing, gives the status of publicprivate partnerships in the water industry. The more than $1.5 billion of investment described within merely hint at the potential the private sector has for assisting in addressing the infrastructure financing challenge.

U.S. Water Privatization Scorecard—Communities with Long-term Water Partnerships

Municipality	Description (system type)	Plant size (mgd)	Contract Term (years)	Estimated Cost Savings
Atlanta, GA	Water	201.4	20	$400 million (45 percent)
Augusta, GA	Wastewater	46	10	$5 million
Bessemer, AL	DBO Water	24	20	NA
Boston, MA	Wwtr sludge	125 dtpd	15	$95 million
Brockton, MA	Water/Wwtr	24	20	$20 million
Chicago, IL	Wwtr sludge	150 dtpd	20	NA
Cranston, RI	DBO Wastewater	23	25	$35 million
Edmonton, ALB	Wastewater	24	8	Cdn $3.2 million
Evansville, IN	Water	60	10	$8.1 million
Farmington, N.M.	Water/Wwtr	20	8	$4 million
Franklin, OH	BOT Wastewater	4.5	20	23 percent
Franklin, OH	BOT Water	5	20	30 percent
Fulton Co., GA	Wastewater	24	10	$4 million
Hamilton, Ont.	Water/Wwtr	300/5	10	Cdn $12 million
Indianapolis, IN	Wastewater	250	14	$250+ million
Milwaukee, WI	Wastewater	550	10	$145 million (30 percent)
Moncton, N.B.	DBO Water	25	20	Cdn $12 million

U.S. Water Privatization Scorecard—Communities with Long-term Water Partnerships—Continued

Municipality	Description (system type)	Plant size (mgd)	Contract Term (years)	Estimated Cost Savings
New Haven, CT	Wastewater	45	15	$53 million (30 percent)
Newport, RI	Wastewater	10	20	$22 million (24 percent)
Norwalk, CT	Wastewater	20	20	$10 million
Oak Ridge, TN	Utilities		10 + 10	$70 million
Plymouth, MA	DBO Wastewater	3	20	$7.4 million (19.7 percent)
Rahway, NJ	Water	6	20	$32 million
Seattle, WA	DBO Water	120	25	$70 million (40 percent)
Springfield, MA	Wastewater	67	20	10 percent
Stonington, CT	Wastewater	3	20	NA
Tampa, FL	DBO Water	66	15 + 5	$85 million (21 percent)
Tampa, FL	BOT Desal	25	30	50 percent
Taunton, MA	Wastewater	8.3	20	$62 million
Washington Boro, NJ	DBO Wastewater	1.2	15 + 5	$2.2 million (11 percent)
West Haven, CT	Wastewater	12.5	15	$12 million
Wilmington, DE	Wastewater	105	20	$60 million
Woonsocket, RI	DBO Wastewater	16	20	$45 million

Question 2. In your written testimony, you advocate for consolidation where possible before infrastructure investments are made. Can you elaborate on how you believe the Federal Government could best provide incentives for consolidation?

Response. The Federal Government can build on the current framework of the Safe Drinking Water Act and the Drinking Water State Revolving Fund (SRF) to encourage cost-effective consolidation of the water industry. First, the States should be encouraged to use the enforcement, variance, and exemption.tools under the Act to encourage noncompliant systems to consolidate with another water system. Second, the States should be encouraged to fully incorporate restructuring and consolidation in their programs for ensuring that new systems have adequate technical, financial, and managerial capacity and for developing the capacity of existing water systems. The Federal and State capacity development programs can provide guidance and technical assistance for consolidation as part of the capacity development effort. Third, the States should be encouraged to provide State-level incentives for restructuring from the various regulatory agencies involved in drinking water. Fourth, projects that involve consolidation of systems (for example, pipelines for physical interconnection or improvements to prepare a system for acquisition) should be given priority in Federal funding programs, particularly the SRF. Finally, tax and other broad incentives for newly consolidated systems should be considered. For example, tax incentives might be provided to investor-owned water systems that assume responsibility for a troubled small water system.

Finally, it is worth noting that unless Federal assistance programs are carefully constructed incorporating the suggestions made above, consolidations may actually be discouraged. Without careful planning, Federal assistance could be used unproductively to prop up failing systems that otherwise would be ripe for consolidation.

Responses From Peter L. Cook to Additional Questions from Senator Graham

Question 1. In your written testimony, you discuss the advertised "gap" between infrastructure needs and available funding. You indicate that this gap is based on a scenario where utilities do nothing to fill this gap, and list a series of actions including innovative rate structures, reducing cost through increased technologies, and others that could be taken. Can you give me your best example or case study of a utility where some of these actions have been taken and the gap has been reduced?

Response. The so-called "gap" between funding needs and funding levels is based on a static, aggregate analysis that includes assumptions that may not be well supported at the system level, as this question rightly recognizes. Several water utilities, private and public, are successfully meeting the infrastructure challenge by keeping pace with investment needs. Costs can be lowered through better planning, improved efficiency in water production and consumption, and the use of innovative technologies on both the capital and operating sides. For many water systems, the actual cost of service—even when accounting for substantial investment needs—can

be recovered through rates charged to water customers. Cost-based rates have the distinct advantage of sending appropriate price signals to customers and encouraging efficient water use. Cost impacts can be managed through innovative rate structures that mitigate adverse effects in terms of equity and affordability.

For the most part, the larger investor-owned water utilities have tried to keep pace with the investment needs of their systems. Indeed, private companies have positive incentives to make prudent capital investments in a timely manner, subject to review by the State public utility commissions. Also, private utilities generally do not have opportunities to subsidize the cost of operations through reduced cost loans, grants, or intergovernmental transfers. Assuming that most companies are investing appropriately to maintain the value of their systems, a funding gap will emerge for private companies only if they do not receive timely recognition of prudent costs from the State public utility commissions. The many systems owned and operated by the American Water Works Company provide numerous examples of how investor-owned water companies are meeting the water infrastructure challenge.

The Philadelphia Suburban Water System provides another excellent example of a water company that is keeping pace with investment needs and deploying financing and rate mechanisms (the Distribution System Improve Charge) to ensure that costs are recovered.

The evidence that many municipal water utilities are also successfully meeting the infrastructure funding challenge undermines the case for massive subsidization of the water. The Louisville Water System, a wholly-owned municipal corporation, is a case in point. Many other publicly-owned water systems, however, are reluctant to both make the necessary investment in their systems or raise rates accordingly.

We would be pleased to arrange for executives from these companies to come to Washington to discuss these issues at your convenience.

Question 2. Can you describe the process that utilities use to incorporate capital replacement costs into their rate structure? Do public utilities use this same procedure?

Publicly- and privately-owned water utilities differ in that the former tend to follow the "cash needs" basis for determining revenue requirements (what they must recover through rates), while the latter follow the "utility basis," summarized as follows:

	Method of Recovery	
	Cash Needs Approach	Utility Basis
Type of system:		
Capital-related costs	Many publicly-owned systems	Most privately-owned systems
Component of total revenue requirements:		
Capital-related costs	Capital expenditures (major and recurring).	Depreciation
	Debt service on bonds	Return on assets (debt and equity)
Taxes	Payment in lieu of taxes	Taxes
Operation and maintenance	Same	Same

The key difference between these methods is in the recovery of capital costs. A publicly-owned system following the cash-needs approach will use a "pay-as-you-go" method for some capital improvements, and use bonds for long-term financing. Pay-as-you go (advocated by some) can lower total costs, but tends to add to revenue and rate instability. A major drawback is that it can create an intergenerational inequity by forcing today's customers to bear a disproportionate burden for financing facilities that will benefit future generations of customers (an intergenerational subsidy). Financing large capital projects using debt instruments over a reasonable period of time helps address this concern.

An investor-owned system makes a capital investment and seeks recovery both of that investment (depreciation) and on that investment (overall return). The overall return is used to pay for debt service and for equity (the return to shareholders). The private company will use a combination of debt and equity to pay for improvements.

Depreciation simply repays investors for "using" up the value of an asset. Narrowly, it does not obligate further investment in the system. (Other aspects of the

regulatory compact require the regulated utility to meet service obligations.) In practice, for most private utilities, the depreciation expense and an associated reserve account provides an important source of cash-flow for reinvestment. Some publicly-owned systems also follow the utility basis for ratemaking and charge a depreciation expense. Under the new Government Accounting Standards Rule 34 (GASB), more municipalities may be contemplating their depreciation and reinvestment practices.

The impact of rising costs on rates depends on several factors, making it hard to generalize. The impact is mitigated if (1) the system has been properly investing in and maintaining its system, (2) costs have been consistently reflected in rates, (3) measures are taken to lower costs as much as practical, (4) financing tools are properly used to spread costs over time and recover costs from customers benefiting from the associated investment, and (5) rate structures are designed to minimize deleterious effects.

The perceived water infrastructure funding gap that has received so much attention recently is at least in part a function of assumptions about rates and affordability that may not be reasonable.

Question 3. In your discussion of increasing the existing volume caps of Private Activity Bonds, you indicate that preliminary modeling indicates that this change would, "cost the government very little, yet leverage huge sums of private capital." Can you give the Subcommittee some more specific numbers here?

Response. Recently the U.S. Conference of Mayors, as part of their project to remove water out from under the PAB volume caps, had some tax modeling done on this very question. They found that removing water and wastewater out from under the cap will cost the Federal Government a mere $566 million over 10 years, yet bring about as much as $20 billion or more in increased investment in water infrastructure nationwide.

It makes far more sense for the Federal Government to "spend" one half a billion dollars and thus leverage $20 billion in investment than simply grant the billions to utilities with all of the related inequities and inefficiencies of a massive grant program.

STATEMENT OF HAROLD J. GORMAN, BOARD MEMBER, ASSOCIATION OF METROPOLITAN WATER AGENCIES AND EXECUTIVE DIRECTOR, SEWERAGE AND WATER BOARD OF NEW ORLEANS

Good morning, Chairman Graham, Sen. Crapo and members of the subcommittee. On behalf of the Nation's largest municipal, county and regional drinking water agencies, serving at least half of all the United States, thank you for hosting this important hearing. My name is Harold Gorman, and I'm the executive director of the Sewerage and Water Board of New Orleans and a board member of the Association of Metropolitan Water Agencies, or AMWA, on whose behalf I am testifying today. AMWA is one of the 40 national organizations representing water systems, local elected officials, labor, environmental advocates, and engineering and construction companies that comprise the Water Infrastructure Network.

I would like to take a moment to thank Chairman Graham, Sen. Crapo, Sen. Jeffords and Sen. Smith, who have been instrumental in helping to protect drinking water systems and their customers from terrorist attacks. We especially appreciate your signing a letter on October 11 to urge President Bush to provide the estimated $155 million needed to help drinking water agencies conduct vulnerability assessments and develop emergency response plans as soon as possible. This is the first step in protecting drinking water and the facilities that produce and distribute it.

The drinking water industry also wishes to thank the nine members of the committee and subcommittee who have advocated $5 billion in grants for water and wastewater systems as part of the economic stimulus package. Based a brief survey, the water industry estimates this amount and more could be absorbed in the economy next year alone and create 200,000 jobs. Rather than for new facilities, the grants would be used to expand existing projects, such as pipe replacement and plant rehabilitation, and possibly even projects to help protect against or respond to terrorist attacks. We hope this new, temporary measure will recognize that some cities, such as New Orleans, would have a difficult time coming up with large matches in order to qualify for the grants, depending on the size of the grants offered.

We look forward to working with you to protect consumers and get the economy moving again.

New Orleans is one of our country's older cities, founded in 1718 as a French colony. It has a few other distinctions that set it apart from other cities. It is almost

totally surrounded by water; it's protected by over 300 miles of levees and floodwalls and its midtown elevation is six feet below sea level. Our only source of water is the muddy Mississippi River. It is an abundant source but we face the greatest water purification challenge of any city in the world. Our watershed consists of 32 States and three Canadian provinces that are located between the Appalachians and Rocky Mountains.

The current water system in New Orleans dates back to 1899 when a women's suffrage group successfully petitioned the State legislature to create the Sewerage and Water Board of New Orleans. Today we provide water, sewerage and, most importantly, drainage services to a half-million consumers, plus the hundreds of thousands more who commute to the city for work and who come to the city as tourists. We also operate our own electric power plant to provide us the reliability needed to weather floods, rainstorms and hurricanes, which constantly threaten the city.

The Sewerage and Water Board, like many other water utilities throughout the Nation, is structured as a freestanding business. The Board operates three separate businesses—water, sewer and drainage. There are no general government subsides and there is no co-mingling of funds allowed among the three systems. Each system must pay its own way. The Board charges user fees for water delivered and sewerage collected through its metered system. Drainage is funded by dedicated millages. The City Council of New Orleans determines the rate structure.

All operations, maintenance and capital funding must be provided through our dedicated revenues. Capital projects are funded by a combination of cash generated from earnings and through revenue bonds, which are sold in the open market based upon our historic and projected revenue stream. We have very conservative debt coverage ratios to protect bondholders, and we are very prudent in managing our funds. All financial reports follow the guidelines established by the Government Accounting Standards Board (GASB). Our annual financial audit is submitted and approved by the Louisiana State Legislature Auditor. Success in meeting our financial responsibilities has been recognized by the Government Finance Officers Association (GFOA), which has honored the Sewerage and Water Board with an award for outstanding financial reporting for the past 15 years.

As we look forward, we project massive programs of infrastructure replacement. The current book value of our assets is just over $1 billion, and the Board has adopted a 5-year capital improvement program worth $1.2 billion, doubling our asset base. Almost half of this program is dedicated to complying with a court ordered EPA sewer system consent decree, which the Board entered in 1998. Our projected program cost will probably increase substantially, going forward, as we obtain better survey and evaluation data. And in spite of trends in outsourcing and privatization and new heights of reengineering and efficiency, the savings generated will not resolve the infrastructure funding crisis facing New Orleans and other American cities.

To meet the needs of our capital infrastructure program without Federal grants, the Board would have to raise drinking water rates over the next 5 years by nearly 50 percent and sewer rates by 90 percent. This type of increase threatens the economic stability of our consumers and the city. Just as the members of this committee want to avoid raising taxes, the New Orleans City Council hopes to avoid increasing water rates. Our typical residential customer currently pays about $30 per month for sewer and water services, which is near the national average. The projected rate increases will push those rates to almost $50 per month, amounting to nearly $600 per year. That may not sound like a lot of money in some communities, but in New Orleans it's a substantial sum. In fact, it's double the average expenditure for water services, according to the Bureau of Labor Statistics. New Orleans is one of the poorest cities in the Nation. Our customers' utility bills now exceed the EPA recommended ratio of utility cost/household income. According to the 2000 Census, 28 percent of the city's residents live below the national poverty level. This is second only to New York City's Bronx Borough, with 30 percent of its residents below the national poverty level. Rate increases of 50–90 percent will only push working families in New Orleans into a deeper financial hole.

Other cities have similar numbers. Miami-Dade: 21 percent of residents below the poverty level and facing an infrastructure bill of $5 billion. Los Angeles: 20 percent, with more than $2 billion needed for infrastructure. Washington, DC.: 19 percent in poverty, facing over $1 billion in wastewater and stormwater improvements; Detroit: 18 percent in poverty and needing $2.6 billion in the next 5 years for infrastructure improvement.

The Drinking Water State Revolving Fund (SRF), established by the 1996 amendments to the Safe Drinking Water Act, was not created to address infrastructure repair, replacement and refurbishment. It is not an infrastructure rehabilitation and replacement fund. Instead it is a fund predominantly focused on solving small sys-

tem compliance problems. EPA, through guidance, and the States, through project prioritization, have adhered to the requirements of the statute by giving a higher priority to those systems that have violated the Safe Drinking Water Act and communities threatened with acute health threats. Much of the estimated annual $11 billion gap between current spending and overall need involves pipe replacement. In many cases, such projects would not qualify for the SRF. When a 100-year-old water pipe bursts in downtown New Orleans, there is no violation of the Safe Drinking Water Act and usually no public health threat. It's just another pipe that needs to be replaced. Unfortunately, there are thousands of miles of these old pipes throughout our Nation's cities.

The Safe Drinking Water Act requires States to use a minimum of 15 percent of its SRF for small systems serving fewer than 10,000 people, and States may reserve as much as 30 percent for disadvantaged communities—again primarily directed at smaller systems. An additional 2 percent of the funds allotted to the States may be used to provide technical assistance to public water systems serving 10,000 people or fewer. Add to that an additional 10 percent for a number of programs including development and implementation of a capacity development strategy and operator certification program. Both of these support small system sustainability.

Many States actively discourage large systems from participating in the SRF program. Some State formulas that determine affordability deduct points from systems with very large service populations. Other State formulas only consider household income and the water bill, ignoring the higher cost of living in large cities. Needless to say, the current funding level of the SRF program is in itself a discouragement to participation. Most large city infrastructure needs are many times larger than the entire State allocation.

What is needed 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 5-year period for both drinking water and wastewater infrastructure. This amount is only half of the infrastructure funding gap for those years. The gap is the difference between what drinking water and wastewater systems have historically spent from their own budgets and the overall need. This investment program should include a strong grants component, with matches ranging from 75 percent for the most hard-pressed systems to 55 percent, to help systems that are disadvantaged, yet have the capacity to return to self-sustainability. The only current alternative to funding the $1.2 billion needed by the Sewerage and Water Board is to borrow on the open market. But even no-interest loans would require unaffordable rate increases for 28 percent of the residents living below the poverty level. This program should also include ample opportunity for large systems to participate in innovative programs such as principal forgiveness loans, credit guarantees and insurance, and refinancing of high-interest debt obtained on the open market.

Another proposal to resolve the gap is privatization, ranging from a full asset sale to contracting out a single treatment facility. It is often seen as a panacea for resolving infrastructure funding gaps. But consumers objected strongly to the concept of losing control of their water resources. Indeed, a number of cities have sought to buy back their utilities. Indianapolis, for instance, expects to complete its repurchase sometime next year. The more recent trend has been to outsource various services. At the New Orleans Water and Sewerage Board, we have outsourced almost 40 percent of our business.

Most of privately-owned water systems in the U.S. are very small utilities, such as neighborhood associations or mobile home parks. But the U.S. privatization scene is dominated by a handful of foreign-owned firms. The largest is the French multinational Vivendi, which owns contract operator U.S. Filter, among many other businesses, including entertainment. One of its rivals is another French multinational, Suez. Its American subsidiary is United Water. And the Nation's largest investor-owned drinking water provider is the American Water Works Company, which just entered into an agreement to be purchased by the German utility conglomerate, RWE. The international engineering and construction firm CH2M Hill owns a major provider of contract services, OMI, or Operations Management International. Two British firms are involved in privatization, too. The most active is Thames Water, a British firm owned by RWE. The other is the Kelda Group, which operates in five U.S. States. There are a few relatively small American companies that have contract operations mainly on the West Coast.

Though there have been some interesting events surrounding privatization, especially in New Orleans, there does not appear to be either a strong or weak record of success related to privatization. But one of the differences between public and private operation is that State utility commission regulations provide for investor-

owned utilities to ensure a profitable rate-of-return. Municipal, county and regional water systems, of course, are public services that do not seek to earn a profit. Instead, revenues are reinvested into the utilities.

Whether a publicly-owned water system privatizes should always be a decision for those who are accountable to the voters: local elected officials. The Sewerage and Water Board offers a good example. We are now undergoing a managed competition process, which could potentially outsource our entire water and sewerage system. The managed competition, a variant of privatization, involves a potential 20-year operations and maintenance procurement worth $1 billion. Under the competition, the Board's employees will bid alongside private firms to operate the system.

If a city is considering privatization, this is probably the most equitable approach. It offers public employees the opportunity to show they can operate a utility just as efficiently as a private firm. In cities large and small, managers and employees are very proud of their ability to compete against their peers, public or private. To recognize their efforts, the Association of Metropolitan Water Agencies inaugurated early this year an award program honoring competitiveness achievement. Among the 44 winners this year are the water agencies serving Tampa and Broward, Palm Beach and Orange Counties in Florida; Kansas City, Missouri; Las Vegas; and Akron, Columbus and Cincinnati. These cities have reengineered, reorganized, reduced staff and installed state-of-the-art technology to save millions of dollars and still satisfy customer expectations and EPA regulations. Another competitiveness tool employed by water systems is asset management. Asset management techniques can help water utilities in planning and budgeting for maintaining existing infrastructure while meeting future needs for growth and regulatory requirements, making decisions on rehabilitation or replacement, providing justification for funds for capital renewal, and integrating information systems such as geographic information systems (GIS), maintenance management systems, and financial recording and reporting systems.

The achievements of the New Orleans Sewerage and Water Board are no less. The Board has become more competitive, leaner and more efficient by reducing staffing levels by 25 percent in the past 3 years and adopting new technologies, such as slip lining of pipes, global positioning satellite (GPS) surveying and GIS tracking to manage maintenance and customer service calls, and Supervisory Control and Data Acquisition, or SCADA, to remotely monitor and operate plants and pumps. And reengineering the Board's field operations has improved productivity by 30 percent.

The most innovative ways to stretch local and Federal dollars would be to "incentivize" voluntary regional partnerships among water systems, a concept that offers much promise for improving and enhancing water systems across the country. We have fine water service providers throughout the Nation, and each one does its best to provide the highest levels of service to their customers. But it is also true that there are a wide variety of capabilities among the systems. Many water providers face constraints in many different areas, including financial, technical, operational and managerial limits unique to each provider. For example, financial constraints force some systems to minimize expenditures for needed work. This can contribute to long-term declines in service and even weaker public health protection. Non-compliant systems increase the regulatory burden on Federal and State agencies to ensure that public health standards are met.

The inherent potential in voluntary partnerships is why a few water utilities have begun to work cooperatively with others in their areas to gain access to, or share with others, the capabilities needed. A partnership could include physical infrastructure connection among utilities of various sizes near each other. Or it could involve a financial, managerial or technical support connection among utilities regardless of distance from one another. Or it could involve a combination of both. For example, the Contra Costa Water District, which serves 450,000 people in the area around Concord, California, is working with four other local water entities in a variety of partnerships, ranging from simply providing less costly water supplies to cooperation in obtaining new supplies and developing needed infrastructure. One partnership being developed will save more than $10,000,000 for local agencies involved. Another successful partnership, involving three agencies, provided an alternative water supply at a cost that will save the local agencies as much as $13,000,000. In a third instance 10 water and sanitation agencies came together to conduct a water supply and infrastructure study that focused on the region, rather than the boundaries of each agency, thereby providing a more beneficial plan for the region as a whole.

We believe that an incentive-based program to encourage voluntary partnerships among water utilities could benefit all parties and, most important of all, could provide excellent benefit to the customers of those systems. Everyone could benefit from partnerships between water systems with substantial technical, managerial and fi-

nancial resources, known as capacity, and those without. The receiving entities would gain needed capacity more efficiently and cost-effectively than if they had to obtain it on their own, and the providing entity would recover all of its costs.

Partnership authorization should provide maximum flexibility, so that local providers can find the best solution for their own unique needs. Potential forms of partnerships include: operating agreements, engineering and construction contracts, long-term contracts, consolidation, asset transfers, or even formation of new entities, such as the Central Arkansas Regional Water Authority, formed out of the water systems of Little Rock, North Little Rock and other smaller systems. The key point is that Congress should encourage partnerships and provide local agencies with maximum flexibility to establish the structure of that partnership to meet local conditions, within the overall goals of the Safe Drinking Water Act.

Congress can encourage these partnerships by offering loans, grants, loan subsidies, refinancing and credit guarantees with more favorable conditions to partnerships. Assistance with basic conditions would still be available to systems that do not seek partnerships. Only where systems do not seek to improve their compliance records or managerial, technical and financial capacities could States or the EPA compel them to enter partnership, where available.

Another possibility for helping to stretch available dollars is research into more efficient and effective means of infrastructure improvement and repair. With the American Water Works Association, we recommend Congress consider identifying a very small portion of water infrastructure funds for such research, matched by drinking water and wastewater systems on a one-to-one basis, and managed by a consortium of water research organizations to fund development of a comprehensive infrastructure research plan and to provide funding for critical infrastructure research projects. It would be a worthy investment, as research into infrastructure management will make for more efficient use of Federal money in the long term as well as better protection of public health.

In some ways the challenge we face today is not much different than that faced by our predecessors 100 years ago when these systems were first being built. We must replace and upgrade the massive systems built by our predecessors but it must be done without disrupting the normal social and business activities of our cities and without causing financial disruption or ruin. Funding of the major urban water systems in 1900 was accomplished almost exclusively with local dollars. The replacement of these systems today cannot be funded exclusively with local funds. In the 1900's most taxation was local in nature. There was no Federal income tax. Funding of water infrastructure today must reflect the tax structure in 2001, not the structure of 1901. The Federal Government must join with the urban centers of this country and help upgrade our water infrastructure. As the U.S. Conference of Mayors President and New Orleans Mayor Marc Morial said earlier this year, testifying before the Senate Subcommittee on Transportation, Infrastructure and Nuclear Safety on behalf of the Mayors, "Local infrastructure needs are no longer simply a local concern. These needs are of national significance, of national economic importance and of substantial cost, exceeding local capital resources."

AMWA believes the recommendations outlined here will help resolve the $11 billion per year drinking water infrastructure gap and keep American infrastructure strong and secure. We look forward to discussing them further with you.

STATEMENT OF PAUL PINAULT, EXECUTIVE DIRECTOR, NARRAGANSETT BAY COMMISSION ON BEHALF OF THE ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES

INTRODUCTION

Good morning Chairman Graham, Senator Crapo and members of the Subcommittee, my name is Paul Pinault. I am Executive Director of the Narragansett Bay Commission ("the Commission") in Providence, Rhode Island and Vice President of the Association of Metropolitan Sewerage Agencies (AMSA). AMSA represents the interests of more than 260 publicly-owned treatment works (POTWs) across the country. AMSA's members treat 18 billion gallons of wastewater every day and provide service to the majority of the United States' sewered population. On behalf of AMSA and the Commission, I thank you for this opportunity to address your Subcommittee.

Adequate financial resources to States, cities, and communities like mine are the most essential element to maintaining our Nation's water and wastewater infrastructure. The Clean Water Act (CWA) amendments of 1987 created a new phase of clean water funding by replacing the Federal Construction Grants Program with the Clean Water State Revolving Fund Loan Programs (SRF). Since 1980, according

to studies by both the U.S. Environmental Protection Agency (EPA) and the private sector, Federal contributions have declined by 75 percent in real terms and today represent only about 10 percent of total capital outlays for water and wastewater infrastructure and less than 5 percent of total water and wastewater outlays. Local governments currently assume more than 90 percent of water infrastructure construction costs in the form of expensive bond issuances—municipal debt—and increased water and sewer bills.

This hearing addresses what wastewater utilities, and State and local governments are doing to maximize limited Federal funding for water and wastewater infrastructure improvements and what role the Federal Government should play in ensuring the Nation's infrastructure. I assure you that wastewater utilities must be, and are being, extremely innovative in order to get the most out of the limited dollars available. This testimony will address both what the Commission is doing, what AMSA and wastewater utilities are doing nationwide, and what the Federal Government can do to ensure that funding levels are sufficient to meet infrastructure needs.

THE NARRAGANSETT BAY COMMISSION'S EXPERIENCE

The Narragansett Bay Commission has had a positive experience with its State loan program and has made significant use of the monies Congress has appropriated to the SRF. The Commission owns the two largest wastewater treatment facilities in Rhode Island. Field's Point was originally built in 1901, and Bucklin Point in 1952. The Commission assumed ownership and operations of both facilities by order of the Rhode Island General Assembly in 1982 and 1992 respectively.

The Commission has borrowed approximately $72.3 million from the SRF since the Commission's inception in 1980, enabling us to fund a significant portion of our sewer system projects. The Commission is the largest borrower from the Rhode Island Clean Water Finance Agency, which administers the SRF. Field's Point required over $100 million in upgrades, a majority of which was funded by statewide general obligation bonds.

In 1986, the Commission's debt service as a percentage of total operating budget was 19 percent; in 2002, it will be 22 percent, and in 2006, it is projected to be 54 percent as a result of $350 million in planned capital projects over the next 5 years, including construction startup costs on the first phase of our three-phase federally mandated combined sewer overflow (CSO) project. Phase I is estimated at $250 million and the total project budgeted at $550 million over next 20 years. While it is daunting to think that 54 cents of every dollar the Commission receives will go for debt service rather than operations, without the SRF, that number would be much higher.

The Commission has used the SRF to partially fund projects including septage receiving facilities, pump station rehabilitation and repairs, facilities planning, and solids handling facilities. Future projects that will require Federal funds include a $60 million upgrade at the Bucklin Point Wastewater Treatment Facility to improve capability for nutrient removal/reduction and the $250 million Phase I for CSO controls.

I should fully clarify that these capital funding needs are driven by the dual forces of aging infrastructure and increasingly stringent environmental regulations, not operational costs. The Commission and its fellow AMSA members around the country have a 6-year documented record of reducing operational costs. However, no amount of operational streamlining or belt-tightening can offset the cost of replacing critical clean water infrastructure.

As we plan for the future, we believe that the Rhode Island Clean Water Finance Agency will need more money and a greater array of financing mechanisms to meet the Commission's needs, as well as the needs of the other 17 wastewater treatment facilities in the State—the three largest of which face very expensive nutrient removal projects—and the State's drinking water projects. If the SRF is underfunded and unreformed, the Commission will be forced to borrow at daunting market rates to accomplish these important projects.

An important part of the funding equation is the cost that users pay for services. I want to stress to the Committee that The Commission's ratepayers have been paying their fair share of the cost of the services provided. However, it is becoming increasingly clear that our ratepayers cannot sustain additional, substantial rate increases. Twenty-two percent of households in the Commission service area fall under the Federal poverty line; 15 percent of the Commission's service area population are over 65 years of age and, most likely, on a fixed income; and 65 percent of children at or below the poverty line in Rhode Island live our service area.

In January of this year, the Commission raised its rates by 25 percent. This rate increase was driven primarily by the Commission's need to increase its debt capacity to pay for the CSO project. We will have to apply to the Rhode Island Public Utilities Commission again shortly for additional rate increases to meet growing debt capacity needs. For our demographic group, these increases represent substantial financial hardship-well in excess of the 2 percent median household income affordability levels set by the U.S. Environmental Protection Agency (EPA).

I want to reiterate that the Narragansett Bay Commission has been fortunate in that it has been able to access Rhode Island's State loan fund to help us finance our water infrastructure needs. Unfortunately, impediments such as cumbersome program administration requirements and limited leveraging of State monies to maximize the capacity of the program have prevented many wastewater utilities from having similar experiences. It is clear that based on current and future infrastructure needs, the SRF program is not—and will not be—adequate to ensure continued compliance with our Nation's water quality goals.

THE NATIONAL PERSPECTIVE

Again, municipal debt comprises 90 percent of water infrastructure construction costs, which includes compliance with Federal regulations. Debt management offers a case-in-point of the innovations that wastewater treatment plants employ, as public officials rise to meet the funding challenge. To make municipal bonds as effective a source for generating income as possible, municipalities are increasingly involved in "pooled borrowing." Pooled borrowing is a bond issuance mechanism in which several municipalities join together and, instead of issuing bonds individually, issue a single bond. By doing so, these municipalities can ensure both a slightly better interest rate and, more importantly, a significant reduction in issuing costs. These activities can result in both short-term and long-term savings.

Additionally, many local utilities structure and restructure their debt to achieve low cost, low risk debt and to minimize debt service costs over the long-term. This often involves a delicate balancing act between reducing an agency's debt reduction in the near term for somewhat increased debt service costs in the future. This must be done while ensuring that ratepayers' costs remain stable and the environment fully protected. Some local governments have moved to longer term—30 and 40 year—debt plans that help reduce annual payments.

Public Agency Management Innovations: Minimize Costs/Maximize Performance

Utility managers over the past decade have become better business operators. Publicly-owned wastewater treatment plant operators have worked diligently to be more competitive to meet the demands of the ratepayer, protect the public's investment, and meet the Nation's water quality goals. Environmental management systems (EMSs) and asset management are becoming essential tools nationwide.

EMSs and more narrowly-targeted management programs, like asset management, can and should be implemented in a complementary fashion. EMSs can provide the overall framework for implementing these other management programs. AMSA, in cooperation with EPA and the Water Environment Federation, is currently engaged in a joint project to develop comprehensive EMS guidance for wastewater utilities that will provide a key tool to ensure a more integrated, cost-effective management approach for wastewater utilities in the near future. Such a system gives a utility the tools to identify and more efficiently manage its capital assets, address a full range of environmental impacts, focus on improving environmental performance beyond the levels required by regulations, and do so through an open and transparent process that addresses the needs of communities, regulators and other stakeholders.

At the same time, AMSA is collaborating with EPA on developing a nationwide asset management program for wastewater utilities, scheduled for implementation in early 2002. Historically, capital investments in the form of water and wastewater infrastructure have been placed into service and considered candidates for rehabilitation and replacement only when the system faces critical levels of age or deterioration. Current physical, economic, social, financial, and institutional factors have rendered such an approach no longer viable. AMSA's view is that public utilities must be able to plan and optimize the maintenance and replacement cost cycles for their infrastructure assets in order to minimize costs and maximize performance.

An added incentive for this shift to a more measured planning approach can be found in the June 1999 changes to financial accounting and reporting standards issued by the Governmental Accounting Standards Board for State and Local Governments (known as GASB 34). These sweeping changes require governments to report depreciation of assets or to implement an asset management system. Under the standards, any asset management system utilized by a government must result in

an up-to-date inventory of infrastructure assets, the undertaking of condition assessments of assets, the development of annual estimates of the funds necessary to maintain the assets and documentation that assets are being maintained.

The goal of the accounting requirements of the GASB is to add value to decision-makers nationwide. Advances in geographic information systems, combined with effective relational data base management, improved data collection technologies and increased analytic computer capacity provide a unique and challenging opportunity to improve management decisions and reduce cost.

Improved asset management practices and programs at public wastewater utilities protect the public's investment in a vital local service. Sound management practices enable communities to control and potentially reduce the costs of assets required to meet service objectives. Some estimates suggest that the potential exists for a 20 percent savings when the current capital investment approach is abandoned and an asset management approach is implemented.

Local utility management teams currently explore new ways to stretch available funding including environmental management systems, asset management, bond issuances and debt management, and are stretching their dollars to the greatest extent possible. Publicly-owned wastewater treatment plants have a distinct mission for which innovation must be complimented by critical changes to the State Revolving Fund (SRF) as well as increased Federal funding.

There is ample precedent for, and clear economic principal for supporting, a strong Federal role in funding water infrastructure. Despite increasing Federal mandates for cleaner water, shifts in population that strand wastewater plants in urban core cities with few ways to pay for needed improvements, and the nearly universal need to replace billions of dollars in aging and failing water distribution and wastewater collection systems, current Federal funding policies and mechanisms to meet the country's water infrastructure needs are woefully inadequate. As is true of America's highway and airport infrastructure, there is a compelling need and rationale for a long-term, sustainable, and reliable source of Federal funding for clean and safe water.

EVOLVE THE SRF INTO A COMPREHENSIVE FINANCING PROGRAM

Every day, the agencies that comprise AMSA ensure that waste is removed from millions of American businesses and households and that the environment is clean and safe. For decades, AMSA has been a partner with Federal, State and local stakeholders to make environmental progress through the improvement of municipal wastewater services. The importance of wastewater infrastructure was well understood in the late 1960's as the Nation watched the quality of its waters decline precipitously and chose, in the 1972 Clean Water Act, to spend Federal tax dollars to reverse this trend. A large number of publicly-owned treatment works (POTWs) have built their secondary and advanced treatment capabilities as a result of the EPA's Construction Grants Program. According to EPA's 2000 report entitled Progress in Water Quality, a total of $61.1 billion ($96.5 billion as constant 1995 dollars) was distributed to municipalities through construction grants from 1970 to 1995. State SRFs have received about $16 billion for the 11-year period between 1988 and 1999. The wastewater treatment infrastructure funded with this grant and loan money is coming to the end of its useful life. And the SRF, as currently structured and funded, is becoming an out-dated financing mechanism.

As the broad national benefits of improved water services accrue, the number of people served by POTWs is rising, regulatory mandates are skyrocketing, ratepayers' bills are continually increasing, and infrastructure is aging. During this same time, available funding options have been narrowed—to loans only—while program eligibilities have been greatly expanded. Local communities need a full range of funding options from an improved EPA water infrastructure financing program. The current State revolving fund program needs to modernized. As we increasingly approach our water quality challenges on a watershed basis, our financing mechanisms must be consolidated, streamlined and updated to accommodate the most effective and efficient approaches to funding environmental protection.

Some public wastewater treatment agencies, like the Narragansett Bay Commission, have been able to take advantage of the funds to help offset the tremendous costs of upgrading, rehabilitating and replacing their wastewater treatment facilities. Other communities, however, simply cannot afford to pay back a loan. These communities should be afforded a full range of funding options—including grants—to meet their infrastructure needs. AMSA member agencies report different levels of success in dealing with their State-run loan programs.

THE NEEDS ARE GREATER THAN THE SRF

The needs of hundreds of communities across the Nation are not being met by EPA's current wastewater loan program. We face financial challenges in the water infrastructure sector today that far exceed historical investment patterns. In addition, communities must plan to reach multiple environmental programmatic goals simultaneously. We're upgrading and replacing our plants, controlling sewer overflows, protecting wetlands, managing coastal areas, controlling stormwater, upgrading and replacing pipe, dealing with nonpoint sources and taking on the challenges represented by a whole host of other water quality duties. With the limited amount of funds available, we must make certain that our dollars are spent in the most efficient and effective manner possible. In short, Congress must modernize the SRF.

AMSA supports the recommendation contained in the recent WINow report by the Water Infrastructure Network that calls for the next generation of the SRF—State water and wastewater infrastructure financing institutions. In order to effectively manage all of the water quality programs and challenges previously mentioned, communities should not have to deal with more than one SRF. As you are aware, this is not a new idea. Already, 30 States have combined their wastewater and drinking water SRFs. By creating one centralized financing program, States can eliminate duplication, streamline government, save money, and gain other efficiencies. By taking this common-sense approach, States will have more money to help fund their communities' needs. The expanded SRFs should have all the necessary financial tools needed by local governments to efficiently and effectively meet their needs. Federal EPA funds should be administered through flexible statewide water and wastewater financing institutions that would use appropriate combinations of grants, loans, loan subsidies and other types of financial assistance instruments.

The evolution to a more modern EPA water infrastructure financing program would also create an opportunity for Federal and State government officials to streamline their funding programs. Areas of focus should include Federal and/or State paperwork requirements associated with Federal funding assistance, simplification of the application processes, reduction of oversight and reporting requirements where they no longer serve the Federal or State interests, and flexibility in meeting requirements that do serve Federal and State interests.

AMSA's agencies know that change does not come easily, nor is it without some cost. For years, publicly-owned treatment works have been changing the way they do business. By becoming more competitive, we have cut costs and become more effective and more efficient. As States take the next step in streamlining their operations, AMSA supports additional funding for the States to combine and modernize their water infrastructure financing programs.

SOLVING THE PROBLEM THROUGH A FISCAL PARTNERSHIP

EPA's clean water SRF cannot satisfy our current financial and regulatory needs. Both our systems and our watersheds are at a critical juncture in their life cycles. A combination of reduced Federal spending and increased Federal mandates to meet treatment requirements is taking its toll. The collective aging of our pipes and systems further compounds our ability to meet the objectives of the Clean Water Act. Any additional deferral of the needed investments to repair and renew our systems will lead to greater increases in the costs associated with providing clean and safe water services, threats to public health, and environmental degradation.

The challenge of closing the water infrastructure financing gap can be met, but not without a substantial and concerted effort by the Federal Government to join with States, local communities and consumers in a fiscal partnership. To bridge the investment gap, the Federal Government should meet localities halfway by authorizing an average of $11.5 billion per year in capitalization funds over the next 5 years. States would receive the funds and, in turn, offer grants and loans to local agencies. AMSA further supports the following recommendations in the WINow report to reform this country's water and wastewater infrastructure financing program:

- Create a long-term, sustainable, and reliable source of Federal funding for clean and safe water;
- Authorize capitalization of the next generation of State financing authorities to distribute funds in fiscally responsible and flexible ways, including grants, loans, loan subsidies, and credit assistance;
- Focus on critical "core" water and wastewater infrastructure needs and nonpoint source pollution;

• Streamline Federal administration of the funding program and encourage continuous improvement in program administration at both the Federal and State levels;

• Adequately finance strong State programs to implement the Clean Water Act and the Safe Drinking Water Act;

• Establish a new program for clean and safe water technology and management innovation to reduce infrastructure costs, prolong the life of America's water and wastewater assets, and improve the productivity of utility enterprises; and

• Provide expanded, targeted technical assistance to communities most in need.

AMSA and other stakeholders recognize that no single solution addresses the full range of water and wastewater infrastructure funding needs. All levels of government and the private sector must share responsibility for effective, efficient, and fair solutions.

CONCLUSION

Significant progress has been made in financing the clean up of our Nation's waters over the past 30 years through the Construction Grants Program and the SRF. However, much remains to be done. The fundamental challenge for Congress today is to fund a comprehensive financing program for the 21st century that will allow State and local governments to meet their water and wastewater infrastructure needs without putting unnecessary stresses onto the Nation's ratepayers.

The critical role of our Nation's water infrastructure has become clearer as a consequence of the tragic events of September 11. Obviously, dollars will have to be stretched even further now not only to ensure that utilities are protected from internal threats such as aging pipes, but also from external threats. AMSA has played a leading role in organizing a Wastewater Infrastructure Security Task Force and AMSA members have already earmarked significant funds toward efforts to ensure that these security challenges are met.

AMSA and the 40 organizations in the Water Infrastructure Network support the inclusion of water infrastructure in an economic stimulus package. We propose that $5 billion in grants should be made available to water and wastewater utilities for construction projects that are ready to go. This would serve both as an immediate job creation program and would also demonstrate a strong commitment to the long-term, sustainable and reliable source of funding of water and wastewater infrastructure upgrades and repair, and the environmental well-being and public health of our Nation.

AMSA, and the Water Infrastructure Network, have supported a 5-year, $57 billion plan for new Congressional authorizations and funding to capitalize State-administered grant and loan programs for water and wastewater infrastructure. AMSA also understands the need to consider other potential long-term options beyond this 5-year period, and looks forward to discussing this further with this Subcommittee and other Members of Congress.

Chairman Graham, Senator Crapo and Members of the Committee, we look forward to working with you to develop the right solutions to fund our national water infrastructure needs. I will be happy to answer any questions.

RESPONSES FROM PAUL PINAULT TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1a. In your written testimony, you discuss improved asset management practices and programs as a means of improving management of capital assets at water utilities.

Is there a federal role in creating incentives for individual utilities to adopt these practices?

Response. The appropriate incentives are already in place for individual utilities to adopt plans that optimize the maintenance and replacement cost cycles for infrastructure assets.

The primary incentive for the ongoing shift to a more measured planning approach can be found in the June 1999 changes to financial accounting and reporting standards issued by the Government Accounting Standards Board for State and local governments (know as GASB 34). These sweeping changes require governments to soon begin reporting depreciation of their assets or to implement an asset management program. Under the standards, any asset management system utilized by a government must result in an up-to-date inventory of infrastructure assets, the undertaking of condition assessments of assets, the development of annual estimates of the funds necessary to maintain the assets and provide documentation that assets are being preserved.

Question 1b. If so, is this something you would recommend Congress address in legislation or is this something EPA should address through training programs and regulations?

Response. Asset management is most effective when developed and implemented at the local level and should not be addressed by Congress in federal legislation. The Association of Metropolitan Sewerage Agencies (AMSA) is committed to bringing an innovative training and education program to the public wastewater and water utility sector in the coming months.

AMSA, in partnership with the Association of Metropolitan Water Agencies, the American Water Works Association and the Water Environment Federation, will conduct a series of dynamic regional asset management workshops in 2002. Managing Public Infrastructure Assets to Minimize Cost and Maximize Performance is designed to assist agency directors and engineers, and planning and financial staff to develop a better understanding of the concepts and benefits of asset management programs. Member anticipation of the workshops has been very high and AMSA expects these sessions to be extremely popular with public utility personnel.

Question 2a. In your testimony, you mention that some communities cannot afford to pay back a loan which limits their ability to receive funds from the SRF.

Do you believe that the tools provided by the SRFs today in terms of low interest or zero interest loans, etc. are inadequate?

Response. The tools provided by today's SRFs should be expanded to include a full range of flexible financing options designed to satisfy the wide variety of needs in America's cities, counties, towns and communities. Federal funding should be administered through flexible statewide water and wastewater financing institutions. These water and wastewater infrastructure financing authorities would have broad latitude to meet needs within their States using appropriate combinations of grants, loans, and other financial assistance instruments. It is AMSA's experience that local governments can attract more loan funds if provided with some grant funds.

Question 2b. What would you recommend in lieu of these options?

Response. AMSA and the Water Infrastructure Network (WIN), recommend that a complete line of modern financing options be made available to localities through State water infrastructure financing institutions. Forms of assistance should include grants, loans and loan subsidies, including interest rate discounts, zero interest rate loans, principal forgiveness and negative interest rate loans. AMSA and WIN strongly recommend loan terms of up to 30 years, provided such terms do not exceed the useful lives of investments.

RESPONSES BY PAUL PINAULT TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. In your testimony, you discuss the use of environmental management systems as a tool used to minimize costs and maximize performance. Are water utilities seeking certification with EMS standards such as ISO 14001 or are water utilities creating their own EMS based on individual needs?

Response. Environmental Management Systems (EMS) can be developed and implemented by wastewater utilities either utility-wide or for individual processes. The National Biosolids Partnership (NBP), a partnership among AMSA, WEF and the EPA, is an excellent example of the EMS program for managing the Nation's biosolids. Now in its third year, the NBP is setting the industry standard for best practices, community involvement and the implementation of environmentally sound management programs. AMSA also is in the early stages of a project that would explore the feasibility of the implementation of utility-wide EMS for the Nation's wastewater utilities.

During the past year, France proposed the creation of an ISO standard for the "standardization of service activities relating to the supply of drinking water and to wastewater and rainwater sewerage." AMSA supported the U.S. (American National Standards Institute—ANSI) position on the proposal which states that the AFNOR proposal does not take into account other similar work underway, is a subject more appropriate for national and local standards, has too broad a scope, and only appears useful for European companies wanting to expand internationally but has little value for the U.S. Since it now appears that work on a new voluntary international standard will proceed, AMSA will help to ensure that it has appropriate representation on the technical committee and will support the work of the ANSI team.

Question 2. In your discussion of evolving the SRF into what you term a "comprehensive financing program", you state in your written testimony that "financing mechanisms must be consolidated, streamlined, and updated to accommodate the most effective and efficient approaches to funding environmental protection." Can

you describe the specific actions you believe need to be taken by Congress to modify the SRF to meet these goals?

Response. Over half of the States have combined the management of their clean water and drinking water State revolving loan funds. AMSA believes that Congress should encourage the remaining States to take similar steps to reduce administrative costs and to create new efficiencies. Combined State financing authorities have proven to be successful and are the next generation of today's State revolving funds. Local governments, including wastewater authorities, are cutting costs and implementing more efficient management in order to become more competitive. AMSA believes that States, too, could become more competitive by consolidating the administration of the SRFs. Joint administration could improve priority-setting and ensure that the most critical needs are addressed first. AMSA also believes that addressing both wastewater and drinking water needs on a watershed basis can ultimately save the taxpayer money.

Question 3. You also recommend the creation of a "long-term, sustainable, and reliable source of federal funding for clean and safe water." Can you describe your idea as to what this source of funds would be and how we can ensure that it is sustainable?

Response. AMSA and WIN have recommended 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. While AMSA does not have specific recommendations on a new funding structure at this time, it believes that the hearings initiated by the Senate EPW Committee will help to further the national dialogue and identify a permanent funding solution to guarantee the health of our critical water infrastructure system.

STATEMENT OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

Mr. Chairman and Members of the Subcommittee:

The American Society of Civil Engineers (ASCE) appreciates the opportunity to present this statement to the Subcommittee on Fisheries, Wildlife, and Water for its consideration during the oversight hearing on innovative financing techniques for wastewater infrastructure improvements.

ASCE was founded in 1852 and is the country's oldest national civil engineering organization.

It represents more than 125,000 civil engineers in private practice, government, industry and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a 501(c)(3) non-profit educational and professional society.

I. INFRASTRUCTURE PROBLEMS

The American people value a strong working public infrastructure. Unfortunately, in many cases what they see are crumbling wastewater and drinking-water facilities and (sometimes) contaminated water supplies.

In March of this year ASCE released its 2001 Report Card for America's Infrastructure. That assessment showed the Nation's infrastructure to be in alarmingly bad shape. The cumulative grade, covering 12 infrastructure categories, including drinking-water and wastewater treatment plants, was a D.

We attribute such a dismal grade to explosive growth in population that is outpacing the rate and impact of current investment and maintenance efforts and to the growing obsolescence of our Nation's aging water infrastructure generally.

ASCE estimates that the United States needs to invest a staggering $1.3 trillion over the next five years just to meet current infrastructure demands. Virtually all federal spending on water systems, highways, and other aspects of the infrastructure is subject to annual congressional appropriations, and these appropriations have not come close to meeting funding needs in recent years.

Infrastructure, by its very nature, is a long-term investment. The current federal budget process is structured for short-term investment. This creates major problems in the planning, design and construction processes for long-term investments.

Generally, we believe that a Federal capital budget could create the mechanism to help reduce the constant conflict between short-term and long-term needs. Without long-term financial assurance, the ability of the Federal, State and local governments to do effective infrastructure investment planning is constrained severely.

ASCE supports the establishment of a Federal multi-year capital budget for all public works infrastructure construction and major rehabilitation, similar to those

used by State and local governments. The capital budget must be separated from non-capital Federal expenditures.

Moreover, ASCE supports the creation of a "Clean Water Trust Fund" that would support clean water, drinking-water and nonpoint-source-related infrastructure projects throughout the country. Congress should reauthorize the Clean Water Act to provide adequate funding based on construction needs and compliance schedules.

We turn now to the matter of innovative financing methods for all infrastructure improvements generally, including wastewater treatment plants and their related facilities.

II. A UNIQUE SOLUTION: H.R. 1564

Representative Dennis Kucinich (D-Ohio) and Representative Steve LaTourette (R-Ohio) have developed what we believe to be a unique funding solution to the Nation's infrastructure crisis. They have proposed legislation that would make money available from the Federal Reserve Board to invest in State and local infrastructure.

Let us describe the Kucinich-LaTourette plan briefly.

The bill, H.R. 1564, Rebuilding America's Infrastructure Act of 2001, would fund capital projects undertaken by State and local governments. It would use existing funds to create a stable, long-term source. This is how it would work:

- The Federal Reserve System holds a large amount of Treasury securities in order to add liquidity to the monetary system. The Kucinich-LaTourette bill would transfer a portion of those securities to a new bank, the Federal Bank for Infrastructure Modernization, the FBIM.
- The FBIM would act as a subsidiary bank, using the transferred funds to issue loans. Since the mortgages would be integrated by the central bank's Federal Open Market Committee (FOMC), the Federal Reserve would be better able to maintain economic stability. More importantly, no congressional appropriations would be necessary.
- The bill would authorize FBIM loans to any State or local government, any Native American tribe, or any regional or multistate organization to fund certain types of capital infrastructure projects dealing with transportation, education, water, or hazardous waste.
- The FBIM would be authorize to offer approximately $50 billion annually in loans over a period of 10 years. Thus, $500 billion would be lent out during the initial authorization of the FBIM.

The Federal Reserve's FOMC would direct the issuance of the loan amounts each year so as to integrate the FBIM's operations with its own. The FOMC would be able to vary the $50 billion dispersal if it decided that the economy needed a boost.

This money would have a greater effect on the economy than a lowering of interest rates, which does no more than create an incentive to invest. Loans from the FBIM would represent actual investments and thus would have a direct effect on the economy. The FOMC would need to maintain some control over these funds so that it could vary the amounts available each year in response to economic conditions.

By providing zero-cost loans to States to fund infrastructure projects, the Kucinich-LaTourette bill would help slash the cost of infrastructure projects in half, making them much more affordable.

States would also be able to make decisions about which projects would be eligible for funding under the bill. At least 20 percent of the total amount of loans would have to be invested in schools.

Loan allocations would also be based on population. Additionally, the loans would have to be paid back in 10 to 30 years, and each loan would bear an administrative fee of 0.25 percent.

All infrastructure projects financed under the new law would first have to be approved by a State certifying officer or, in the case of a regional project, by an officer from each of the States involved before the FBIM could clear a loan. In the case of Native American tribes, the Secretary of the Interior would have to give her approval.

Finally, it should be noted that the funds made available through the FBIM would not be subject to the annual congressional budget and appropriations processes. The money would be paid out directly to the qualified agencies from the Federal Reserve, thereby having no consequences for federal budget surpluses or deficits.

Mr. Chairman, that concludes our statement. Thank you again for your courtesy in hearing our proposals. If the Committee has any questions, please contact Michael Charles of our Washington Office at (202) 789–2200.

STATEMENT OF CLEAN WATER ACTION, NATIONAL CITIZENS' ENVIRONMENTAL ORGANIZATION

DISCUSSION OF INNOVATIVE FINANCING TECHNIQUES FOR WASTEWATER INFRASTRUCTURE IMPROVEMENTS SHOULD PUT PUBLIC HEALTH AND THE ENVIRONMENT FIRST

At today's Senate Subcommittee on Fisheries, Wildlife, and Water hearing on financing techniques for wastewater infrastructure improvements, Clean Water Action supported augmenting the declining federal clean and safe water investment and urged Congress to see that protection of public health and the environment guide any financing decisions.

Clean Water Action noted that increasing concerns over hazard reduction and security, as well as overall attention to protection of public health and the environment, should drive decision making, not abstract notions of efficiency. "Funding mechanisms that emphasize efficiency as the primary value, not protection of public health and the environment, are not a sustainable solution," said Clean Water Action National Policy Coordinator Paul Schwartz.

Clean Water Action also asked Congress to reject emphatically the notion that financial burdens on public and private wastewater agencies justify delay or weakening of regulations intended to protect public health and the environment. Clean Water Action also calls on Congress to consider funding cost-effective innovative and alternative decentralized wastewater systems and pollution preventing green infrastructure solutions.

Discussion of financing solutions should include contributions from major sources of wastewater contamination, including large-scale industries, corporate agriculture and large users of water resources. Taxing inputs such as pesticides and fertilizers should be considered as well. "Taxpayers and consumers should not be footing the whole bill for wastewater clean-up when large polluters are creating a good portion of the problem," said Schwartz.

Clean Water Action supports a significant increase in the Federal Government's contribution to drinking water and wastewater infrastructure. In particular, Clean Water Action supports the Water Infrastructure Network's call for a $57 billion increase in federal funding over a 5-year period. And as the economic stimulus package is shaped up, Clean Water Action supports a set aside of $5 billion as an initial downpayment that will quickly generate up to 200,000 jobs, increase the security of our water infrastructure and put the public's health and a clean environment on firmer footing now and for the future.

Clean Water Action notes that the Senate Subcommittee on Fisheries, Wildlife, and Water should have scheduled an environmental community representative to testify at today's hearing. "The absence of a voice for public health and the environment on this important topic is an oversight which we hope is not repeated again," said Schwartz.

SPECIAL REPORT BY PUBLIC CITIZEN'S CRITICAL MASS ENERGY AND ENVIRONMENT PROGRAM, WASHINGTON, DC

WATER PRIVATIZATION: A BROKEN PROMISE—CASE HISTORIES FROM THROUGHOUT THE UNITED STATES

Rising rates, increased shortages, legal and legislative battles, source depletion and crumbling infrastructure have drawn attention to a resource that the United States has long taken for granted—water.

We expect an unending flow of clean water every time we open the tap. We also expect this life-giving resource to be available to everyone at affordable prices because our health and our survival literally depend on it.

Today, over 80 percent of Americans receive their water from public utilities. Many of these public providers, however, find themselves in a very difficult position. The Nation's water and wastewater infrastructure—with its leaky, decades-old pipes and pumps—is in desperate need of repair and upgrading.

The Water Infrastructure Network estimates that an additional $23 billion a year would have to be spent to adequately improve the infrastructure over a 20-year period.[1] Without the help of the Federal Government, which has not placed water projects high on its priority list, cities and counties are in a bind.

Coming to the rescue of local governments, or so they say, are private corporations. Fully aware that elected officials are averse to raising taxes, corporate executives are seeking to parlay public financing problems into profit opportunities. Corporations are promising local government officials the world: They'll buy or operate their water or wastewater systems and, in the process, save taxpayer money, comply

with ever-enhancing environmental standards, and eliminate the headaches associated with operating these increasingly complex systems.

Even though the historical record supplies evidence that privatization is not a panacea for ailing water and wastewater systems, more and more municipalities are beginning to consider handing over their systems to the private sector.

Backers of privatization—which also goes by the names of public/private partnerships, outsourcing, procurement, and operation and maintenance contracts—like to highlight their successes.

The U.S. Conference of Mayors, for instance, champions privatization as an innovative solution to the country's water challenges. In a study of 20 local governments that privatized water/wastewater utilities, the organization's Urban Water Council portrays private companies as their saviors.[2] The study, however, carefully steers clear of communities that had negative experiences with privatization.

The Conference of Mayors' glowing assessment of privatization comes as no surprise, given that the membership of its Water Development Advisory Board includes major private water companies American Water Works (the largest in the U.S.), Severn Trent, OMI, United Water, U.S. Filter and U.S. Water.[3]

The Conference of Mayors had good reason to leave out the negative. There are more than enough cases that expose the opposite side of water privatization.

No matter what form privatization takes, there is always a risk it could backfire.

A government agency can hire a private company to complement or replace its engineering department to perform repairs or new construction. San Francisco, for example, last year hired a Bechtel-led alliance for consulting services that some argue overlaps with the city's management. Public officials can also decide to outsource management alone, as did Pittsburgh this past March.

The contracting out of operations and maintenance (O&M), and often management, is becoming a very popular form of privatization. Under such a structure, the community retains ownership of water and sewer systems and continues to set the prices, but a private company effectively operates and manages the system for a fee. Atlanta's privatization is an example of such arrangement. Design-Build-Operate (DBO) contracts often include the operation component because public officials believe that they encourage private companies to construct high-quality infrastructure. Under this arrangement, the public generally retains ownership of the new facilities.

Concession is a form of privatization that is more common abroad. Under such an arrangement, which usually has a duration of 20–30 years, a government agency concedes operations of its water systems to a private company for a number of years. The company becomes responsible for maintaining the system, performing capital improvements, providing customer service and setting rates. As a rule, the company also makes a one-time payment to the government.

This type of privatization is more popular with communities whose water systems are in need of capital infusions they cannot afford. Concession is not a complete transfer of ownership. Once the concession expires, however, transferring responsibilities back to the public sector may prove difficult. As in the case of O&M, by the time the contract expires, the government would likely have lost both the expertise and the employees necessary to run the system.

Finally, the sale of public water and sewer system to a private company is the most extreme form of privatization. This option is much more popular among communities that serve small populations, because local governments in such cases rarely have the expertise, resources or incentive to operate water and sewer systems. Without consolidation, public operation can prove rather costly. Private operators could reduce these costs through economies of scale. Privatization, however, is not the only way save money, connecting to a larger public provider can be a sensible alternative.

Here, then are 13 case histories that should give any public official pause before handing over a public resource to a private, for-profit corporation. Some of these experiences have made local governments second-guess the wisdom of privatizing.

OPERATION AND MAINTENANCE—LEE COUNTY, FLORIDA

In 1995, ST Environmental Services, a subsidiary of the British company Severn Trent, won a contract to operate and maintain the water and sewer systems in Lee County, Fla., after underbidding employees by some $6.8 million. ST promised to save money by increasing efficiency and cutting almost half of the workforce, from 91 people to 52.

Some county officials questioned whether the company could operate the systems with so few employees. Among the doubters was the county's public works director, J.W. French. He did not anticipate big problems, however, because "the company

would have to perform at the cost it bid, even if it has to hire people not specified in the proposal."[5]

Privatization proponents celebrated the company's performance: The number of employees reduced dramatically, the amount of pipe inspected increased, and old gasguzzling vehicles were replaced with newer, more fuel-efficient models.[6]

Five years after start of the contract, however, a variety of problems began to surface. Paul Adams, a former ST vice president in Lee County, told the county that the company had neglected the systems. In a letter to county officials, Adams wrote that "critical facilities were in danger of imminent failure through lack of proper corrective maintenance."[7] He also alleged that when a superintendent was given a list of more than 500 meters that needed replacement, the company's direction was to "lose the list."[8] ST refuted the accusations.

ST sued Adams, claiming libel, interference with a business relationship and breach of contract. When he left the company, Adams agreed not to make comments that are derogatory or may damage the company in its business, or its public or private affairs.[9]

Notwithstanding the public benefit it may have brought, the breach of contract may create legal problems for Adams. Libel may be difficult to prove, however, because auditors indeed found problems with ST's operations, substantiating some of Adams' claims.

At the time ST was pursuing renewal of its contract, Azurix Inc. also submitted a bid. Contesting the county's intent to award the contract to ST, Azurix echoed some of Adams' allegations after its own investigation.[10]

In October 2000, Lee County's Internal Audit Department released a report on ST's contract performance. The findings included:

- STs flushing program was not as effective and efficient as it could have been, resulting in wasted water and lower than required chlorine levels, necessary for proper filtering.[11]
- ST did not perform required lime softening at the Olga Water Treatment Plant, even though the company was being paid do to the work.[12] At the same time, in its monthly reports to Lee County Utilities (LCU), ST claimed that all requirements that involved lime softening were being met. According to LCU's former director, lime softening is "effective in removing heavy metals, radionuclides, dissolved organics, viruses and coliform."[13]
- The wastewater collection system was in poor to fair condition, and the maintenance level was inadequate to sustain the facilities in an acceptable operating condition.[14]
- ST was not operating one of the wastewater treatment plants according to Florida Department of Environmental Protection permit requirements, as required by the contract, for at least part of February 2000 and possibly several months prior.[15]
- Several operational errors occurred at a wastewater treatment plant, including spills and contamination of re-use water in February and March 2000.[16]
- Preventive maintenance at a wastewater treatment plant was not always performed timely or to minimum manufacturer recommended standards, as required by the contract.[17]
- ST failed to perform $108,310 worth of maintenance work on water meters.[18]
- A large number of monthly customer billings were delayed from April to July 2000, resulting in $596,614 not being billed in timely manner. The number of billing employees and meter readers may not have been sufficient for timely billing.[19]
- The Lee County Department of Natural Resources found concerns with the handling of hazardous materials in its assessments in 1998 and 2000, with conditions in the latter year being worse.[20]

In response to the problems with ST and to the battle between ST and Azurix, the county's Board of Commissioners voted in October 2000 to return the water and sewer to public control.[21]

The following spring, county utilities director Rick Diaz sent a memo to the county's new public works director, Jim Lavender, outlining STs failure to properly maintain the infrastructure as required by the contract. The memo said it would cost more than $8 million to bring the neglected infrastructure up to par. According to Diaz, the contract required ST to clean more than 2.3 million linear feet of sewer lines over 5 years, but the company reported cleaning less than 1 million feet. The contract also obligated the company to make 23,000 manhole inspections, Diaz said, however less than 10,000 were actually completed.[22]

Lee County and ST are currently in postcontract discussions regarding the performance issues. Assistant county attorney David Owen anticipates that the two parties will evaluate their legal positions and options if the negotiations result in an impasse.[23]

ATLANTA, GEORGIA

In 1998, the city of Atlanta awarded United Water, a subsidiary of the French water giant Suez Lyonnaise des Eaux, a contract to operate the city's water system. The company promised cost savings in exchange for a $21.4 million annual fee. Three years into the contract, the question of whether residents are benefiting from it continues to be raised.

In 2000, some Atlanta residents began to find debris in their water. Additionally, the water assumed brown tones, which usually signals high levels of iron oxide—rust. The company, however, did not initially acknowledge there was a problem.[24] Four months later, residents were still experiencing the same problems.[25]

Moreover, cases of dry or inoperative fire hydrants have been reported. Again, United Water did not promptly address the problem, even though inoperative fire hydrants could be a matter of life and death. And, in response to residents' inquiries, the company has said that testing the fire hydrants after they were repaired was the city's obligation—a claim city has rejected, holding that the company should ensure that fire hydrants are in working order after repair or replacement.[26]

Complaints of delays and slow service have also been registered. For example, when the Breakwater homeowners association paid $2,700 in March 1999 to have three meters installed, United Water told the group that the request would take 10 weeks to fulfill. Six months later the company installed the first meter. According to the contract, the company has 1 day to respond to leaks and 15 days to install a meter.[27] One reason for delays may be understaffing. Today, United Water has just 327 employees, down from 731 in 1997, a year before privatization.[28]

The city is currently conducting a comprehensive review and audit of the company's performance.[29]

NEW ORLEANS

The city of New Orleans has contracted out its sewage treatment operations and maintenance (O&M) since 1992. The original contractor, Professional Services Group (PSG), transferred its O&M operations to U.S. Filter, which was in turn acquired by the French conglomerate Vivendi.

This past July 26, an electrical fire interrupted operations at the East Bank Sewage Treatment Plant, which serves about 440,000 people, for two and a half hours.[30] Raw sewage backed up, covering the surrounding land and making its way through some of the plant's offices. The plant's operators diverted raw sewage into the Mississippi River for 2 hours before the plant was returned to operation.

Joe Puglia, a spokesperson for the city's Sewerage and Water Board (S&WB), claimed it was not possible to estimate the amount of sewage diverted into the river.[31] Because sewage systems generally have flow meters, and because flow estimates are usually easy to calculate, this claim is open to debate. Interestingly, Puglia is an employee of a private firm, the Public Relations Group, which carries out a bulk of S&WB's public relations work.[32]

According to City Council member Jim Singleton, S&WB officials told him that U.S. Filter was aware of problems with equipment for several weeks and the dangers they could create, but failed to address them.[33]

The fire came only a few months after the sewage plant's two broken incinerators resulted in the trucking of excess untreated sewage sludge out of the plant through the neighboring Arabi Park and Carolyn Park communities of St. Bernard Parish. Residents there were exposed to the putrid odor for more than 2 months.[34]

Ironically, the fire took place just a day after the S&WB voted to invite bids to privatize the city's water and wastewater treatment systems, despite apprehensive citizens and the labor community. U.S. Filter is among several companies that have expressed interest in running the city's water.

JERSEY CITY, NEW JERSEY

In 1996, the city contracted United Water Resources to operate and maintain its water system. Five years later, the city no longer expresses as much enthusiasm about the arrangement. According to Kathleen Deely of the Municipal Utility Authority (MUA), the city has learned that the private operation is "no worse, no better." United Water did improve bill collection, but overall the quality of water service did not change.[35]

Though still set by the MUA, rates are greatly influenced by operation fees paid to United Water. According to a senior MUA official, a lack of financial transparency prevents the city from evaluating whether the price commanded by the company is reasonable. The company is not required to open its books for a municipal review.

Instead, it just sends a bill. The contract does not prevent the company from overcharging because no review process is built in.[36]

According to the same MUA official, United Water's customer service is in need of improvement. Customer service representatives often direct citizen complaints to the MUA, even though in many cases the company is responsible for the problems triggering these complaints, and some of the problems are preventable. And, United Water contracts out meter reading to another company. A combination of broken meters and underpaid readers often leads to erroneous billing.[37]

The MUA official does not believe that the "public/private partnership" is a bona fide partnership. The company's goal is to make a profit, regardless of the consequences. It has little concern, the officials said, for public good and is resistant to doing work unless it is compensated for it.[38]

PRIVATE OWNERSHIP AND THE MOVE TO DEPRIVATIZE—CHARLESTON, WEST VIRGINIA

In the Year 2000 Water and Wastewater Rate Survey of 194 U.S. cities and counties performed by a leading consulting firm, Raftelis Financial Consulting, Charleston stood out due to its exceptionally high rates.

Monthly water charges for an average customer using 7,480 gallons of water were $46.21, some $31.84—or 221 percent higher than the $14.37 average for cities of comparable size. This amount was augmented by an additional $12.69 monthly fee—once again, the highest in the category. Finally, the affordability index showed that the cost.of 7,480 gallons of water amounted to 1.65 percent of the median income in Charleston. The city was the only one in its category with an index of more than 1 percent. The cost of water as a percentage of median income was more than 3.5 times higher than the amount for like-sized cities.[39]

Charleston residents get their water from West Virginia-American, a subsidiary of American Water Works Co., the largest private water company in the U.S. According to the West Virginia Public Service Commission, average bills increased by 66.5 percent for the company's customers over the last decade.[40] West Virginia-American has increased its rates 15 times during that period.[41]

Roy Ferrell, the company's rates and revenues director, attributes the skyrocketing rates to West Virginia's mountainous landscape that makes it difficult to lay pipe and new construction. According to Ferrell, the company has consolidated its plants, reducing the number from 26 to nine. Eight of the remaining plants were either refurbished or replaced. To provide remote locales with access to water, extensions had to be built. The company claims to have spent $240 million on construction.[42]

Billy Jack Gregg, director of the Consumer Advocate Division in West Virginia's Public Service Commission, sees the picture a little differently. Gregg agrees that infrastructure construction is very costly, but he believes West Virginia-American is forcing existing customers to finance its own expansion. The company has extended its water service to areas where operations are not cost-effective. The investment required for such areas can be twice as high. Single tariff pricing, however, shifts costs to present customers. New service areas not only receive access to new infrastructure built with existing customers' money, but they also receive service at prices lower than real costs, thanks to higher rates paid by existing urban customers.

Earlier this year, West Virginia-American filed for yet another rate increase, which would translate into an additional $1 million in annual revenues. Gregg says the company is seeking to recover $750,000 it spent trying to acquire the water system in Parkersburg, West Virginia.[43]

Ferrell pledged that the company would not request another rate hike for the next 20 years, because after the current request is approved all major construction will be finished.[44] Given that American Water Works depends on rate increases for higher profits and dividends, it remains to be seen whether this is a promise the company can keep.

In extending water lines to remote regions, West Virginia-American is mainly driven not by a sense of civic responsibility, but by the simple desire for higher profits. Single tariff pricing allows the company to expand to non-profitable areas, knowing it can easily increase rates statewide to maintain existing profit margins.

The Raftelis survey shows that the median sewer charges for the cities of comparable size are 20 percent higher than the water rates . However, in Charleston the situation is reversed. The sewer charges don't amount to even a half of the water rates level.[45] The solution to this paradox may lie in the fact that the sewer service is provided by the city, and not by a private company.

CHATTANOOGA, TENNESSEE

In 1998, the city of Chattanooga moved to buy out Tennessee-American, also a subsidiary of American Water Works, which has owned the utility for 130 years[46] Chattanooga's Mayor Jon Kinsley, who spearheaded the takeover effort, projected that public ownership would result in a 25 percent rate reduction and some $100 million overall savings for customers over 10 years.[47]

Kinsley was also responding to the company's exorbitant fire hydrant fees and to the possible export of city water to Atlanta without public approval. Tennessee-American Vice President Richard Sullivan admitted discussing supplying water to Atlanta with officials there.[48]

Unwilling to sell, the company launched an extensive public relations and legal fight as the city filed a condemnation suit. In its quarterly earnings report, American Water Works acknowledged spending $6 million on costs incurred by the subsidiaries fighting takeover attempts in Chattanooga and Peoria, Illinois[49] According to the company's officials, most of these pre-tax costs were in Chattanooga.[50] Tennessee-American hired Burson Marsteller, a New York-based public relations firm, and Baker Donelson, Tennessee's largest law firm, to fight the takeover attempt.[51]

Among other firms used by the company in the public relations offensive were Wirth Worldwide, which handled opinion polling, National Media, which handled advertisements, Moriah Group, which provided political insight, and a temporary agency, Special Counsel, which performed background checks on Mayor Kinsley and Ken Hays, his former chief of staff.[52]

The public relations effort succeeded. In October 1999, the city reached a settlement with Tennessee-American under which the company agreed to lower its fire hydrant fees from $301.50 to $50 per hydrant, or from about $1.2 million to $200,000 a year.[53] Such a significant drop raises the question whether the city was paying reasonable fees in the first place. The agreement also requires Tennessee-American to ask permission from local citizens before exporting water.[54]

DUVAL, NASSAU AND ST. JOHNS COUNTIES, FLORIDA

This past August 1, United Water Resources (UWR) accepted a $219 million offer from the Jacksonville Electric Authority to buy out the company's Florida holdings in Duval, Nassau and St. Johns counties. JEA is a municipal authority serving residents of Jacksonville and surrounding areas. JEA's operations are expected to lower average water and sewer bills of former UWR customers by 25 percent.[55]

The rate cut will be welcomed by many county residents. In 1997, when UWR was providing water and sewer services for the three counties, residents saw their rates increase by an average of $9.44 per month. Many residents expressed indignation with the rate hike. Richard H. Harlan, Jr., who was among the affected ratepayers quoted in the local media, called the company "the biggest bunch of highway robbers."[56]

In 1998, the company requested yet another rate increase, which the Florida Public Service Commission granted the following year. Water rates then increased by 12.5 percent and sewage rates by 5.4 percent. When reviewing the rate hike request, the PSC found that United Water overestimated its expenses by $1.05 million.[57]

HINGHAM AND HULL, MASSACHUSETTS

Massachusetts-American, another American Water Works subsidiary, owns the water system in the communities of Hingham and Hull. In 1996 the company doubled water rates[58] in the face of many objections. Massachusetts-American justified the hike by the need to build a new water treatment facility. Meanwhile, American Water Works profits grew by 10.4 percent that year.[59]

This year yet another rate increase was approved for the company, which relied on claims of higher infrastructure spending and increased operation costs.

When approached with a request for rate schedules in effect before the 1996 increase and those currently in effect, Connie Chapman of Massachusetts-American provided information on rates immediately after the increase, but not those preceding it. When asked again, she claimed that the 1995 rate schedules would be difficult to locate, even though locating the rate information just 1 year later apparently did not pose a problem.[60]

According to James Lampke, Hull's town attorney, the two communities have some of the State's highest water prices.[61] Lampke said the city understands that rates have been influenced by construction of the new plant. He believes, however, that the company chose a process that augmented the costs by spending millions of dollars that could have been avoided.

For example, the company spent excessively to obtain approval for a site that was an unlikely location for the plant. According to Lampke, the State Department of Telecommunication and Energy, which regulates private water providers, has agreed with the city that the plant could have been built with less money.[62]

HUBER HEIGHTS, OHIO

In 1993, Florida-based Avatar elected to sell its water holdings, including Ohio Suburban Water, a small outfit that provided water for 40,000 customers in Huber Heights and parts of the Mad River Township. American Water Works expressed its desire to buy the utility.

The city voiced concerns about the New Jersey-based water giant controlling its water. It feared the company would raise rates and extend service to areas beyond the city limits without annexation, thus impairing the city's ability to grow.[63] Water services are an important incentive that municipalities use to expand. As a rule, outlying areas have to become part of a city before obtaining access to municipal water.

The city attempted to acquire the water system from Avatar but was outbid by American Water Works. The Ohio Public Utilities Commission simultaneously approved the transfer and denied the city a hearing to plead its case.[64]

The city's fears soon materialized. In 1993 the company increased its rates by 30 percent.[65] At the same time the company moved to contract with Industrial Water to deliver up to 2 million gallons of Huber Heights' water a day to the Wiley Industrial Park, located outside the city.

In an effort to prevent further rate hikes and to reclaim control of economic development, the city initiated proceedings to take over the system through the power of eminent domain.

Once again, American Water Works unleashed a public relations campaign to prevent the takeover and collected enough signatures to put the issue on the ballot. The effort collapsed when city residents voted overwhelmingly in support of the city's efforts to acquire the system.[66]

While the city continued to fight the legal battle to reclaim control of the water system, the company continued its efforts to export Huber Heights water outside the city. The city protested, arguing that water pipes should be extended only in the event of annexation.

However, in pursuit of additional profits, the company disregarded the city's pleas and began piping Huber Heights water to the industrial park. Because the park used only 10,000 gallons a day, county officials wanted to make excess water available to the remainder of Bethel Township.[67]

In March 1995 the city avoided a lengthy legal battle by negotiating an out-of-court settlement with the company and proceeded with the buyback. Even after the buyback, however, American Water Works continued to cause problems. Industrial Water, through which water was channeled to the industrial park, had subsequently sold its contract to neighboring Miami County, which claimed rights to two million gallons of water per day. Under the settlement, the city would continue piping water to the park "until Ohio Suburban's obligations, if any, are 61 resolved."[68]

Because of American Water Works questionable actions, the city is now under a legal obligation to act against its own interests, due to the fact that Bethel Township is unfairly reaping benefits of the water infrastructure funded by Huber Heights' ratepayers and taxpayers, while avoiding paying city taxes. The city continues to argue that the township must be annexed to Huber Heights in order to have access to its water. The conflict remains unresolved.

PEKIN, ILLINOIS

In 1982, Illinois-American, another subsidiary of American Water Works, acquired Pekin's water system from a local private owner. In the 18 years that followed, rates increased by 204 percent. At the same time the company failed to keep infrastructure up to date.

According to Pekin City Manager Dick Hierstein, pressure problems have plagued several parts of the city, especially those experiencing commercial growth. However, the company hesitated to construct the water tower it promised to build, while failing to upgrade undersized mains.[69] The company's behavior negatively impacted the city's economic growth and added to its expenses.[70]

In response to soaring rates and questionable quality of service, the city chose to consider acquiring the local water company from Illinois-American through its eminent domain powers. A report by the Water Study Committee, commissioned to evaluate feasibility of the acquisition, made a strong case for purchasing the water

system. The committee found that the company's service record left much to be desired.

For example, there was an instance of street flooding for over 24 hours before any action was taken. In another case, water service to two schools was interrupted for a week. Company workers taped a message to school doors just before the students arrived for classes, instead of notifying the school officials in advance.[71]

Citizens For Locally Owned Water (FLOW), a group that advocated public ownership of the water system, projected that with the present rate of infrastructure upgrades, it would take Illinois-American some 268 years to replace all city mains. Given that some water mains were over 75 years old, FLOW found this rate of improvement unacceptable. The group also pointed out that in 1990 a local business was destroyed by fire after firefighters were confronted with broken fire hydrants and low water pressure.[72] Hierstein also argued that the city could obtain financing for infrastructure improvements at lower interest rates than the company.[73]

To remedy the problems, some city officials, including the city manager, began to advocate a buyout.

Yet another elaborate public relations campaign by American Water Works sought to convince residents that the city did not have enough expertise to run the system properly. PR firms hired by Illinois-American conducted surveying and placed television, newspaper and radio ads to fight the takeover efforts.[74] Even the company's president was invited pay a visit in an effort to convince residents to support private ownership of the water system.[75] The city estimates the company's public relations offensive cost about $1 million. Meanwhile, the city spent $30,000 on public outreach.[76]

Illinois-American then hired a firm to collect enough signatures to put the issue on the ballot. The company narrowly won the election, 54 to 46 percent,[77] but the referendum was advisory, not binding.

As a result of the close outcome and the battle preceding the referendum, Illinois-American did become more responsive to the public. The buyout question remains on hold, but Hierstein believes it will inevitably be raised again because of the stark differences in priorities of a "profit-driven national company versus a service-oriented and costconscious local government." Having been the city manager in communities with both private and public providers, Hierstein is convinced that citizens and the government are served "far better" by publicly-owned systems.[78]

PEORIA, ILLINOIS

In October 1998, the Peoria City Council voted to buy back the city's water system from American Water Works subsidiary Illinois-American Water. The city believed that public ownership would stabilize rates and reduce operating costs.[79]

According to Terry Kohlbuss, coordinator of the takeover effort, Peoria's rates at the time were among the highest in the rate survey prepared by Raftelis Financial Consulting.[80] (The company has since stopped providing Peoria information to Raftelis, and in the 2000 survey the city is not listed).

Takeover proponents estimated that public ownership would result in a 31 percent rate reduction over the first 10 years.[81]

The city also argued that the buyback would place the much-needed control over economic development back into the city's hands. City officials have characterized the company as being less than cooperative in economic development initiatives. In fact, a group of business leaders offered to lend the city up to $1 million for the takeover attempt.[82]

Moreover, a financial analysis prepared by Raftelis showed the city would have $6 million a year in excess revenues if it owned the company itself.[83]

City officials argued that the 1889 franchise agreement allowed Peoria to buy local assets of Illinois-American. The company disagreed and challenged the city's position in court.[84] Soon thereafter Illinois-American, requested an 8.2 percent rate increase,[85] as just 3 years after an 8.8 percent increase,[86]

Earlier this year, the U.S. Environmental Protection Agency fined Illinois-American $168,488 for failing to promptly report a release of chlorine vapors in 1998. The company waited 20 hours before reporting it. According to EPA spokesperson James Entzminger, the notification should have been made within 15 minutes of the spill. A Peoria firefighter was hospitalized after breathing the fumes.[87]

The buyout effort is now on hold pending the outcome of the legal battle.[88]

WASHINGTON COURT HOUSE, OHIO

In 1991, Washington Court House, decided to take over its water system from Ohio Water Service Co. The city believed it could operate the utility more efficiently and at a lower cost.

As usually has been the case, the company mounted legal and public relations campaign, collecting enough signatures to put the issue on the ballot. Residents voted to retake control of the system and, after a 2-year legal battle, the city purchased the water system for $10 million.[89]

City operations proved to be a true success story. One of the conditions of the bond issued by the city to raise money for the purchase required the city to collect approximately 20 percent more in revenues than it spent to operate the system. Yet just 2 years following the takeover, the city was collecting 60 percent more and enjoying $500,000 annual surpluses. Not only did the city live up to its promises not to raise rates in the 3 years following the takeover, it was actually able to issue rebates to local ratepayers.[90]

CONSULTING AND MANAGEMENT—SAN FRANCISCO, CALIFORNIA

San Francisco is among a large number of U.S. cities whose water systems require intensive repairs and upgrades. The century-old Hetch Hetchy water system, which provides water to 2.3 million people in San Francisco, San Mateo, Santa Clara and Alameda counties, needs as much as $8 billion worth of seismic upgrades.[91]

The city hired a private consulting firm as it embarked on this ambitious project. Last year, after much controversy, the city awarded a $45 million contract to an alliance led by Bechtel Corporation, the world's largest engineering firm and an emerging player in private water market. The city's Public Utilities Commission (PUC) claimed that hiring Bechtel would produce as much as $45 million in savings over 4 years and allow access to the necessary expertise.

Many spoke out against the contract, including city budget analyst Harvey Rose, who disagreed with the claim of prospective savings because no supporting evidence had been provided.[92] Supervisor Tom Ammiano questioned the alliance's ability to produce cost-savings and suggested that the contract would eventually lead to further privatization.[93] Nevertheless, the city Board of Supervisors approved the deal.

Almost a year into the contract, many have voiced concern about its value. According to David Novogrodsky, the executive director of the Professional and Technical Engineers Local 21, Bechtel has so far done very little other than charge "outrageous" fees. Bechtel's workers do not work closely with the city engineers. Additionally, there are a few "higher-ups" who go beyond their contractual role as consultants and often attempt to manage PUC staffers. And, there are many Bechtel support staff with no knowledge or experience unique to Bechtel.

Moreover, said Novogrodsky, most staff members are not qualified, and it is not unusual to see Bechtel employees sitting down studying for their engineering exams, instead of performing actual work.[94]

According to the San Francisco Bay Guardian, many city workers feel Bechtel is not aiding them in their work, and is actually slowing progress because the company has to approve certain in-house jobs. City workers also feel that instead of acquiring valuable skills from Bechtel's engineers, as was originally intended, they have to explain even basic operations to them. Finally, staffers feel the city is being billed for work already performed by city employees.[95]

The city's first semiannual audit found the Bechtel consortium's performance to be satisfactory, although many tasks were not evaluated because they were in the startup phase.[96] The auditor did find that of the $75,943 in reimbursement requests submitted by the consortium, $2,766 was not identified as allowable under the contract. These costs included refreshments and lunches, telephone charges, and relocation and travel expenses.[97]

The auditor also found that the consortium did not inform the PUC about changes in staff work locations, which is essential in order for the city to determine whether the consortium is charging correct rates.[98]

Additionally, a Bay Guardian investigation documented many instances of wasteful spending. Bechtel, for instance, was paid nearly $500,000 to restore and change the format of data already prepared by the city. Most of Bechtel's work, the newspaper said, was either "unnecessary, duplicated work that city staffers had already done, or wasn't specialized enough to require a highly paid outside consultant"[99]

CONCLUSION

Not every private company provides poor service, and not every operation and maintenance contract is a failure. In their marketing efforts, however, companies exploit their successes while carefully concealing their failures. And, analyses conducted by financial consultants are often biased in favor of privatization.

As a result, the debate over the merits of transferring operations or ownership of public utilities to the private sector tends to be biased. The case histories in this

report are intended to bring much needed balance to the debate, while helping government officials better assess the risks involved.

Not every public utility has a satisfactory performance record. However, the solution lies in more government accountability and more investment in aging systems not in signing them away and admitting defeat. The risks that privatization brings are simply too great to be dismissed.

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