S. HRG. 107–954

WATER INVESTMENT ACT AND OTHER WATER INFRASTRUCTURE BILLS

HEARINGS

BEFORE THE

SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER

AND THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

ON

S. 252, A BILL TO AMEND THE FEDERAL WATER POLLUTION CONTROL ACT TO AUTHORIZE APPROPRIATIONS FOR STATE WATER POLLUTION CONTROL REVOLVING FUNDS, AND FOR OTHER PURPOSES

S. 1961, A BILL TO IMPROVE THE FINANCIAL AND ENVIRONMENTAL SUSTAINABILITY OF THE WATER PROGRAMS OF THE UNITED STATES

FEBRUARY 26 AND 28, 2002

Printed for the use of the Committee on Environment and Public Works

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ONE HUNDRED SEVENTH CONGRESS
SECOND SESSION

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C O N T E N T S

ADDITIONAL MATERIAL

FEBRUARY 28, 2002

OPENING STATEMENTS

WITNESSES

ADDITIONAL MATERIAL

WATER INVESTMENT ACT, S. 1961 AND OTHER WATER INFRASTRUCTURE BILLS

TUESDAY, FEBRUARY 26, 2002

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 9:34 a.m. in room 406, Senate Dirksen Building, the Hon. James M. Jeffords, (chairman of the committee) presiding.

Present: Senators Jeffords, Smith, Bond, Crapo, Voinovich, Warner, Chafee, and Corzine.

Also present: Senator Kyl.

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

Senator JEFFORDS. This committee will come to order.

Our hearing today will be a legislative hearing to examine five pieces of legislation involving water infrastructure. Our focus will be S. 1961, the Water Investment Act of 2002. Along with Senators Graham, Crapo, and Smith, I wrote this legislation to provide additional resources to States, tribes, and localities, to meet water infrastructure needs.

This legislation seeks to move the state-of-the-art in water program management forward by increasing the flexibility offered to States in administering their water programs.

The Water Investment Act ensures that the "next generation" of water quality issues receives the appropriate focus and institutionalizes financial management capacity into our nation's water systems. This legislation authorizes funding of over $20 billion over 5 years nationwide for clean water, and $15 billion over 5 years nationwide for safe drinking water projects.

There is significant new flexibility attached to these funds. Many of the provisions already authorized in the Safe Drinking Water Act will allow an extension of loan terms and more favorable loan terms, including principle forgiveness for disadvantaged communities. In States such as my own State of Vermont, these types of provisions are critical, as small communities struggle to meet their water quality needs.

There is financial accountability built into the Water Investment Act of 2002. We have included provisions for both the Clean Water Act and the Safe Drinking Water Act, that are designed to help water utilities better manage their capital investments, using asset management plans, rate structures that account for capital replacement costs, and other financial management techniques.

We encourage utilities to seek innovative solutions by asking them to review options for consolidation, public/private partnerships, and low-impact technology before proceeding with a project.

Whenever one mentions "consolidation", concerns are often raised about inadvertently providing incentives for excessive or uncontrolled growth. This legislation recognizes that concern, and includes a provision that specifically requires States to ensure that water projects are coordinated with local land use plans, regional transportation improvement and long-range transportation plans, and State regional and municipal watershed plans.

As a package, this legislation will help ensure that your utilities seek the most efficient organizational structure to meet their water quality needs.

I am also very pleased that the bill includes provisions ensuring that the next generation of water quality issues receives the appropriate focus.

As I worked on this legislation, I became aware that there are opportunities to use low-impact technologies to solve water quality issues that may or may not be considered by States and localities, and they seek to solve water quality issues. In response, our bill includes several incentives for the use of nonstructural technologies.

The use of nontraditional technologies is the focus of the Water Investment Act, to ensure that nonpoint pollution receives appropriate emphasis under the Clean Water Act. The modifications this bill makes to the priority listing requirements in the Clean Water Act ensure that nonprofit source projects will be a part of the equation when funding decisions are made at the State level.

I want to thank Senator Graham for his leadership on this legislation, and Senators Crapo and Smith for their dedication to introducing a bipartisan package today, and their willingness to find a compromise when we needed one.

I recognize this issue is of great importance to every Senator. I look forward to working with each of you to pass this important legislation that is so important to our nation's water quality and drinking water safety.

[The prepared statement of Hon. James Jeffords follows:]

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

The committee will come to order. Our hearing today will be a legislative hearing to examine 5 pieces of legislation involving water infrastructure. Our focus will be S. 1961, the Water Investment Act of 2002. Along with Senators Graham, Crapo, and Smith, I co-sponsored this legislation to provide additional resources to States, Tribes, and localities to meet water infrastructure needs. Simultaneously, it seeks to move the state-of-the-art in water program management forward by increasing the flexibility offered to States in administering their water programs, ensuring that "next generation" of water quality issues receive the appropriate focus, and institutionalizing financial management capacity into our nation's water systems.

This legislation is critical to our nation's future. We tend to take clean water in our faucets and well-functioning, hidden sewage treatment systems for granted in this country. However, without vigilance, these luxuries can quickly disappear. The Water Investment Act of 2002 will help our communities be vigilant.

This legislation authorizes funding of over $20 billion over 5 years nationwide for clean water and $15 billion over 5 years nationwide for safe drinking water projects.

There is significant new flexibility attached to these funds.

Many of the provisions already authorized in the Safe Drinking Water Act which allow an extension of loan terms and more favorable loan terms (including principal

forgiveness) for disadvantaged communities. In States such as my home State of Vermont, these types of provisions are critical as small communities struggle to meet water quality needs. There is financial accountability built into the Water Investment Act of 2002. We have included provisions for both the Clean Water Act and the Safe Drinking Water Act that are designed to help water utilities better manage their capital investments using asset management plans, rate structures that account for capital replacement costs, and other financial management techniques. We encourage utilities to seek innovative solutions by asking them to review options for consolidation, public-private partnerships, and low-impact technologies before proceeding with a project.

Whenever one mentions "consolidation", concerns are often raised about inadvertently providing incentives for excessive or uncontrolled growth. This legislation recognizes that concern and includes a provision that specifically requires States to ensure that water projects are coordinated with local land use plans, regional transportation improvement and long-range transportation plans, and State, regional and municipal watershed plans. As a package, this legislation will help ensure that utilities seek the most efficient organizational structure to meet their water quality needs.

I am also very pleased that the bill includes provisions ensuring that "next generation" of water quality issues receives the appropriate focus. As I worked on this legislation, I became aware that there are opportunities to use low-impact technologies to solve water quality issues that may or may not be considered by States and localities as they seek to solve water quality issues. In response, our bill includes several incentives for use of nonstructural technologies. We specifically state in the statute that these approaches are eligible to receive funding under the Clean Water Act State Revolving Fund and require that recipients of funds consider the use of low-impact technologies. In addition, we authorize a demonstration program at $20 million per year over 5 years to promote innovations in technology and alternative approaches to water quality management and water supply. This program requires that a portion of the projects use low-impact development technologies.

The use of nontraditional technologies is the focus in the Water Investment Act to ensure that nonpoint source pollution receives appropriate emphasis under the Clean Water Act. The modifications this bill makes to the priority listing requirements in the Clean Water Act ensure that nonpoint source projects will be a part of the equation when funding decisions are made at the State level. The bill also addresses eligibility issues. It clarifies that planning, design, and associated preconstruction costs are eligible for funds under the Clean Water Act and Safe Drinking Water Act State Revolving Funds as stand-alone items. This ensures that small communities who may not have the resources available to get a project ready to go on their own can receive assistance. Small communities will also benefit from a provision in the bill that allows privately owned wastewater facilities to access the Clean Water Act State Revolving Fund Already permitted under the Safe Drinking Water Act, this will allow small, privately owned wastewater systems such as those located in trailer parks, to obtain much-needed financial assistance.

To ensure that both public and private small systems can actually develop the projects to solve problems, our legislation provides three main types of technical assistance for small communities. It authorizes $7 million per year over 5 years for technical assistance to small systems serving less than 3300 people located in a rural area. It reauthorizes the Small Public Water Systems Technology Assistance Centers for an additional $5 million per year over 5 years. Finally, it reauthorizes the Environmental Finance Centers for $1.5 million per year over 5 years.

We have heard from many organizations that public participation in the execution of the State revolving loan funds needs to be increased. I hope that every individual interested in how water quality projects are selected and prioritized in their States takes full advantage of existing opportunities for public participation. Our legislation takes action to ensure that there is ample opportunity for public comment when developing project priority lists and intended use plans.

I want to thank Senator Graham for his leadership on this legislation and Senators Crapo and Smith for their dedication to introducing a bi-partisan package today and their willingness to find a compromise when we needed one.

I recognize that this issue is of great importance to every Senator, and I look forward to working with each of you to pass this important legislation that is so important to our nation's water quality and drinking water safety.

Senator JEFFORDS. Senator Smith.

OPENING STATEMENT OF HON. BOB SMITH, U.S. SENATOR FROM THE STATE OF NEW HAMPSHIRE

Senator SMITH. Thank you very much, Mr. Chairman, and thank you for working with us to introduce this legislation on a bipartisan basis.

One of my top priorities, when I had the Chair, was to renew our commitment to our nation's water. I am pleased that you have continued to keep this a priority.

This is particularly timely for my State in New Hampshire, because it is in the midst of its worst drought in 50 years. It is having a devastating impact on our water supply. One of the reservoirs in Bellamie, which provides water for a number of New Hampshire towns, is down over 50 percent. This bill will help to alleviate these problems, with new funding for water conservation, recycling, and reuse.

The bill helps to alleviate these problems, and it will take steps to address potential water shortages in the future. It involves the U.S. Geological Survey. It requires them to provide information on water shortages, as well as planning models. That requires streamline procedures for local governments to work with Federal Agencies responsible for water resources. This would be helpful in the communities in New Hampshire, who are facing severe water shortages.

These are also being compounded in a couple of communities by the great trend now in bottled water, where we are taking hundreds of millions of gallons of water out of the ground, and selling it all over the world without, in my view, proper precautions.

But beyond the drought, the nation does face a terrible water infrastructure problem. So much of our nation's water infrastructure is aging and it is in desperate need of replacement.

So coupled with that, and the cost burden that local communities face with the ever increasing State and Federal mandates, the problem is exasperating. This bill addresses these problems, and makes structural changes to ensure that we do avoid a national crisis now and in the future.

I believe in limited Government, and when it comes to water infrastructure, I do not believe the primary responsibility of financing local water needs to lie with Federal Government. I am adamant, however, that the Federal Government should not place unfunded mandates on these communities.

We recognize both of these principles, and I think this bill strikes a balance. Unfortunately, there will be some who will try to take away the compromise through amendment, which is always regrettable. But it authorizes $35 billion over the next 5 years in Federal contribution to water infrastructure, to help defray the cost of mandates placed on these communities. This basically is a return to the communities of their tax dollars to help them.

When the Clean Water Act was amended by Congress in 1987, there was a debate which many of us will remember, that set up a revolving fund to provide a continued pool of money for water needs. But unfortunately, not everybody met their commitment to plan for those needs, and what was not to be Federal responsibility became a Federal necessity.

So this bill makes certain that we do not go down that road again. The Federal Government will help to defray the cost of Federal mandates, but with the new money comes a new requirement that all utilities do a better job of managing their funds and plan for the future.

It will be a tremendous help to many of the struggling communities in New Hampshire, as we extend the repayment period for loans to disadvantaged communities. It is my hope that we can move it through the committee, Mr. Chairman, and see it passed by the Senate in short order.

I believe that if we keep to the deal and not load it down with "poison pills," as I said before, we can move the bill quickly. Unfortunately, the poison pill that always comes up, and there is usually ample water, no pun intended here, to take the pill, and that is Davis-Bacon. So Bacon and water, and Bacon and Davis and water, do not go very well together, in my view.

I think we need to understand that to take these issues which really are, in my view, not relevant to the case at hand, to the question at hand, and load them up, first of all, it is going to cost more, by adding the Davis-Bacon provisions; and it is going to increase it by probably 5 to 15 percent nationally, and it could be as much as 38 percent in rural areas like New Hampshire; and there are some other Senators here with States who have lots of rural areas.

So many States, including my own, have long ago eliminated Davis-Bacon rules from their statute books, because they want to maximize their investment in clean water. We want the money to go to clean water, and not to increased labor costs that are not necessary. That is why it is so particularly outrageous to think that we may have to face these kinds of amendments.

Big unions are beholding to prevailing wage legislation, because it supports their members, to the exclusion of other workers, unfortunately. But all Americans should be treated equally, and none should be held back the way they are by Davis-Bacon. Davis-Bacon laws preclude the hiring of helpers, for example, who not only perform much needed lower-skilled work, but free up more experienced workmen for the more difficult tasks.

So the bill is a bipartisan product, which is a testament, I think, to the hard work of the Chairman and Senators on both sides. The amendments, however, unfortunately if they pass, are going to destroy that bipartisan compromise, and I hope it does not happen, Mr. Chairman. Thank you.

[The prepared statement of Hon. Bob Smith follows:]

STATEMENT OF HON. BOB SMITH, U.S. SENATOR FROM THE STATE OF NEW HAMPSHIRE

Good Morning. I am pleased to be here to discuss our recently introduced bipartisan legislation: the Water Investment Act of 2002. When I became chairman of this committee in 1999, one of my top priorities was a renewed commitment to our nation's water systems. I am pleased that Senator Jeffords has continued to make this a priority.

This bill is particularly timely, as New Hampshire is in the midst of our worst drought in 50 years, and it has had a devastating impact on our water supply. One of the reservoirs, Bellamy, which provides water for a number of New Hampshire's towns, is down over 50 percent. Our bill will help to alleviate these problems with new funding for water conservation, recycling and re-use projects.

We also take steps to address potential future water shortages. We require the U.S. Geological Survey to provide information on water shortages, surpluses and planning models. We also require streamlined procedures for the local governments to work with Federal agencies responsible for water resources. This valuable information will be helpful to communities facing a severe water shortage like so many of those in New Hampshire. It will also help to minimize the threat of future droughts.

Beyond the drought, the nation faces a potential water infrastructure crisis. So much of our nation's water infrastructure is aging and in desperate need of replacement. Coupled with the aging problem is the cost burden that local communities face in order to comply with ever increasing State and Federal clean water mandates.

This bill addresses these problems and makes structural changes to ensure that we avoid a national crisis now and in the future. I am a strong advocate of limited government and when it comes to water infrastructure, I do not believe the primary responsibility of financing local water needs lies with the Federal Government.

I am equally adamant, however, that the Federal Government shouldn't place unfunded mandates on our local communities. We recognize both of these principles and strike a responsible balance.

The legislation authorizes $35 billion over the next 5 years in Federal contribution to the total water infrastructure need to help defray the cost of the mandates placed on communities. This is a substantial increase in Federal commitment, but not nearly as high as some would have preferred. Even so, this commitment does not come without additional responsibilities.

When the Clean Water Act was amended by Congress in 1987, a debate I remember well, we set up a revolving fund to provide a continual pool of money for water needs. Unfortunately, not everyone met their commitment to plan for future needs and what was not to be Federal responsibility became a Federal necessity.

This bill makes certain that we do not go down that road again.

The Federal Government will help to defray the costs of Federal mandates, but with the new money comes a new requirement that all utilities do a better job of managing their funds and plan for future costs. We also make additional structural changes to the law both to address financial concerns and to help achieve improved management of these water systems.

One such change to the Clean Water Act is to incorporate a Drinking Water Act provision that allows States to provide principal forgiveness on loans and extends the repayment period for loans to disadvantaged communities. It will be a tremendous help to many struggling communities in New Hampshire and across the country.

It is my hope that we can move it through the committee process and see it passed by the Senate in short order. I believe that if we keep to this deal and not try and load it down with any poison pills, we can move this bill quickly.

One such poison pill is Davis Bacon.

According to GAO, Davis Bacon will increase by costs by 5–15 percent nationally and perhaps by as much as 38 percent in rural States like New Hampshire. Many States, like New Hampshire have long ago eliminated Davis-Bacon-like rules from their State statute books, because they want to maximize their investment in clean water. Davis Bacon will result in less capital improvement and less safe drinking and clean water. We need to spend every penny we can to get safe drinking water, and the way to do that is this bill, without amendment.

Big unions are beholden to prevailing wage legislation, because it supports their members to the exclusion of other workers. I believe all Americans should be treated equally and none should be held back the way they are by Davis-Bacon.

Davis-Bacon laws preclude the hiring of "helpers" who not only perform much-needed lower skilled work, but free up more experienced workmen for the more difficult tasks.

This bill is a bipartisan product, which is a testament to the hard work of the Chairman and Senators on both sides of the isle. It is my hope that we can move a clean bill—one that will move through the process quickly and one that I can continue to support.

Senator JEFFORDS. Thank you.

Senator Corzine.

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

Senator CORZINE. Thank you, Mr. Chairman. I, like my colleagues, commend you for holding the hearing here. This focus on water infrastructure proposals is important to the State of New Jersey and, I think, the nation, as most issues we address.

Before I begin, I want to say how pleased I am that Mayor Doug Palmer from Trenton, NJ will be testifying on one of the panels today for the Conference of Mayors. He is one of the bright lights of New Jersey, and truly familiar with all of these various issues, and a terrific leader. I welcome Mayor Palmer.

Mr. Chairman, like other urbanized States, New Jersey faces all these issues that you and the ranking member have talked about: aging infrastructure, urban run-off, combined sewer overflows. I would say that the problems are exacerbated also by this growing crisis with regard to drought on the East Coast.

That said, New Jersey has done a good job in meeting a lot of these challenges. I think our current EPA Administrator has led the way in trying to address many of these issues, but there is a lot more to do.

One of the things about S. 1961 that I am particularly pleased about is the increase in authorization. The demand in our State to address many of these issues, both in clean water and drinking water safety, are real. I visited a number of places where the demands are high, and we need to push forward on it. So I congratulate everyone for working to increase these authorization levels, which I think at today's point are far, far too small.

I will respectfully argue that the amendment that the ranking member talked about is one of those things that I think we are going to have to have debate about, because it is an issue that I think is important for making sure that we have high quality efforts with regard to how projects are executed. I think it is important that we maintain these common standards. So I, for one, understand or least appreciate the argument, but will be supportive of Davis-Bacon type amendments.

I look forward to a good healthy debate on that, but moving forward with a bipartisan element with respect to the clean water activities. Thank you.

Senator JEFFORDS. Senator Bond.

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

Senator BOND. Thank you very much, Mr. Chairman.

I commend you, Senator Smith, Senator Graham, and Senator Crapo for your hard work in putting this bipartisan proposal together. It sounds like we have a little friction building up. I could certain agree with my colleague from New Jersey that we ought to maintain high standards. There is no question about that; but how that translates into a need for Davis-Bacon, I am afraid we are going to have to have that battle.

I hope that we could stay on the environmental side of it, to show that we can work together. Because I happen to believe, from my work in my environmental area, that one of the things that is the

most important is to make sure we have clean water, that we have safe drinking water, that we cleanup our waste water.

I have been in small communities in too many areas in Missouri, where the systems have broken down. I believe any public health official will tell you that that is a real and present danger.

There is a lot of talk about environment and the people who get out and talk about the environment; and then there are people who do the really tough, dirty work down in the trenches, who are maintaining the water systems. These are the true environmentalists. When you look at the total number of projects that are needed, it is huge.

Then in small communities, as well as large, 84 percent of the Safe Drinking Water Act violations in 2001 were in systems serving fewer than 3,300 customers. You know, just because you live in a small community does not mean you ought to have to drink impure water.

In Missouri, we have a community like Pickering, in northwest Missouri, that the waste water treatments works would be ridiculously expensive. They frankly cannot afford to pay for it, but we need to help.

We have medium-sized communities like Lebanon, MO, where they struggle with problems with sanitary sewer overflows. Even though they tripled the water rates, they still could not get it done. We have a lot of problems in our big cities like St. Louis, which has a myriad of problems.

We do need to have a good bipartisan bill. Certainly, I support the higher authorization levels, although I would remind my colleagues that what we do here, we can authorize all day long.

We have a little problem. Senator Mikulski and I have been working on that problem, as long as we have worked together on the VA/HUD Independent Agencies Committee, to try to get our 602(b) to where they can justify what we ought to be putting into the State revolving funds.

There is somebody in OMB who must not like to drink water; because every year, in the past Administration and in the previous Administration, they make the politically outrageous, but I suppose appealing, statement of cutting the State revolving funds.

It is like, you know, State revolving funds do not matter, so they just cut them. They think they would rather put in some fancy pet projects for the Administration. I will tell you, every time they do that, we go to bat. There is nothing like having Senator Mikulski, when you go after it. We have cut the pet projects and put it back in the State revolving funds.

I support the higher authorization levels. I am going to need the help of everybody on this committee to try to get the funds available. Maybe one of these days, OMB could come and tell us why they do not like State revolving funds; why they do not think clean water and safe drinking water is appropriate.

So we have a lot of battles. I am concerned about the application of the funding system. We need to work on nonpoint source pollution problems. We will work with you on that. I am delighted to support these authorization levels, and look forward to working with my colleagues on this committee to make sure that dollars are available to meet the implied promise of the authorization levels.

[The prepared statement of Hon. Christopher S. Bond follows:]

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

Mr. Chairman, let me commend you, Senator Smith, Senator Graham and Senator Crapo for your hard work in developing this bipartisan proposal to increase funding for water infrastructure. The environmental debate today is far too polarized. This bill should serve as an example to those who care about the environment on what can happen when people come together.

Every person, every family, every community in America depends on clean and safe water. America can be proud of all that we have accomplished to bring clean and safe water to so many of us.

However, communities around the nation, and communities in Missouri, know that we need more funds to provide the water we need and deserve.

A recent EPA report stated that 84 percent of Safe Drinking Water Act violations in 2001 were committed by systems serving fewer than 3,300 customers. I doubt that many of these systems want anything other than clean water for their citizens. I imagine that most all lack the funds to provide the services they would like to provide.

We have communities in Missouri like Pickering, in the northwestern Missouri, that are so small that they just plain can't afford wastewater treatment works. It's hard to tell the 150 residents and one business in Pickering that they should just raise their rates to build the clean water they need.

Medium-sized communities like Lebanon, MO, in the southwest part of the State, struggle with problems like sanitary sewer overflows. They have tripled their water rates and they are still millions of dollars behind what they need for wastewater system they deserve.

Then of course, large cities like St. Louis share many of the problems faced by old urban cities like those here on the East Coast and across the nation. I once heard that Philadelphia loses enough water from its pipes every day to supply all of New Orleans. I don't know how St. Louis and Kansas City would compare, but I believe we are right in there with everyone else.

So it is good that we have a bipartisan bill before us to meet our overwhelming need for additional water spending.

There are many positive measures in this bill. I support higher authorization levels. Although, I would remind my colleagues that our work will not be complete when we pass a reauthorization. We must also work to increase the money allocated for water needs in the appropriations process. Then we can make sure money is actually spent, and not just wished for.

Measures to increase State flexibility and help disadvantaged communities are also positive. Although, we must make sure that we don't overload our States and applicants with too many new requirements. It doesn't make a lot of sense to give with one hand and take away with the other in the form of new mandates and requirements.

I support efforts to broaden funding eligibility for nonpoint source problems. The farmers and communities of Missouri want to do their part to improve water quality, but they need the help and tools to do so.

I am concerned with the proposed new formula for allocating money for the Clean Water SRF. I understand the desire expressed by many that the current system is outdated and unfair. A new system should be based on needs. I also understand the advantages of learning from the safe drinking water formula. However, early indications are that Missouri will suffer under the new formula. We will need to confirm that point and examine it in further detail.

For now, thank you again Mr. Chairman, and my fellow members, and I look forward, for the sake of our communities and the environment, to working with all of you to make additional water funding a reality.

Senator JEFFORDS. 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, for calling this hearing today. To our witnesses, I want to say that I look forward to your insight on S. 1961, the Water Investment Act.

You know, in terms of looking at the environment and the major issues of our nation, I think that the issues we deal with in this legislation are probably the single most significant environmental issue in America today. If not, they certainly compete for being among the most significant issues that we deal with.

We are looking at not only improving and strengthening our effort at clean water, but also at safe drinking water around this nation, and a long-needed reform and strengthening of the system.

As you know, when I first joined this committee as Chairman of the Fisheries, Wildlife, and Water Subcommittee, the late Senator John Chafee and I began a long process of assessing the performance of our water and waste water infrastructure statutes, and exploring needed improvements to addressing these outstanding problems. This process continued under his successor as chairman, Senator Smith.

Over the past 3 years, I have convened many hearings and meetings with the stakeholders and Agency officials to debate how to address the problems of our communities with unmet water and waste water infrastructure needs.

With the able partnership of yourself, Mr. Chairman, Senator Graham and Senator Smith, I am pleased that we have been able to culminate this work in S. 1961. As has been indicated here already, this is a very strong, bipartisan package, and we have had many, many hours of meetings together to try to resolve the various differences in approach on how to solve these issues. We have come up with remarkably a strong basis of common ground with which to move forward.

Although we are likely to hear testimony on other bills pending before the committee, I want to confine my comments just to S. 1961.

This legislation has several important provisions and goals, including modernizing State water pollution control revolving programs, and ensuring the allocation of funds that reflect the public health and water quality needs of our nation; streamlining State assistance programs for maximum efficient use of funds by States and communities; assisting disadvantaged communities, and enhancing the capacity of small systems to better service the public; and ensuring the enhanced Federal contributions to State assistance programs, as matched by appropriate accountability from those who are receiving the funds.

These are strong guiding principles, and the ones that the committee should remember, as we advance this proposal through the legislative process.

The needs of our nation's waste water and water infrastructure systems are enormous. Because Federal regulations drive the majority of the cost for communities, I think it is only appropriate for us to recognize that there is a strong Federal interest to help utilities and the public to address their needs. To help provide the Federal share, this bill authorizes a bold investment of $35 billion over 5 years, to invigorate State and revolving funds with the goal that these funds will be self-sustaining at the end of that investment period.

The bill also aims to increase flexibility for States in managing their assistance programs to explore avenues, to reduce costs, to

target resources to those most in need. It also embodies my commitment to assist rural areas in our most distressed communities with additional resources, and to help them serve the public.

Although it is tempting to turn this legislation into a vehicle for individual proposals and controversial concepts, S. 1961 represents the collaboration and hard work of many who recognize that the goal of assisting communities should be our guiding principle.

If this important bill is to become law, controversial issues should be put aside for another time. I am not just referring to the one that was brought up already in this hearing. There are going to be, I believe, a number of controversial issues that could be problems for moving this legislation expeditiously.

Too many communities are waiting for the assistance this bill will provide to see legislation brought down by other difficult proposals.

With that, Mr. Chairman, I want to once again welcome our witnesses from all the panels. Your comments have been helpful throughout this process, and I look forward to your insights on S. 1961. Thank you.

[The prepared statement of Hon. Mike Crapo follows:]

STATEMENT OF MIKE CRAPO, U.S. SENATOR FROM THE STATE OF IDAHO

Mr. Chairman, thank you for calling together this hearing. To our witnesses here today and on Thursday, I look forward to your insights on S. 1961, the Water Investment Act.

As you know, when I joined this committee as Chairman of the Fisheries, Wildlife, and Water Subcommittee, then-Chairman, the late Senator John Chafee and I began a long process of assessing the performance of our water and wastewater infrastructure statutes and exploring needed improvements to address outstanding problems. This process continued under his successor as Chairman, Senator Smith. Over the past 3 years, I have convened many hearings and meetings with the stakeholders and agency officials to debate how to address the problems of communities with unmet water and wastewater infrastructure needs. With the able partnership of Chairman Jeffords and Senator Graham, I am pleased that we have been able to culminate this work into S. 1961.

Although we are likely to hear testimony on other bills pending before the committee, I would like to confine my comments to S. 1961. This legislation has several important provisions and goals including:

- modernizing State water pollution control revolving programs and ensuring the allocation of funds reflects public health and water quality needs
- streamlining State assistance programs for maximum efficient use of funds by States and communities
- assisting disadvantaged communities and enhancing the capacity of smaller systems to better serve the public
- ensuring the enhanced Federal contributions to State assistance programs is matched by appropriate accountability by those who receive funding

These are strong guiding principles and ones that the committee should remember as we advance this proposal through the legislative process.

The needs of our nation's water and wastewater infrastructure systems are enormous. Because Federal regulations drive the majority of costs for communities, it is appropriate for us to recognize there is a Federal interest to help utilities and the public address their needs. To help provide the Federal share, this bill authorizes a bold investment of $35 billion over 5 years to reinvigorate State revolving funds with the goal that these funds will be self-sustaining at the end of the investment period.

The bill also aims to increase flexibility for States in managing their assistance programs, explore avenues to reduce costs, and target resources to those most in need. It also embodies my commitment to assist rural areas and our most distressed communities with additional resources to help them serve the public.

Although it is tempting to turn this legislation into a vehicle for individual proposals and controversial concepts, S. 1961 represents the collaboration and hard work of many who recognize the goal of assisting communities should be our guiding

principle. If this important bill is to become law, controversial items are best put aside for another time. Too many communities are waiting for the assistance this bill will provide to see the legislation brought down by difficult proposals.

With that, I want to once again welcome our witnesses for all our panels. Your comments have been helpful throughout this process and I look forward to your insights on S. 1961.

Thank you Mr. Chairman.

Senator JEFFORDS. Senator Voinovich.

OPENING STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Senator VOINOVICH. Thank you, Mr. Chairman. I would like to commend you, Senators Graham, Crapo, and Smith for proposing this legislation that addresses the incredible unmet water infrastructure needs that we have in this country.

It is all too clear to me that we are facing an environmental and public health crisis in the country when it comes to water infrastructure, and I am pleased that this committee has made it a priority to address this problem with the Water Investment Act and other needed measures.

I think Senator Bond really made a point. We are here authorizing. You know, the last couple of years, we have had a bill before this committee, in terms of the revolving loan fund for sewers. We have not been able to get that done, because of the fact that there was a debate over Davis-Bacon.

So it got nowhere, and I have been working with groups, to see if we cannot compromise this thing out. We ought to get into that and try and work it out. All of you ought to understand, if we do not work that out, the bill is not going to go anywhere. So that is No. 1.

No. 2, even if we do authorize it, this issue has to be given a higher priority by the Administration and by this country. I think the reason why OMB does not pay any attention to it is, they figure that the cost of this stuff belongs in the local governments, and why should the Federal Government pick it up?

Now we had a little bill, a $1.5 billion bill, that Senator Smith and I and a couple others put together and got through this committee, that would have made grants over a 2-year period. There was not a dime for it in the last budget. The last budget had, what, $1,350,000. In my State, we could use $7 billion a year, to take care of the problem.

So the fact is, you are all going to have your testimony today. We will listen to you. We will try and get a bill out of here, but there are some fundamental things that we need to face up to.

One of them is to get the money to get it appropriated. We have now, you know, the war on terrorism abroad, at home, homeland security, and the rest of it, and all these things that have to be reconciled. I think that that is where we are going to have to talk about this. I think it gets back, Mr. Chairman, to the appropriators.

You cannot do it all. You know, if we are going to do homeland security in our water systems, and we do not have safe drinking water and we do not have sewers, that is another threat to the people in their communities. It is a big threat.

So somehow, some of this has to be reconciled. We cannot, at this stage of the game, say, well, it is all homeland security, and let us ignore the infrastructure problems that have been out there. The fact of the matter is that this Congress and this Administration have a responsibility in this area. We have foisted upon local communities enormous costs, in most cases, justifiable; but they are incapable of handling them, incapable.

In my State, Senator Crapo and I had a hearing in Ohio, where there was a 100 increase in their water rates, in order to comply with these new mandates that are coming out. We have a role to play in helping to pay for this.

So I am very happy to be here. I hope we can get this out today. I hope we can work out the Davis-Bacon thing, but the key is, we have to get this as a national priority, if we expect to get the job done. Thank you.

[The prepared statement of Senator Voinovich follows:]

STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Thank you, Mr. Chairman. I would first like to commend you and Senators Graham, Crapo, and Smith for proposing legislation that looks to address our nation's incredible unmet water infrastructure needs.

It is all too clear to this Senator that we are facing an environmental and public health crisis in this country when it comes to water infrastructure, and I am very pleased that this committee has made it a priority to address this problem with the Water Investment Act and other needed measures.

Since coming to the Senate, I have made it a goal of mine to address the hundreds of billions of dollars of unmet wastewater and drinking water needs across the country as indicated in the EPA's Clean Water and Safe Drinking Water needs surveys. Other independent groups, such as the Water Infrastructure Network have documented a $23 billion per year gap between infrastructure needs and current spending.

Over the last 2 years, I have held a number of meetings with officials from Ohio municipalities and sewer districts to discuss their wastewater infrastructure concerns. In addition, Senator Crapo was kind enough to conduct a field hearing as Chairman of the Fisheries, Wildlife and Water Subcommittee in Columbus last April to discuss Ohio's wastewater infrastructure needs.

Last year, I introduced the Clean Water Infrastructure Financing Act (S. 252) to reauthorize the highly successful, but undercapitalized, Clean Water State Revolving Loan Fund (SRF) program. S. 252, and its companion bill in the House, H.R. 668, have strong bipartisan support.

Congress created the Clean Water SRF program in 1987 to replace the construction grants program of the Clean Water Act. Under the construction grants program, the Federal Government paid up to 75 percent of the cost of a wastewater infrastructure project. Under this program, our country made a substantial amount of progress to clean our water. Since then, States and localities have used the Clean Water SRF loan program to help meet critical environmental infrastructure financing needs.

However, as I indicated a moment ago, in many States, the need for public wastewater system improvements greatly exceeds typical Clean Water SRF funding levels. For instance, in fiscal year 2002, a level of $1.35 billion was appropriated for the Clean Water SRF program. However, in Ohio alone, about $7.4 billion in needs have been identified.

The city of Akron, for example, has proposed a CSO Long-Term Control Plan that will cost more than $248 million to implement—nearly 20 percent of the total SRF level appropriated in fiscal year 2002 for the entire nation. Without outside funding, Akron's sewer rates could more than double.

In many instances, communities face having to increase rates—sometimes as much as 100 percent or more—in order to comply with a number of Federal requirements. Without outside help, many of these communities cannot respond to the needs of their citizens. Simply put, if the Federal Government mandates it, the Federal Government ought to help pay for it.

Authorization for the Clean Water SRF expired at the end of fiscal year 1994, and the continued failure of Congress to reauthorize the program sends an implicit message that wastewater infrastructure is not a national priority. Well, Mr. Chairman, we cannot afford to continue to ignore our unmet needs, and I believe that reauthorizing the Clean Water SRF program should fit right into our homeland security agenda.

My bill, the Clean Water Infrastructure Financing Act, would authorize a total of $15 billion over the next 5 years for the Clean Water SRF program. Additionally, my bill would provide technical and planning assistance for small systems, expand the typed of projects eligible for loan assistance, and offer financially distressed communities extended loan repayment periods and principal subsidization. The bill would also allow States to give priority consideration to financially distressed communities.

Mr. Chairman, I am pleased that your bill, the Water Investment Act, includes the core elements of my Clean Water SRF reauthorization bill. As someone who has had a long-standing interest in water infrastructure issues, I would like to see this committee support legislation that would increase funding for our nation's water infrastructure needs, increases State and local community flexibility to use SRF funds, provide our small communities assistance in financing their water infrastructure needs, and offer financially distressed additional consideration and assistance.

While the funding levels included in the proposed legislation is modest compared to what is needed to bridge the enormous water infrastructure funding gap, passage of legislation which increases the authorization levels for the Clean Water and Safe Drinking Water SRF programs would be a great step in the right direction.

Even though the loans provided by the SRF programs can help many communities finance water infrastructure projects, even a low-interest or no-interest loan can be too expensive for some communities. That is why I have also been a strong supported of the 2-year, $1.5 billion Wet Weather Grants Program that Congress enacted in 2000. I worked last year to fully fund the first year of the program. Although Congress did not provide any funding to the program, I will continue to push for the necessary funding to keep this program viable.

I would like to thank you, Mr. Chairman, for including the Clean Water Infrastructure Financing Act on today's agenda. I look forward to the testimony from this morning's witnesses, and I also look forward to working with you and Senators Graham, Crapo, and Smith as the committee moves forward with its important water infrastructure legislative agenda. Thank you.

Senator JEFFORDS. Well, thank you.

Senator Inhofe asked unanimous consent to place his statement in the record. Without objection, that is done.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Mr. Chairman, thank you for calling this hearing to discuss the important issue of water infrastructure. I commend you and Senators Graham, Crapo, and Smith for the hard work that was done to introduce this bi-partisan bill. This bill is a step in the right direction toward the continued improvement of the water infrastructure of this nation. This is an important bill for the nation and is especially important for Oklahoma. This bill will be of tremendous benefit not only to our citizens, by providing safe drinking water, but also to the environment by the continued improvement of water quality.

Both the Clean Water and Drinking Water Program are very popular with local communities seeking assistance for clean and drinking water projects. Both program provide "lower" than market rate loans to assist communities to come into compliance with the respective Federal acts. Extending and increasing the Federal contribution for these programs will allow States to better meet the financial demands placed on these funds.

The Water Investment Act contains many positive measures including the higher authorization levels, an increase in the percentage of funds set aside for Indian programs, and the increased flexibility afforded the States to manage their water programs. The measures contained in this bill that provide additional help for disadvantaged and small communities are also sorely needed.

A primary concern with extending and increasing the Federal amount is the availability of the required 20 percent State matching funds. For your reference, I have attached a copy of two tables that reflect how Oklahoma has generated matching funds for both the Clean Water and Drinking Water SRF programs. As you can see we have had to issue match notes to provide the required State matching funds for

the more recent capitalization grants. [State funds equaling 20 percent of the Federal capitalization grant has to remain in the fund.] Currently, we are utilizing Fund interest and investment earnings as the primary source to re-pay these State match notes. Future debt for State match notes and lower investment and interest earnings will continue to increase the financial burden to our SRFs. Another concern is that this bill does not do enough to assist our larger communities, those that serve over 10,000 customers, in meeting the infrastructure needs of their aging water systems.

Thank you again Mr. Chairman for calling this hearing. I look forward to working with my colleagues on this piece of legislation to invest in the water infrastructure of our nation.

State of Oklahoma.—Source of State Match Drinking Water State Revolving Fund

Cap Grant	Federal Appropriated Amount	State Match Amount	Over Match Amount	Notes	Less Utilized Set-asides	Total Available for Assistance
97	$17,561,900	$3,512,380.00	$0.00	(1)	$5,444,189.00	$15,630,091.00
98	$10,224,200	$2,044,840.00	$0.00	(2)	$3,169,502.00	$9,099,538.00
99	$10,716,000	$2,143,200.00	$0.00	(3)	$2,786,160.00	$10,073,040.00
2000	$11,137,000	$2,227,400.00	$0.00	(4)	$1,781,920.00	$11,582,480.00
2001	$11,183,000	$2,237,600.00	$1,000.00	(4)	$2,254,670.00	$11,165,930.00
2002	$12,446,500	$2,489,300.00	$0.00	(5)	$3,236,090.00	$11,699,710.00
					$0.00	$0.00
	$73,268,600	$14,654,720.00	$1,000.00		$18,672,531.00	$69,250,789.00

Notes:
(1) $3,500,000 of State match from the Constitutional Reserve Fund and $12,380 transferred from OWRB grant account. 6/12/98, S.B. 965
(2) $2,000,000 of State match appropriated by legislature and $44,840 transferred from OWRB grant account.
(3) State match from the Oil Overcharge Fund
(4) 2001 State match note paid from investment and interest earnings on DWSRF accounts and the Guymon Ketchum bond loans. $2,227,400 went toward matching the fiscal year 2000 cap grant and $2,237,600 toward the fiscal year 2001 grant State match.
(5) Match has not been identified at this time. Currently being considered by Oklahoma Legislature

State of Oklahoma.—Source of State Match Clean Water State Revolving Fund

Federal Fiscal Year	Federal Appropriated Amount	State Match Amount	Over Match Amount	Notes	Less 4 Percent Admin. Amount	Total Available for Assistance
1988	$9,278,000	$1,855,600.00	$0.00	(1)	$371,120.00	$10,762,480.00
1989	$7,597,400	$1,519,480.00	$0.00	(1)	$303,896.00	$8,812,984.00
1990	$7,862,000	$1,572,400.00	$0.00	(2)	$314,480.00	$9,119,920.00
1991	$16,580,619	$3,316,124.00	$0.20	(2)	$663,224.76	$19,233,518.24
1992	$15,697,737	$3,139,548.00	$0.60	(3,4)	$627,909.48	$18,209,375.52
1993	$15,528,546	$3,105,709.00	-$0.20	(3)	$621,141.84	$18,013,113.16
1994	$9,632,600	$1,926,520.00	$0.00	(5)	$385,304.00	$11,173,816.00
1995	$9,951,183	$1,990,237.00	$0.40	(6)	$398,047.32	$11,543,372.68
1996	$16,300,350	$3,260,069.00	-$1.00	(6,7)	$652,014.00	$18,908,405.00
1997	$4,986,100	$1,018,670.00	$21,450.00	(7)	$199,444.00	$5,805,326.00
1998	$10,879,110	$2,184,466.94	$8,644.94	(8)	$435,164.40	$12,628,412.54
1999	$10,880,001	$2,281,647.00	$105,646.80	(9)	$435,200.04	$12,726,447.96
2000	$10,996,702	$2,282,330.94	$82,990.54	(10)	$439,868.08	$12,839,164.86
2001	$10,746,747	$2,149,349.40	$2,154,818.89	(11)	$429,869.88	$12,466,226.52
.....	$156,917,095	$31,602,151.28	$2,373,551.17	.....	$6,276,683.80	$182,242,562.48

Notes
(1) State match from the Statewide Water Development Fund, 07/30/88, H.B. 1571; 04/26/89, S.B. 51
(2) State match from the Special Cash Fund, S.B. 144, 03/20/91
(3) State match from the Constitutional Reserve Fund, 05/28/93, S.B. 390; 05/18/94, H.B. 2761
(4) $200,000 in State match provided by Ute settlement—State of New Mexico and $47,501 in State match provided from OWRB grant account.
(5) 1994 State Match provided by OWRB Note Series 1994. Note paid from moneys in the Debt Service Reserve Fund (the ''1985 Reserve Fund'') for the Board's 1985 Bonds.
(6) 1996 Match note paid from investment and interest earnings on CWSRF accounts and the Guymon and Ketchum bond loans. $1,990,236 toward the fiscal year 95 cap grant State match and $2,018,545 toward the fiscal year 96 cap grant State match.
(7) 1997 State match note paid from investment and interest earnings on CWSRF accounts and the Guymon and Ketchum bond loans. $1,241,524 went toward matching part of the fiscal year 96 cap grant and $1,018,670 toward the fiscal year 97 grant State match.
(8) 1998 State match note paid from investment and interest earnings on CWSRF accounts and the Guymon and Ketchum bond loans.
(9) 1999 State match note to be paid from investment and interest earnings on CWSRF accounts and the Guymon and Ketchum bond loans.
(10) 2000 State match note to be paid from investment and interest earnings on CWSRF accounts and the Guymon and Ketchum bond loans.
(11) 2001 State match note to be paid from investment and interest earnings on CWSRF accounts.

Senator JEFFORDS. The time is now, Senator Kyl.
[Laughter.]

STATEMENT OF HON. JON KYL, A U.S. FROM THE STATE OF ARIZONA

Senator KYL. Thank you, Mr. Chairman, that was most instructive. Mr. Chairman, thank you for the opportunity to testify today.

I will be very brief. I just want to testify about something in this bill that I think, if we are successful in getting it through, everybody can be very proud of, and it will certainly help me a great deal. I have in mind the provisions that rectify the unfairness with respect to the allocation formula for the Clean Water State Revolving Fund.

Interestingly, in 1996, when the Safe Drinking Water Act was adopted, the funds from the Drinking Water Fund were allocated on the basis of a quadrennial infrastructure needs survey, which is conducted by the States under EPA's supervision and guidance.

But that is not true for the much larger Clean Water Fund. As a result, in the Clean Water Fund, Arizona, which is the fastest growing State in the country, ranks 53d out of the 50 States, 53. Now that is behind Guam, Puerto Rico, and the District of Columbia.

Based upon the needs survey conducted by the States under EPA's supervision, Arizona would rank 16th. Obviously, Arizona is being shorted considerably, and there are other unfairnesses, as it is to Arizona, with some other States, especially fast growing States.

I have just a couple of statistics here. Arizona receives .41 percent of the documented need, while other States with comparable population receive 2.4 percent of documented need, which is six times as great a percentage. In fact, some States receive as much as 17 percent. So I think everybody can agree that this is unfair.

I would just take one State, Maryland, a State with roughly the same population as Arizona, and a similar need in the most recent survey. It receives almost four times the actual funding that Arizona receives.

So we have some significant discrepancies. Fortunately, this bill would correct that. That is why I said, I think the committee can feel very good about its work in this area.

Let me just mention, Senator Smith asked me, well, how did the formula get adopted this way? Nobody knows for sure, but we think we know the culprit. Back 15 years ago, on a conference committee who developed a formula, it was based on an earlier construction grant program, that bore no relationship to waste water infrastructure requirements. That is when the percentages were fixed. It has been that way ever since.

Mr. Chairman, let me just mention two other quick things. There is in the legislation that Senator Graham has drafted, a proposal to fix this, as I said, but it has a very high minimum share of 1.1 percent. I would urge the committee to look at that. That will, itself, skew some of the results.

For example, the State of Wyoming receives 17 percent of its total need each year. Based upon this minimum, in 3 years, Wyo-

ming would pay for everything that it had to have build out, and there would not be anything left.

The other thing that I want to say is that I hope EPA will step up to the plate here. For 15 years, it has been administering a fund, without ever really raising any questions, to my knowledge. We have written officials at EPA, and still have not gotten a response.

I think EPA has a responsibility here, if it is really concerned about meeting the needs of the country, to help revise this formula, to be supportive of it, and I hope that EPA will support the committee in its effort to make this fair.

Let me thank you, again, Mr. Chairman, and also staff, and my personal thanks especially to Michele Nellenbach and Catherine Cyr of the committee staff, for their assistance to my staff in working on this.

I will be very happy to work with you as you move forward with this. Again, I thank you for seeing to it that a very big wrong is corrected, as a result of one of the provisions of this bill.

Thank you again, Mr. Chairman.

[The prepared statement of Senator Kyl follows:]

STATEMENT OF SENATOR JON KYL, U.S. SENATOR FROM THE STATE OF ARIZONA

Thank you, Mr. Chairman, for allowing me to participate in this important hearing. I would like to commend you for calling a hearing that addresses the allocation formula for the Clean Water State Revolving Fund. You and your staff, along with other committee members and staff, have been most open and helpful, allowing my staff to become involved in the work of the committee on this issue. I would like to extend my personal thanks to Michele Nellenbach and Catharine Cyr of the committee staff for their efforts on my behalf.

Mr. Chairman, as you and the other members of this committee know, the reason I am here today is to address the gross inequity of the current allocation formula for the Clean Water State Revolving Fund. Mr. Chairman, I have worked throughout the past year to create dialog on this issue and encourage my colleagues to support a more equitable Clean Water Funding formula. I am pleased that the committee has addressed this issue in the Water Investment Act of 2002.

As you know, this issue is important to my home State of Arizona. Arizona ranks 161 in the most recent needs survey. However, under the Revolving Fund's fixed allocations, Arizona ranks last among the 53 States, territories and the District of Columbia in proportional share of need fulfilled. Arizona receives just 0.41 percent of documented need while other States with comparable population receive 2.4 percent of documented need, six times as great a percentage. Some States receive as much as 17 percent. I think we would all agree such a system of allocations is unfair.

Addressing this inequity is of critical importance to the State of Arizona. I am here today to urge my colleagues to lend their support to adopting a needs-based approach for allocations under the Clean Water Revolving Fund that addresses inequities like those I have just highlighted.

The State Revolving Fund is crucial in ensuring States have the fiscal resources to address the most critical shortcomings in wastewater infrastructure. However, the State of Arizona, along with many others, including Florida, California, Virginia, and others, do not receive a fair share of the funds authorized and appropriated by Congress each year. This is not the fault of the EPA. The EPA allocates the funds among the States according to the formula that was set forth in the Clean Water Act in 1987. And that, Mr. Chairman, is the source of the inequity.

The formula created by Congress was developed behind closed doors, during the conference for the Clean Water Act. The allocation percentages were based on an earlier construction grant program that bore no relationship to the wastewater infrastructure requirements, and the percentages were fixed. That is to say, once the Act was signed into law, each State would receive the same share of available funds in perpetuity, unless the Act itself were amended. As you know, we have yet to either amend or reauthorize the portion of the act pertaining to the faulty formula, and I applaud the committee for placing this issue on the legislative agenda.

It is interesting to note that, when Congress enacted the 1996 Safe Drinking Water Act, we ensured that no such inequity would haunt the newly created Drinking Water State Revolving Fund. From its inception, the Drinking Water Fund was allocated on the basis of a quadrennial infrastructure needs survey conducted by the various States under EPA supervision and guidance. The survey involves the States in determining their own needs for drinking water infrastructure, to ensure compliance with EPA regulations. The EPA, in turn, validates the State submissions and compiles them in a report to Congress. The EPA then allocates Drinking Water Fund appropriations on the basis of each State's proportional share of the total need.

There is a fundamental fairness associated with allocating the funds on the basis of the survey. The States themselves participate in the survey. The EPA has oversight, but in the end, valid needs are simply compiled into the aggregate, and the resulting shares determine Drinking Water Fund allocations among the States. Unfortunately, the same is not true for the much larger Clean Water Fund. A Clean Water Needs Survey is performed by the States and the EPA in fashion similar to the compilation of the Drinking Water Needs Survey. The Clean Water survey, however, has no impact on Clean Water Fund allocations. I believe, as I'm sure do most of my fair-minded colleagues, that it is time we take action to right this wrong. There is no reason for the Drinking Water Fund to be allocated fairly on the basis of actual need, while the Clean Water Fund is allocated on an arcane set of fixed percentages that were established before most of us were elected to Congress.

I ask you if it is equitable for the State of Maryland, a State with roughly the same population as the State of Arizona, and similar need according to the most recent survey, to receive almost four times the actual funding? When looked at in terms of percentage of need funded, Maryland receives almost seven times what Arizona receives. Is that fair? No, it is not. And this is only one example.

I have submitted to the committee two potential formula changes for the Clean Water Fund. I note that the draft legislation proposed by Senator Graham is similar to one of my proposals, except that Senator Graham's proposal includes a very high minimum share of 1.1 percent. The current fixed percentage Clean Water Fund formula also has a minimum share, of 0.4971 percent. While I support the Needs Survey basis of Senator Graham's proposal, I believe the 1.1 percent share is so high that it creates a different sort of inequity: creating a system that redistributes funds from those States with high levels of validated need to those with less need. In fact, at current levels of appropriations, and under the current minimum share of 0.4971 percent, the State of Wyoming receives 17 percent of its total need per year. With a 1.1 percent minimum share, Wyoming would receive one third of its total need per year, and would continue to receive the same amount after 3 years when, theoretically, all its need would have been met.

Mr. Chairman I would ask the committee to reexamine this provision. I support a minimum share to ensure the smaller States receive some meaningful amount of funding for their needs. However, I believe the floor should not be set at a level that creates new inequities and perpetuates existing problems.

My friends, it is simply an issue of fairness. Not even my colleagues from those States that stand to lose funding can argue against the fairness of a needs-based allocation formula. In fact, in the vote for my proposed amendment to the VA-HUD Appropriations Bill, Senators Allard and Feingold, both from States that would have lost funding under my proposal at the time, voted in favor of my amendment. There is a sense of fair play within the Senate. I urge the committee to capitalize on it and support legislation that will ensure the next budget we pass will allocate the Clean Water State Revolving Fund on a fair and equitable basis. I pledge my support to any reasonable legislation, including Senator Graham's proposal, that will create a needs-based allocation formula.

Mr. Chairman, I call upon the Administration to exercise leadership on this important issue. For the EPA to have administered the revolving fund for 15 years despite gross discrepancies between the Agency's own assessment of needs and the formula allocations is simply wrong. The time has come for the Administration to support a formula change that takes account of the needs of every State. I would therefore ask the Administration to support this bill or a similar formula change.

I thank you again, Mr. Chairman, for the opportunity to participate in this hearing. At this time I would like to ask one question of the Administration's witness.

Senator JEFFORDS. Thank you, Senator.

Are there any questions?

[No response.]

Senator JEFFORDS. I am going to keep on rolling. Somebody is going to replace me.

Thank you very much for your testimony.

Senator KYL. Thank you, Mr. Chairman.

Senator JEFFORDS. I would be interested in working with you. I understand, having been in Arizona, the problems are a little bit different than they are in Vermont. So I think we have to learn.

Senator KYL. You might be interested to know, and Senator Corzine spoke about the urban needs, but Arizona, I think, after Connecticut, is the most urbanized State in the country, in the sense that all the population is concentrated in a couple of big areas; but we also have some of the very poor rural issues, as well.

So we are really very much like a lot of other States in the country. As I say, add that to the fast growth, and you can see why we would rank No. 16 in needs. We have to get the formula a lot closer to that than 53d.

Senator JEFFORDS. Well, I will be interested in following that. In the future, too, maybe you can comment, just where are we in the ability of water in Colorado, and what does the future look like?

Senator KYL. Well, there are some issues. But year after year, the States of California, Nevada, and Arizona, have worked more closely together, to ensure that the limited supply of water is allocated according to the Supreme Court's rule, and California has been taking way more than its share, as everybody knows.

California has committed to a 15-year program, or I think it is 15 years, to get that down to what it is supposed to take. Unfortunately, last year was the first year of the program, and they went way over, 100,000 and some feet over of what they were supposed to take; but we will get that resolved. The Upper Basin States have been very cooperative in that regard, as well, Mr. Chairman.

Senator JEFFORDS. I do not want you to miss your vote.

Senator KYL. Thank you.

Senator JEFFORDS. Thank you, it was an excellent statement.

Our second panel is Ben Grumbles, Deputy Assistant Administrator for Water, U.S. Environmental Protection Agency, Office of Water. Thank you very much, and please proceed.

STATEMENT OF BEN GRUMBLES, DEPUTY ASSISTANT ADMINISTRATOR FOR WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER

Mr. GRUMBLES. Thank you, Mr. Chairman.

First of all, I would like to extend my deepest regrets on behalf of Tracey Meehan, who is not able to be here today to testify on behalf of the Office of Water.

My second point is that it is indeed an honor to be able to appear on behalf of the Administration to testify on S. 1961. I can only hope that my testimony will be received more favorably than what I used to say as a House staffer, when I would come over here to try to argue in support of House water projects. That is often a very tough sell in this room.

It is an honor to be here, and to talk a little bit on some of the principles and the importance of clean water and drinking water in S. 1961.

First of all, just a few of the principles and basics to keep in mind is the year of clean water, and the 30th anniversary of the Clean Water Act.

There is a wide acknowledgment that there is, and the Senators have certainly talked about it, a tremendous funding gap. The basic principle is that to respond to that gap, it requires a partnership: Federal, State, local, private entities, all working together to respond to that gap. Second, through the partnership, there is a need to put more resources into water and waste water infrastructure. Third, we need to reduce the costs by ensuring more efficient and productive use of these resources, through locally tailored, fiscally sustainable management and technical approaches.

Today, I will address some of the basic concepts and principles that we have, as we look to engage and to work constructively with the Congress and other stakeholders on the whole water and waste, water infrastructure issues. One is to recognize that there is a fundamental need for a strong partnership, public/private partnership.

Another is to recognize that there needs to be encouragement and incentives for fiscal sustainability and improved management; whether it is asset management, with some of the other mechanisms, to really get at the gap, and to have a more cost-effective approach.

Another important principle involves recognizing the importance of cost-based rates: water and sewer rates. Another is to encourage innovation, and that is done through a variety of mechanisms, but certainly through increased research and development of innovative technologies and more cost effective approaches to waste water and drinking water treatment.

A couple other principles are encouraging conservation and reuse reclamation of water and waste water. Then a final one is to encourage watershed-based approaches.

Certainly, for the Administrator, a high priority of hers, as included in the budget request for fiscal year 2003, is to encourage more watershed-based approaches, through targeted initiatives that bring together drinking water and waste water, and focus on environmentally important projects.

Now if I could just turn briefly to S. 1961, I am pleased to be able to say that in many respects, the legislation is important and a strong step forward. It has many provisions in it that encourage fiscal sustainability and greater flexibility.

As you might have imagined, however, with respect to the funding levels, the Administration cannot support the funding levels in the bill. They are not consistent with the overall priorities laid out in the budget.

The Administration believes that we can have a constructive dialog, and focus on various ways to help meet the needs, recognizing the funding levels, and that needs to be addressed.

There are many other aspects of the legislation that are important steps forward. In the interest of time and brevity, I will just summarize by saying that there are aspects of the bill that we have provided technical assistance on, and that we look forward to talking with you about.

There are a lot of good things in the legislation to encourage fiscal sustainability. I think that is the keystone that we want to work with you on and focus on, while at the same time recognizing that there is a balance; and that the more provisions that are included, in terms of conditions on the loans, there is a greater recognition that we must keep in sight that if we add more requirements and conditions, that at some point, the utilities and the users will have a difficult process to go through in order to get the loans.

So there is encouragement from our perspective, and we look forward to working with you and with the committee, and continuing this extremely important dialog on water and waste water infrastructure.

Thank you, Mr. Chairman.

Senator JEFFORDS. Thank you.

Do you favor the approach in this bill in the allocation formula for the Clean Water State Revolving Fund, moving toward a needs-based approach, as in the Safe Drinking Water Act?

Mr. GRUMBLES. Mr. Chairman, I think there are some excellent aspects to the way the allotment formula is contemplated in the legislation. I know that traditionally, certainly as a former staffer on a congressional committee, I know that the approach is to defer to Congress in coming up with the allotment formulas.

I know that the model, the approach, that was used in the Safe Drinking Water Act amendments of 1996, has a lot of support among the various stakeholders. I certainly have heard, and I know that Administrator Whitman has heard, the message from others, including Senator Kyl, that as you do come up with an allotment formula, that needs has to be a significant part of that formula.

Now there are other criteria that one may want to look at, such as the level of effort that States have provided. But certainly, I think we recognize that need is and should be an important component of an overall formula for allocation of the funds.

Senator WARNER. Mr. Chairman, I had a question.

Senator JEFFORDS. Yes, Senator Warner.

Senator WARNER. I just visited a community in my State this week, which has been a beneficiary of this program. But in the last 15 years, it has lost the shoe industry, the textile industry, and the tobacco industry which touches it is diminishing. There is the peanut problem, and I could go on and on, and the furniture business.

They are in gridlock. They want to comply, and without the benefit of these funds, I just do not know what this community would do. So I am a strong supporter of the bill, in its present form, and I do hope we can move along with this. But it is a life and death matter with a lot of communities; several of them in my State.

Thank you, Mr. Chairman.

Senator JEFFORDS. Thank you for that helpful remark.

In your testimony, you say the following. "A continuing population growth means that even increasing capacity at current levels of waste water treatment will not be enough to prevent water quality degradation, and the development pressures on unprotected drinking sources will increase."

But then you finish by saying, "The President clearly defined his priorities in the State of the Union as defense and homeland security. As the increased spending called for in this bill is not consistent with those priorities, the Administration does not support the funding levels contained in S. 1961."

In summary, you agree there is a great need for water infrastructure funding. You recognize that at current levels, our nation will continue to pollute its waterways in an unacceptable level. But you conclude by saying, "The President only supports increased funding for defense and homeland security."

We are talking about safe drinking water here. We are talking about clean, fishable, swimmable lakes, rivers, and streams. We are talking about protecting human health and the environment. Are you telling us that this no longer is a goal of President Bush? Are you indicating that clean water and safe drinking water are not priorities of this Administration?

Mr. GRUMBLES. Thank you, Mr. Chairman.

That is an important discussion to respond to and to engage in. I think very clearly, clean water and safe drinking water are priorities and important aspects of the Administration and the budget request. I think there are a couple of things that need to be mentioned.

One is that the Administration does support the State revolving funds, but the Administration also recognizes that that is one tool, one aspect. The Administration recognizes that there is a large gap.

I think like all of the people in this room, everyone knows that it is more than just a Federal funding issue. It is an issue about encouraging an approach that deals not just with the supply side, but the demand side, and looks at asset management, looks at privatization incentives, tries to encourage State and local partnerships, and encourages innovative technologies and approaches. The point is to try to have a more cost-effective and equitable approach. As the testimony points out, there are tremendous needs. There are growing populations. There is a need for some innovation.

We very much look forward to engaging with the committee in a discussion over the Federal funding levels, and coming up with the best possible approach that recognizes that there are mandates, there are also affordability issues; but working through the State revolving funds, and exploring with a new look some of the more cost-effective and innovative approaches, such as asset management, that will make tremendous progress, as we face the challenges ahead.

Senator JEFFORDS. Well, I look forward to further discussion on this, because I am just not quite sure how all of that comes about, without sufficient increases in funds.

Anyway, they are holding the Senate up, and we cannot let them do that. So I will be back, hopefully.

[Recess.]

Senator CORZINE [presiding]. The hearing will come to order.

I think we will move to the third panel in this hearing: Mayor Doug Palmer from Trenton, NJ, and we are truly pleased he is here; Joseph A. Moore, Alderman from the city of Chicago.

It is always nice to have my first opportunity to chair a hearing while someone from my home State, who I care about, is about to testify. Mayor Palmer, would you like to start off?

STATEMENT OF DOUGLAS H. PALMER, MAYOR, TRENTON, NJ, CHAIRMAN, URBAN WATER COUNCIL, CONFERENCE OF MAYORS

Mr. PALMER. Certainly, and it is good to see you, Senator. We are very proud of you in New Jersey, and it is good to be here with you.

As was stated, my name is Douglas Palmer. I am the Mayor of Trenton, NJ, and the chair of the Conference of Mayors' Urban Water Council.

The Conference of Mayors is a national nonpartisan organization, that represents more than 1,100 cities across the nation. We represent the largest water and waste water systems in the United States.

Mr. Chairman, I would like to thank you and the other members of the committee for introducing S. 1961, the Water Reinvestment Act of 2002.

I first would like to take a few minutes to discuss some key components of your bill, and to touch on a few of the Conference of Mayors and Urban Water Council priorities. Since I do not want to go over my allotted time, I also would like to submit my full testimony for the record.

Senator CORZINE. Without objection.

Mr. PALMER. As you know, the issue of water and waste water infrastructure is critical to our nation and to our nation's cities. To maintain healthy and viable communities, we must make sure that our water and drinking water supply is clean and safe. As Mayors, we have recognized that there is not enough local, State, or Federal money available to satisfy all of the water infrastructure needs in the nation.

The Urban Water Council was created to focus on these issues. Its purpose is to assist local governments in providing high quality water resources in a cost-effective manner.

The bill you have introduced has many excellent components. First of all, we agree with the committee that the focus of this bill should be on water infrastructure investment, instead of a new set of water quality provisions.

Local elected officials are engaged in trying to achieve water quality goals, but we need a chance like this to focus on achieving already specified targets, and not be redirected to new goals.

The bill authorizes $20 billion between 2003 and 2007 for the SRF categories under the Federal Water Pollution Control Act, and $15 billion for the SRF categories under the Safe Drinking Water Act. These SRF authorizations are clearly not enough to subsidize the funding necessary to close the needs gap. A combined $35 billion boost over the next 5 years is also clearly much more than previous funding levels. For this, we are grateful to the Senate, and we support this approach.

S. 1961 also incorporates some innovate concepts, two of which are deemed critical by the Conference of Mayors in creating the right conditions for successful achievement of water quality goals.

First, the proposed Section 103 provision that would require a recipient of SRF funds to consider, among other things, forming public/private partners, or other cooperative partnerships, is a step in the right direction.

It has been our experience, since the mid-1990's, that alternative approaches to planning, financing, and operating water and waste water projects can yield greater public benefits for the amount of money that is invested. While choosing a public/private partnership approach should not be prescriptive, it should be made possible for those cities that want to take advantage of such an approach.

The Urban Water Council has prepared two reports, which are available on our web site, that describe over 40 public/private partnership projects that have realized savings. These partnerships were encouraged through changes in regulations under the Federal tax code to allow long-term loans, and with an Executive Order that modified the construction grant repayment provision.

When Congress and the Administration provide the right types of financial incentives, local elected officials can establish public/private partnerships that benefit our citizens and the environment.

The Conference of Mayors adopted a policy in 2001 to encourage competition in the different phases of new water and waste water infrastructure. This policy was adopted once it was determined that competition for both surface and sub-surface infrastructure projects need not be as costly as the traditional methods employed in the past.

The Lynn, Massachusetts experience is an example of what can be achieved by using a competitive approach. I will not go into that because of time. But the second demonstration approach incorporated in the bill is demonstration projects for water quality enhancement and management.

One of the most difficult problem we face as cities involves achieving State water quality objectives and total maximum daily loads, TMDLs, and the virtually unregulated nonsources, such as agricultural uses, that are usually outside of our jurisdictions.

The demonstration project provision of S. 1961 can provide some appropriate financial incentives necessary to bring voluntary cooperative efforts to solve the water quality designation TMDL problem that we are facing. The Conference of Mayors supports this innovative approach. What is also needed, however, is a strategy that will go beyond demonstration projects to a long-term solution.

We support the proposed requirement for recipients of an SRF loan to develop and submit asset management plans that specify how water and waste water facilities will be properly maintained over time.

Asset management is critical to the preservation of infrastructure. We have a long history of experience with using asset management planning, and we would like to mention that formalizing such as a requirement as a condition of receiving SRF funding should be integrated into the loan program in a cautious way.

The focus of our efforts at the local government level should remain principally with ensuring the proper treatment of drinking water and waste water for public health and local economy reasons.

The asset management plan is important, but the current proposal on what is acceptable is not entirely clear. We would be

happy to work with the committee to explore what an appropriate scope and details of an asset management plan should be.

Just quickly about the bill, we believe the bill specifies that disadvantaged communities can receive SRF loans with a 30-year repayment term. Perhaps the most significant shortcoming of this bill proposal is the lack of a similar 30 years repayment term for other communities.

Similarly, the bill does not contain any reference to removing private activity bonds used for water and waste water from the State volume caps. I understand fully that changing the tax code is not in the jurisdiction of this particular Senate committee.

However, I would like to convey to this committee that one of the most fruitful financial incentives that Congress can provide for increasing aggregate water infrastructure investment is to make certain that the largely unfunded environmental mandates and environmental goals they impose on local government should not be impeded by a rigid and inflexible tax code.

Finally, there is no mention in the bill of the imminent need for water systems to conduct security assessments and retrofit the proper anti-terrorist controls necessary to ensure the safety of our water supplies, and the physical integrity of our water infrastructure. We would be happy to work with the committee to recommend a provision to address this problem.

In conclusion, on behalf of the Conference of Mayors and the Urban Water Council, I wish to thank you again for this opportunity to speak before this committee. We look forward to working with you, as you move forward on this very important piece of legislation.

Thank you.

Senator CORZINE. Thank you, Mayor Palmer.

Alderman Moore.

STATEMENT OF JOSEPH A. MOORE, ALDERMAN, CITY OF CHICAGO, ON BEHALF OF THE LEAGUE OF CITIES

Mr. MOORE. Thank you, Senator Corzine and members of the committee. I am Joe Moore. I am an Alderman from the city of Chicago, and chairman of the National League of Cities Energy, Environment, and Natural Resources Committee.

I am here today to testify on behalf of the NLC and the 18,000 cities we represent across the United States on Senate bill 1961, the Water Investment Act of 2002.

I would like to commend Senator Crapo, as well as Senators Graham, Jeffords, and Smith, for recognizing a need for a Federal partnership to help finance the rehabilitation and replacement of our nation's aging water infrastructure. We deeply appreciate your willingness to commit $35 billion over the next 5 years to our waste water and drinking water infrastructure needs.

There are a number of provisions in S. 1961 that NLC believes to be particularly helpful to cities and towns. Allow me to briefly highlight six of them: No. 1, the extension of the transferability provisions; No. 2, the revisions to the Clean Water Act State Revolving Fund allocation formula to reflect needs more closely; No. 3, the extended repayment period for loans from the State Revolving Funds. We recommend that these provisions be applicable to all

loans, not just to those to small communities. No. 4, the addition of source water protection as an eligible activity for funding; No. 5, the inclusion of demonstration projects. We strongly urge you to add storm water as an appropriate category, as well; and No. 6, NLC supports the bill's provisions providing nonrefundable assistance to communities that do not meet the strict definition of a disadvantaged community.

It is unclear, however, how this provision would be implemented, and we look forward to working with you to clarify this matter.

There are two provisions which we believe should be added to the bill. First, NLC believes water infrastructure should be expressly highlighted as a principle and primary purpose of S. 1961. While we recognize that the current statutes authorize the use of State revolving fund resources for infrastructure replacement and rehabilitation costs, the enormity of our nation's water infrastructure needs, and a number of the Senators referred to them today in their own States, mandates special attention in the bill.

Second, we agree with the Conference of Mayors that water security be included as a necessary and legitimate use of State revolving funds, in light of the recent tragic events.

There are some provisions in S. 1961 that we believe need further clarification or revision. We certainly understand and appreciate the Federal Government's legitimate desire to ensure that Federal dollars are spent wisely and prudently. There is no question about that. We are concerned, however, that too many mandates and conditions may discourage cities from applying for funds regardless of how pressing their needs are.

With respect to the provisions on asset management and local rate structures, NLC would like to work with you to assure that all water system function effectively and efficiently to meet the needs of local residents. Again, we want to make sure that the mandates and the conditions are not to onerous.

We are concerned about the penalties assessed if States fail to develop asset management strategies. Reducing Federal assistance to States penalizes the local governments in those States. We, again, would like to work with you to ensure an equitable solution to this problem.

We are concerned about the provision that appears to either require or encourage public/private partnerships in the water business. Certainly, we support those when they work. However, the majority of large private water companies operating in the United States are foreign owned.

We are now only beginning to understand the full impact of international trade agreements on the ability of local governments to regulate and operate local utilities, once they are under contract with a private partner.

We ask that you fully understand the ramifications of public/private partnerships in the water business, in light of the trade agreements, before requiring or encouraging such activities in Federal law.

Finally, we are unclear as to whether the consolidation provisions are a funding requirement. Some systems, such as Chicago's, already serve millions of customers, and further consolidation is either feasible or sensible.

Furthermore, Federal requirements exist that actually impede consolidation. One example is Section 1926(b) of the Agriculture Act of 1961, which disallows absorption of any drinking system indebted to the Farmers Home Administration. Many of these systems are inefficient and marginally protective of public health. Yet, Federal law bars State and local efforts at consolidation in such areas.

Thank you for the opportunity to testify for the National League of Cities, and for initiating the legislative process on Senate bill 1961. NCL looks forward to working with you to make this one of the most important and significant pieces of legislation enacted by this Congress. I look forward to responding to any questions you might have.

Senator CORZINE. Thank you.

I am sure Senator Jeffords will be back and has a series of questions. So I will start, and then we will go to Senator Crapo, if that is OK.

Let me ask, on some of the financing issues that were mentioned, Mayor Palmer, you talked about the 30-year repayment term for disadvantaged communities that you wanted to see extended to all communities.

Then I would also like to hear how serious an imposition it is now that the private activity bond caps exist, and what kind of broader funding we would be able to get for water infrastructure projects, if we were able to deal with those volume caps. Is there a dam that is backing up actions that would work to create greater activity with the revolving funds if we removed those caps?

So my question is on either one of those or both issues, and Alderman Moore, if you want to comment, I would appreciate it, as well.

Mr. PALMER. Well, you know, the volume cap certainly could help if that were changed. There is no way really for municipalities to really finance clean drinking water, the Clean Drinking Water Act. I mean, we just do not have enough money. The only thing we can do is raise rates, which is totally unacceptable.

As you know, there is a needs gap. One of the ways that it can be fixed is if we look at the volume caps of private activity bonds, and use that as a source of helping the private sector get involved in forming public/private partnerships, and moneys that can be used to help narrow that.

Because there is no way, when we look at trillions of dollars over the next 10, 15, 20 years, in terms of making our water safe to drink and dealing with the standards that are out here; there are no real ways to do that, other than continuing to raise rates, which becomes prohibitive. We should look at ways in which you can life these caps, so that more private activity can be involved in the financing of these structures.

Mr. MOORE. In Chicago's case, on the basis of a recommendation from a consulting firm, we have put in the process of a rate increase of 4 percent every year for the next 4 years. So we are undertaking steps to do what we can, to go back to rate payers to take care of our very pressing infrastructure needs.

The problem is, however, that they are so great, and there are only so many times that you can, if you will, go back to the well

and ask the rate payers to pay more. While we do not fall under the strict definition of a disadvantaged community, we have within the city of Chicago large portions of our city that are disadvantaged, where we have people of very low and fixed income, who simply would not be able to either directly, as homeowners, or indirectly, as renters, afford the rate increases that would be required in order to meet our infrastructure needs.

Senator CORZINE. Are you already in a situation where your rate increases are reviewed by State boards or other structures? Are you challenged on those rate hikes on a regular basis?

Mr. MOORE. No, no, we are not. I do not believe we are subject to any State review.

Mr. PALMER. In New Jersey, before we can raise rates, we have to go in front of the Board of Public Utilities and state our case. In my city, and I am bragging now, we have one of the lowest rates in the State. But as the Alderman said, there are only so many times you can continue to go back to the rate payers, when basically, if you raise it too high, they are really choosing between paying their rent or their mortgage or their water bills. There are only so many time we can do that.

Senator CORZINE. So you would believe that, again, these volume caps would be one way to get greater authorization for these projects to be met, without rate increases.

Mr. PALMER. Absolutely; it was scored, and I think it came out this week, at about $147 million, but that could be debatable. We had a little higher figure. But it is really a small price to pay in terms of investment in clean water.

I mean, no one cares about water, as long as they can turn on the faucet and see it coming out, and it is not green or brown or something. But the moment it stops coming out, or it has a funny color or a funny odor, then people get concerned about it. We want to do things before it gets to that point.

Senator JEFFORDS. I have one quick followup. Are both of you up against your volume caps on infrastructure water projects?

Mr. PALMER. I am not certain, but I believe so.

Mr. MOORE. I am not certain of that either, but we would be happy to get back to you on that.

Senator JEFFORDS [presiding]. Senator Crapo.

Senator CRAPO. Thank you very much, Mr. Chairman. I just have one question, but before I ask that, I want to thank both Mayor Palmer and Alderman Moore for your attendance here today, for your comments, and for your support of this very critical legislation.

The question I have is that there are a number of concerns in the country about excessive and uncontrolled growth, urban sprawl, if you will, and those kinds of issues. The legislation seeks to assure that water projects are coordinated with local land use plans, regional transportation plans, and State and regional municipal watershed plans.

I do not know if you have really focused on the legislation in that context; but my question is, do you see any difficulties with requiring that there be coordination with these types of land use plans or transportation plans, and if so, would you have any comment on that?

Mr. MOORE. I would certainly support that, as long as it is not too onerous. But we already do cooperate with other local governmental authorities. Personally, I believe we need to do more of that.

There is much more of an emphasis now on a regional approach in northeastern Illinois and northwest Indiana, and an acknowledgement that we are all dependent on each other. Decisions that one municipality make have an impact on other municipalities. So certainly, Chicago does not need a legislative mandate to cooperate with its neighbors. But to the extent that cities in this nation do, I think it is a good thing.

Mr. PALMER. I would agree with the Alderman. Now with sprawl and preserving open space, in New Jersey, where we have such little space as it is, and through our State plan, those collaborations are almost mandated, if I could say that. So that cooperation and coordination is necessary.

Senator CRAPO. Well, thank you, I suspected that, but I just wanted to be sure. Thank you very much.

Senator JEFFORDS. Thank you, Senator.

Mayor, as the Mayor of Trenton, NJ, you experience the effects of building water infrastructure on the grassroots level. In particular, urban sprawl caused by unplanned and uncoordinated growth can have a detrimental effect on the city's cost to the living and quality of life.

For that reason, I included a provision in the Water Investment Act to ensure that the construction of water infrastructure is coordinated with land plans, watershed plans, and transportation plans. Do you believe that there is sufficient funding to stem urban sprawl that might follow newly constructed water infrastructure?

Mr. PALMER. Yes, I believe so. I think that is very necessary in the legislation. As I stated before, in New Jersey, sprawl is a tremendous problem. Our suburban areas, of course, want to limit growth. Our urban areas want to increase growth, because that is where the infrastructure is. Using waste water sewer capacity is a way of basically expanding growth in areas where it is not wanted.

I think that coordination has to continue to be there, and recognize that we all have to work together in a coordinated approach to limit sprawl, but also not prohibit growth, because properly planned growth is good. Uncontrolled growth and uncontrolled expansion of infrastructures without looking at what is there, in terms of transportation, schools, and open space could be a problem.

Mr. MOORE. Senator, I agree. I think that is a very key provision of this bill. Like New Jersey, we have had a serious problem with sprawl in northeastern Illinois. The amount of land growth that has occurred has far exceeded the population growth by many, many times, and we simply have to get a handle on that.

So we have already begun a process of regional cooperation, of taking steps to begin to curb growth, and also to encourage Federal legislation that will help us to rebuild our city, and to rebuild the infrastructure within our city, so as to discourage the kind of unchecked urban sprawl that has occurred. Certainly, the provision you are referring to in S. 1961 will be a helpful tool to enable us to stem unchecked growth.

Senator JEFFORDS. I thank you both.

Senator Chafee.

Senator CHAFEE. Thank you, Mr. Chairman.

I heard Senator Voinovich's earlier comments about where we are going to get the money, and I just concur that it is distressing to hear the testimony of how important this is. At the same time, I think it is going to be a tough year ahead of us, as we try and meet all the priorities. I appreciate and commend you for your testimony here today.

Senator JEFFORDS. Thank you, Senator.

Well, I thank you both. This has been a very helpful testimony.

Mr. MOORE. Thank you, we appreciate your sponsorship of this legislation, and look forward to working with you as we get it through Congress; thank you, Senator.

Senator JEFFORDS. Don't worry, we will be in touch.

We will now proceed to the fourth panel. The fourth panel consists of Nancy Stoner, director of the Clean Water Project, Natural Resources Defense Council; Paul Schwartz, national policy coordinator of the Clean Water Action; Bill Kukurin, of the Associated Builders and Contractors; Jim Barron, president, Ronkin Construction, testifying on behalf of the National Utility Contractors Association; and Mr. Terry Yellig, building trades attorney, Sherman, Dunn, Cohen, Leifer & Yellig, testifying on behalf of the International Union of Operating Engineers. We are pleased to have you all with us. Ms. Stoner, we are going to start with you, I guess, and work down the line, so go right ahead.

STATEMENT OF NANCY STONER, DIRECTOR, CLEAN WATER PROJECT, NATURAL RESOURCES DEFENSE COUNCIL

Ms. STONER. Good morning, Mr. Chairman and members of the committee. I am Nancy Stoner, director of the Clean Water Project at the Natural Resources Defense Council, and one of the co-chairs of the Clean Water Network, which is a coalition of more than 1,000 groups supporting clean water from across the nation. I present the testimony of behalf of both NRDC and the Clean Water Network this morning.

Thank you for holding this timely hearing today on water infrastructure investment. As Ben Grumbles mentioned, this is the 30th anniversary of the Clean Water Act this year. This is a tremendous opportunity for the Congress to provide increased funding and essential improvements in these programs.

The Federal Government's investment in waste water and drinking water treatment, over those 30 years, has brought tremendous progress in cleaning up our waterways. That progress, however, has been overtaken by water pollution resulting from urban storm water, agricultural run-off, and discharges of inadequately treated sewage from our deteriorating sewage systems.

We need to step up our investment and spend smarter now, to continue to make progress in keeping the promise of the Clean Water Act for clean, safe, usable water for the next generation. I am pleased to hear that many members of the committee support those goals, and spoke in favor of them today.

As an initial matter, we urge you not to use reauthorization of the Clean Water and Safe Drinking Water SRF as a vehicle for re-

considering clean water or safe drinking water protections. Developing a new paradigm for water infrastructure funding that will better meet the needs of our nation and provide greater environmental benefit for each dollar spent is a large enough task for the moment.

We would like to see water infrastructure legislation achieve three major goals: substantially increased funding for State clean water and safe drinking water projects; spend that money on more cost effect and environmentally beneficial projects; improve public participation in the funding process; and increase State accountability for the expenditure of Federal funds.

My written testimony describes each of these issues in depth. I request that I be able to submit that testimony for the record.

Senator JEFFORDS. Without objection.

Ms. STONE. We need to authorize substantially more SRF funds to close the gap between our water needs and available Federal funding. While there are differing estimates on the amount of additional funding needed, the need for greater investment in clean water and drinking water infrastructure is clear and undisputed. We commend the sponsors of the Water Investment Act of 2002 for supporting substantially increased funding over the next 5 years.

We urge you to look ahead, and to authorize additional spending for at least the next 10 years, since we know now that we will continue to need vastly increased water infrastructure financing beyond 2007.

The growing funding gap suggests not just the need for more funding, but also the need to begin to spend that funding more wisely, to obtain the greatest amount of environmental benefit per taxpayer dollar invested in water infrastructure. We should not merely rebuild our waste water systems, using the hard infrastructure technologies of the past.

We must become smarter about stretching our Federal investment in water infrastructure, by spending more on green infrastructure, nonpoint and nonstructural solutions that are more efficient and more environmentally effective than traditional concrete and pipe solutions.

I have brought with me today a poster to illustrate a number of those green infrastructure approaches. I would ask you to take a look at those. They include water re-use, the use of eco-roofs or roof gardens, stream buffers, rain gardens, and conservation designs.

These can be used in communities across the country, and are being used in communities across the country, to save money, and to provide additional benefits, in addition to water quality, like wildlife habitat, enhanced drinking water supplies, smog reduction, thermal reduction. These techniques that mimic Mother Nature can provide tremendous benefits. We ask you to include additional incentives in the legislation for the use of green infrastructure.

In particular, we urge you to provide a 10 percent new funding incentive for States that establish dedicated funds for nonstructure and nonpoint solutions.

We support a number of other mechanisms to ensure that taxpayer dollars are spent on projects that will address the greatest environmental and fiscal needs, including requiring that clean water SRF funds be spent to address those projects identified by

the State as its top priorities; prioritizing projects that meet the most significant public health and environmental needs and those that help disadvantaged communities; ending subsidies for sprawl development, which increases water pollution in the long run; and ending funding subsidies for entities that will not commit to comply with the law; and improve publicly available information about projects that taxpayer dollars are used to fund.

As poll after poll has shown, Americans want clean, safe water, and are willing to invest more to get it. We applaud you for moving forward with legislation to address the public's demand for clean water. We urge you to ensure that the bill you pass will encourage the most cost-effective strategies to meet that demand.

This year, on the 30th anniversary of the Clean Water Act, let us move ahead with legislation that will ensure clean and safe drinking water for years to come.

Thank you for providing me with the opportunity to testify today. We have drafted specific language on each of these issues, and would like to work with you to address them.

I would be happy to answer any questions that you may have.

Senator JEFFORDS. Thank you very much.

Next is Mr. Schwartz.

STATEMENT OF PAUL SCHWARTZ, NATIONAL POLICY COORDINATOR, CLEAN WATER ACTION

Mr. SCHWARTZ. Great, good morning, Mr. Chairman; good day, Senator Crapo, Senator Chafee, and the rest of the distinguished committee. I am Paul Schwartz, the national policy coordinator for Clean Water Action. We are a community-based national environmental group in 15 States with 700,000 members.

I also come here today representing the Campaign for Safe and Affordable Drinking Water, a coalition of over 300 organizations, including not just environmental ones, but consumers, health care providers, and vulnerable populations groups such as the National Association of People with AIDS.

As Nancy has touched on the clean water side of the ledger, I am going to be focusing more on the drinking piece. I want to make a couple of more general points. Last Thursday, White House spokesperson, Scott McClellan said, "we can have economic growth and protect our environment." We think that this bill, S. 1961, is an example of just that type of blending that the Administration was alluding to.

We think that it is really important that as we press our leadership in the war against terrorism, that we do not go AWOL in the war against environmental pollution. I appreciate your remarks on that count, Senator Crapo.

The importance that we want to draw out here is a couple of things. We have talked a lot about environmental and public health issues. One issue that I want to talk about is jobs, which is not something that we normally talk about here.

But for each billion dollars of additional investment that we actually appropriate and put out there over the next few years, it will generate somewhere between 35,000 and 50,000 jobs at the local level across the country.

So the additional authorizations that we have here in front of us represent somewhere between 700,000 and 1 million additional jobs nationally. We think that is important, too, for the security and health of our country.

Getting back to the bill itself and to the environmental and public health issues, I think it is important to recognize, as many have, in talking about the mandates that are in front of us, that on the drinking water side, there are many pressing drinking water issues that are right in front of our face, including arsenic, cryptosporidium and other microbial risks, radioactive radon, and the groundwater rule.

All of these are critical rulemakings that will be having an impact on the quality of our public health across the country, and are going to require additional dollars on the part of rate payers and tax payers at the local level, State matches, and we think, an ongoing and longer term set of Federal funds from the Federal Government.

To that end, although we applaud the bold step that S. 1961 takes in authorizing an increased injection of Federal fundings for a 5-year period, I would echo Nancy's call that we have a longer term solution to an ongoing commitment through a Clean Water Trust Fund, to help funnel Federal dollars to needy communities across the country for many of our critical infrastructure needs.

We would suggest that this trust fund should, in part, be funded by a "pollute or pays" mechanism, that imposes a small fee on those vested interests whose pollution behavior creates the need for drinking water cleanup and other water cleanup and public health protection in the first place.

In addition, we would echo the call for more of a focus on nonpoint source pollution control. We think that it is very important that 10 percent of the money on the clean water side gets set aside for nonpoint source control.

Now since I'm focusing in on drinking water, I think it is fair to ask, why am I on the clean water side of the ledger? That is because the Safe Drinking Water Act really has no source water protection provision. So the Clean Water Act is its first line of defense.

Last, but not least, we would speak out for more accountability and more public participation provisions to be included in S. 1961. One of the clear problems is that when you add together all the sources of funding from the two SRF accounts and from the State matches, you are looking at, even under current authorizations and appropriations, $200 billion being obligated by the States over the next 20 years, with very little Federal oversight, and almost no citizen participation.

It is a scandal that many communities do not know how to access these funds, and that citizens are not involved in the priority setting. So we are asking for a strengthening of those provisions.

Thank you very much for the opportunity to testify. We look forward to working with this committee in moving forward this authorization through Appropriations, and we look forward to helping out on these specific suggestions that we have put in front of you.

Senator JEFFORDS. Thank you, Mr. Schwartz.

Mr. Kukurin.

STATEMENT OF BILL KUKURIN, PRESIDENT, KUKURIN CONTRACTING, ASSOCIATED BUILDERS AND CONTRACTORS

Mr. KUKURIN. Yes, thank you. Good morning Mr. Chairman and distinguished members of the committee. My name is Bill Kukurin, president of Kukurin Contracting, located in Export, PA.

On behalf of the Associated Builders and Contractors, I am honored to be here and would like to thank Chairman Jeffords, Ranking Member Smith, and members of the Senate Committee on Public Works for providing me with this opportunity to discuss the Water Investment Act of 2002, and the important role it could play in improving our nation's water quality and infrastructure.

I will be summarizing my comments, but I would request that my full statement be submitted for the official record.

Senator JEFFORDS. Without objection.

Mr. KUKURIN. For nearly 30 years, Kukurin Contracting has been operating in western Pennsylvania as a family-owned and operated business. Kukurin Contracting has 125 employees, and focuses primarily on municipal work, specifically in the construction and maintenance of water and sewer lines, pumping stations, water tanks, reservoirs, and sewage treatment facilities.

We have built our reputation through providing quality workmanship for our clients, and safe, health worksites for our employees.

In 1997 and 1999, Kukurin was recognized by ABC National as one of the leaders in the construction industry, and was presented the annual excellence in construction award for work on several of our projects.

Kukurin Contracting has been a member of the western Pennsylvania ABC for 20 years. ABC is a national trade association, representing more than 23,000 merit shop contractors, subcontractors, materials suppliers, and construction-related firms within a network of 82 chapters throughout the United States and Guam.

Our diverse membership is bound by a shared commitment to the merit shop philosophy within the construction industry. This philosophy is based on the principles of full and open competition unfettered by the Government, and nondiscrimination based on labor affiliation and the awarding of construction contracts to the lowest responsible bidder, through open and competitive bidding.

This process assures that taxpayers and consumers will receive the most for their construction dollar. With 80 percent of the nation's construction workers choosing not to be represented by a Union, ABC is proud to be their voice.

I would like to commend Chairman Jeffords and Senators Smith, Graham, and Crapo for introducing Senate bill 1961, the Water Investment Act of 2002. I also commend this committee for undertaking a comprehensive look at our nation's water infrastructure needs.

The costs of insufficient attention to clean water issues are indisputable. Non-point source pollution leaking toxins, storm water runoff, and coastal pollution pose grave risks to water quality. Our nation's water quality and environmental infrastructure could not be more vital to our health, safety, and overall quality of life.

The Water Investment Act of 2002 would serve to ensure the environmental and financial stability of our nation's water programs.

This measure would authorize the Clean Water and Safe Drinking Water State Revolving Loan Fund Program at $35 billion over 5 years.

THE SRF Program allows States to provide low-cost financing to communities for the construction, repair, and rehabilitation of waste water collection and treatment facilities. While this legislation seeks to provide additional resources to States and localities to aid them in meeting water infrastructure needs and increased State flexibility to States in administering their water programs, the imposition of the Davis-Bacon Act to this vital program would negate many of these efforts.

While ABC members have concerns regarding a number of waste water needs, I will focus my comments today on funding for construction of waste water treatment facilities, and on the detrimental impact that the discriminatory and antiquated Davis-Bacon Act would have, if included in the legislation, on these vital projects.

Congress passed the Federal Water Pollution Control Act, the Clean Water Act, in 1972, which linked the Federal Government with States and cities to clean up the country's waters, providing projects for water supply and waste water treatment. The Clean Water Act of 1987 phased out the construction laws grant program by the close of fiscal 1990.

From fiscal year 1990 through 2001, the EPA made available over $20 billion in grants. Even this number was under the appropriated amount. While this program has been a significant success, it is clear that to accommodate the nation's growing population, to meet new water quality standards, and repair and upgrade aging facilities, much greater investment must be made.

Estimates for future needs for clean water infrastructure are staggering; anywhere from $300 billion to $1 trillion, over 20 years.

Small communities and States with large rural populations are having the largest share of problems with the SRF Program. Many small towns did not participate in the previous grants program, and consequently are likely to require major projects to achieve compliance with the law. Yet, these communities often lack an industrial tax base, and thus face the prospect of very high per capita user fees, if their citizens are required to repay the full capital costs of sewage treatment projects.

According to the testimony from the General Accounting Office, SRFs will only meet about one-third of the State's funding needs, and will generally be unable to meet the needs of the disadvantaged communities.

There are many small communities that do not have the capital base necessary to support a State Revolving Fund. More direct grant money is required for lower income communities.

I see I am running out of time here. I would like to go more to the Davis-Bacon Act. ABC commends the sponsors of this vital legislation for not expanding Davis-Bacon Act requirements to the Clean Water/Safe Drinking Water State Revolving Fund. The SRF has operated efficiently without Davis-Bacon since 1995.

ABC encourages the committee to continue to allow States and municipalities to operate the SRFs without this expensive and discriminatory requirement.

Davis-Bacon is basically a relic of the infamous Jim Crow era. The law enacted in 1931 was intended to prevent minority workers, mostly from the South, from competing with northern, mostly union, construction firms, for Federal contracts in the North.

Conceived during a time of discrimination, the act still has much the same effect today. Davis-Bacon disadvantages small, emerging businesses and minority businesses. Davis-Bacon discourages many qualified small and minority-owned contractors from bidding on public projects, because of the complex and inefficient wage and work restrictions, which make it nearly impossible for small businesses to compete with the well capitalized corporations.

To seek Davis-Bacon contracts, small and minority-owned firms must not only pay the prevailing wage, and adopt inefficient work practices and rigid union-based job classification; but also expose themselves to huge compliance costs and burdensome paperwork regulations. As a result, few small or minority firms win Davis-Bacon contracts, and many others give up trying.

In conclusion, Mr. Chairman, ABC strongly supports the efforts being made by the Environment and Public Works Committee to ensure that the nation's water quality is improved. ABC supports the Water Infrastructure Act of 2002, as currently written.

We believe that with full funding and without any expansion to the Davis-Bacon Act, our water infrastructure needs will begin to diminish, and our nation's water quality will dramatically improve.

It is imperative to improve the efficiency of the SRF Program by not imposing outdated and unnecessarily perceptive administrative requirements that the Federal Government places on municipalities, namely, the Davis-Bacon Act.

On behalf of the Associated Builders and Contractors, I again want to thank you and the members of the committee for the opportunity to testify here today. I will be happy to answer any questions you may have.

Senator JEFFORDS. Thank you, Mr. Kukurin.

Our next witness is Mr. Jim Barron. Please introduce yourself and you may proceed.

STATEMENT OF JIM BARRON, PRESIDENT, RONKIN CONSTRUCTION, ON BEHALF OF THE NATIONAL UTILITY CONTRACTORS ASSOCIATION

Mr. BARRON. Thank you, Chairman Jeffords, I appreciate the opportunity to speak before the committee today, and thank the distinguished Senators that are members of the Senate Environment and Public Works Committee.

My name is Jim Barron. I am president and owner of Ronkin Construction, which is located just northeast of Baltimore. We are a small underground utility contracting firm that has been in existence for 25 years, building infrastructure in the Baltimore area.

I am here today representing the National Utility Contractors Association, better known as NUCA. As Senator Bond spoke earlier on this issue, we are the true environmentalists. The men and women of NUCA are the people that build and maintain the nation's water, waste water, gas, electric and telecommunications infrastructure in this nation.

Our members are also manufacturers and suppliers, that supply the needed services and materials to do this work. We are the people that get out there every day and have the firsthand knowledge about the existence and the depletion of our existing infrastructure in the United States today.

The picture is bleak. It is getting worse and it is not going to get any better by itself. We need some help. However, NUCA and this committee and the Congress of the United States have an opportunity today to do something about that.

Winston Churchill once said that a pessimist is one that looks at the difficulty in every opportunity, and the optimist is the one that looks at the opportunity in every difficulty.

Well, we need to be optimists, and we need to look at the opportunity that we have before us today, to do something to the Water Investment Act of 2002. NUCA and this committee can work together to overcome this great difficulty through optimism. Through the Clean Water SRF and the Drinking Water SRF, we can begin to correct the problem.

I would like to thank Senator Voinovich, who was here earlier today, for his commitment to the SRF through Senate bill 252. We are very, very happy that the key components of that bill are embodied in the Water Investment Act of 2002.

I would also like to thank Senator Bond for his commitment through the VA and HUD Appropriations Committee, and my Senator, Senator Mikulski, who have worked tirelessly to keep the funding limits up, every time somebody decides to cut it, year in and year out. We are very appreciative of their work.

I would also like to thank Senator Bond this morning for commenting that we are the true environmentalists. You know, it is very nice to hear, when we are standing knee deep in raw sewage in Baltimore trying to repair a broken sewer main, that somebody in the U.S. Senate thinks we are environmentalists and not a honey dipper. So we do thank Senator Bond for that comment.

That is the view from the trenches. We are out there every day, and we see the problems that we face with America's infrastructure, in the cities and the communities around this great nation.

In Baltimore alone, which I am most familiar with, 2 weeks ago in the *Baltimore Sun*, they reported that due to EPA requirements right now, in order for Baltimore and the citizens of Baltimore to not be fined heavily by EPA, the Mayor and the City Council will have to come up with $982 million over the next 3 years, just to correct the critical deficiencies in that crumbling infrastructure. That is a tough chore to accomplish in a city whose tax base has been cut in half over the last 10 years.

The cornerstone of the entire program has to be the Revolving Funds. It is a win/win for everybody. It not only corrects and maintains the existing infrastructure, but it also creates jobs. Studies have proven that for every billion dollars spent in SRF funding, that at least 55,000 jobs are created as a result of that.

Let us look at the ripple effect. Let me give you an example. I just completed a project in Baltimore City that used to be a highrise of subsidized housing. They imploded the project, 35 acres. We put in $2.5 million worth of infrastructure, and today, they are

building 300 townhomes there, that the citizens of Baltimore can, in fact, buy for $60,000 to $70,000.

When they buy those homes, they have to get mortgages, through mortgage bankers and title companies. They have to furnish those homes with appliances and furniture. They are going to come back into the city of Baltimore and increase the tax base. The ripple effect is phenomenal, when this kind of money gets turned back into the community.

My grandfather once said, "It takes as long to get better as it took to get sick." This problem did not just surface overnight. It has been building and building for years and years, and we are going to have to have not funding just this year, but in the years to come, to correct the problem. We have to keep chipping away at it, year after year after year; not just the utility contractors, not just Congress, but us, together, have to work to solve this problem.

Let us talk real quickly about the hot potato, Davis-Bacon. NUCA's membership is made up of open shop and union shop contractors. So NUCA's organization has to be somewhat neutral on this issue.

But we believe there is a possible compromise; and that is, by allowing Davis-Bacon to be part of the first funding round, it would satisfy and compromise the position of this hot potato. If we cannot ignore it, we have to find a way to get around it and compromise that issue.

In closing, I encourage you, when you leave today or when you go back to your communities, to take a ride. Just get in your car and take a ride and look around. You can see the bridges, you can see the highways, you can see the buildings that are in disrepair that need repaired; but you do not see the crumbling infrastructure underneath the streets.

We cannot ignore it any longer. We have to work together and do something with the crumbling infrastructure in this country, and the SRF in this act will go a long way to accomplish that.

Thank you very much.

Senator JEFFORDS. Thank you.

Our final witness is Terry Yellig, business trades attorney for Sherman, Dunn, Cohen, Leifer & Yellig.

STATEMENT OF TERRY YELLIG, BUILDING TRADES ATTORNEY, SHERMAN, DUNN, COHEN, LEIFER & YELLIG

Mr. YELLIG. Thank you, Mr. Chairman, my name is Terry Yellig, and I am testifying on behalf of the 14 affiliated unions that comprise the Building and Construction Trades Department of the AFL–CIO, as well as the millions of skilled construction workers who those unions represent.

We commend you, sir, and Chairman Graham, as well as Senators Crapo and Smith, for introducing S. 1961, the Water Investment Act of 2002, which would authorize $35 billion over 5 years for investment in America's clean water and safe drinking water infrastructure. It is nice for a change to be in the majority. Most of the speakers have endorsed that level.

As we all know, recent annual appropriations have only funded approximately $2 billion per year to help pay for clean water and safe drinking water infrastructure projects. This is a woefully inad-

equate amount. That is why we are encouraged by S. 1961, and view it as an indication that this committee intends seriously to address America's water infrastructure needs.

Notwithstanding, the Building and Construction Trades Union strongly feels, like many of the other witnesses, that more should be done to tackle our massive water infrastructure needs. We recognize the constraints that looming budget deficits pose on Federal infrastructure programs.

Nevertheless, we strongly urge the committee to take a long, hard look at authorizing even higher levels for funding for clean water and safe drinking water projects in S. 1961, in order to bring funding levels up to the $50 billion to $60 billion level over the next 5 years, as was recommended in a needs assessment report prepared by the Water Infrastructure Network, a broad-based coalition of locally elected officials, drinking water, and waste water service providers, contractors, engineers, environmentalists, and labor unions.

As building and construction trades unions, we pledge our support to moving water infrastructure legislation through Congress that authorizes as much funding for new and improved clean water and safe drinking water infrastructure as possible.

In addition to the various other policy considerations that we have heard about in this legislation, we are concerned about the labor standards that will be applicable to construction workers employed on federally assisted water infrastructure projects.

Specifically, we respectfully urge this committee to take steps necessary to ensure that Davis-Bacon prevailing wages are paid on all such projects assisted under the Clean Water and Safe Drinking Water Acts.

As many members of this committee are aware, Congress has, for 71 years, consistently applied Davis-Bacon prevailing wage requirements to Federal infrastructure programs, regardless of whether it was under Democratic or Republican control, or whether there was Democratic or Republican Administration in the White House.

In recent years, as Congress has considered using various so-called innovative financing techniques that are intended to leverage a limited amount of Federal capital investment for maximum public benefit, as well as the more traditional Federal grant programs, it has steadfastly continued to apply complete and comprehensive Davis-Bacon wage coverage to construction projects funding under these programs.

In fact, Congress included comprehensive Davis-Bacon prevailing wage requirements in the Clean Water Act in 1972, and in the Safe Drinking Water Act in 1974.

However, as I have explained more fully in my prepared statement that I have submitted to the committee, EPA has concluded that Davis-Bacon prevailing wage requirements no longer apply to the construction of any water treatment projects assisted by State water pollution control revolving funds that began after the end of fiscal year 1994, even though, as I mentioned earlier, the Clean Water Act includes the Davis-Bacon prevailing wage provision.

Accordingly, it is necessary to amend the Clean Water Act, so that EPA will have no discretion concerning application of Davis-Bacon prevailing wage requirements to construction of water treat-

ment projects, including those supported by funds directly made available through Federal capitalization grants and those supported by recycled Federal funds.

Similarly, as I explained in my prepared statement, the Safe Drinking Water Act already includes a broadly worded provision that directs the EPA Administrator to "take such action as may be necessary to assure compliance with provisions of the Davis-Bacon Act."

However, contrary to that obligation, EPA now claims that the Davis-Bacon prevailing wage requirement in the Act does not apply to construction projects assisted by Safe Drinking Water Revolving Funds.

For this reason, the Davis-Bacon wage requirement in the Safe Drinking Water Act must be amended to make it clear that the Davis-Bacon requirements apply to all construction projects supported by Safe Drinking Water Revolving Funds, with resources directly made available from Federal capitalization grants or with recycled funds made available by repayment of those funds.

To fail to provide Davis-Bacon coverage of water infrastructure projects assisted by State Revolving Funds, under both the Clean Water Act and the Safe Drinking Water Act would, in our opinion, amount to piecemeal repeal of Davis-Bacon prevailing wage requirements applicable to two major Federal construction programs, contrary to congressional intent in the original Clean Water Act and the Safe Drinking Water Act, not to mention the other 60 or so Federal statutes that have extended Federal prevailing wage requirements to a myriad of other federally assisted construction programs.

We again commend the committee for coming to grips with our significant clean water and safe drinking water infrastructure needs, and we look forward to working with the Senators on both sides of the aisle, as the process moves forward.

Senator JEFFORDS. Thank you very much. That was an excellent statement.

Mr. Yellig, we have heard this morning that the application of Davis-Bacon, which we have just been discussing here, will increase the cost of the Federal construction from 5 percent to 38 percent, in some cases. Will you please respond to that claim, as well as Mr. Kukurin's claim that Davis-Bacon discourages minority and small contractors?

Mr. YELLIG. Well, with regard to the allegation that the application of Davis-Bacon prevailing wage requirements increases the cost of construction, first of all, it is important to understand that in any kind of construction project, whether it be water treatment or safe drinking water or housing or whatever, generally speaking the cost of the construction of the project, the labor cost, is approximately 30 percent and actually going down, as a relative portion of the overall cost.

Now in order for the Davis-Bacon wages to substantially inflate the cost of construction, even if the wages were 50 percent higher than otherwise without the prevailing wage requirement, for example, that would only result in a 15 percent increase in the overall cost, because it only accounts for 30 percent or less of the entire cost of the project.

The studies that I have seen and read indicate that the cost of paying prevailing wages is minimal, if anything at all. But the allegations that Davis-Bacon increases cost of construction projects like 15, 30 or 35 percent, it is just not possible. That is not possible.

With regard to opportunities for minority contractors, I spoke to a gentleman several years ago. He was a mechanical contractor here in Washington, DC.

He said that the Davis-Bacon Act was the best friend that he has, because it enables him to compete on a level playing field, because he knows that the cost of labor is going to be relatively the same; regardless of whether it is a small contractor or large contractor, the cost of labor is going to be the same. So therefore, it is eliminated from the competition, and places a greater emphasis on productivity and efficiency.

So the evidence that we have seen indicates that, in fact, the Davis-Bacon Act is actually a help to minority contractors in bidding for public work.

Senator JEFFORDS. Thank you.

Ms. Stoner, in your testimony, you stated that projects should be funded according to priority. Why is this important in terms of protecting the environment and public health?

Ms. STONER. I guess I would say a couple of things about that. The first is that there is a system for determining priority of the projects within every State.

That is the public's opportunity, that is everyone's opportunity to look at those questions about what will be most environmentally beneficial for that State, and to ensure that the priority list reflects that, to the best of the ability of the State, to put together that list.

Once that effort has been made, we feel it is very important to follow that list, the State's own determination, based on the information it has received of which projects will produce the most environmental benefit for the State. That is why we support funding from the priority list.

There has been a question raised, what about projects that are not ready to go forward? We would support allowing the State to fund the next priority project that is ready to go forward. We certainly would not want to hold up funding for any project that is ready to go forward, based on waiting for a project before it in line. But we believe that is the best use of our taxpayer dollars.

Senator JEFFORDS. I am interested in your pictures up there. In the upper left hand corner, that is obviously a drain pipe, and that water gets stored?

Ms. STONER. Yes, what this is, it is a storm drain. This is a gutter off someone's roof, like you probably have on your home and I have on my home.

What they have at the bottom here is rain barrel with a hose attached at the bottom, so that the homeowner can store that water and reuse it for, here you can see it is in the middle of a garden for watering the vegetation, the lawn, and so forth. It is a way of reusing water and harvesting storm water, is what it is sometimes called, to make beneficial use of it.

Senator JEFFORDS. Is it all gravity?

Ms. STONER. Yes, it is just gravity. This is a very inexpensive little device. You can actually buy it from mail order catalogs.

Senator JEFFORDS. Thank you, I might just do that.

You might have made a sale.

[Laughter.]

Senator JEFFORDS. Mr. Schwartz, in your testimony, you stated that more funds should be directed toward nonstructural, nontraditional water facilities. Do you have any sense as to how those expenses for nontraditional projects compare in terms of environmental benefit per dollar spent in structural projects; and are these projects an efficient use of SRF money to address nonpoint source pollution?

Mr. SCHWARTZ. Thank you for that question. Just before I answer it, I just want to make one other point on the question you asked Nancy about the priority projects.

Since there has been a lot of lesson learning from the Safe Drinking Water SRF, one of the things under the Safe Drinking Water SRF is that the States are now allowed to go around the priorities that are established by the rankings, except for readiness to proceed.

We think that that is a good thing to borrow from on the clean water side as well. Obviously, it takes away some flexibility on the part of the States, but it gets you some real accountability, in terms of scarce SRF funds being used for real public health and environmental needs.

To answer your question, currently in Washington, DC, and in cities and counties across the United States, we have mandates to fix very old problems that this generation did not put in place. These are things like combined sewer overflow problems.

The typical solutions that we are turning to are very expensive end-of-the-pipe deep tunnels. Now in a number of places, those deep tunnels have not worked too well. In Chicago, in Milwaukee, and other places, they are in place, and billions of dollars have been spent, and we are still having overflows of human sewage and we are still having problems in central business districts with overflows.

What we are not doing is taking a look at the engineered nontraditional solutions that Nancy has pointed to, in part, that can capture storm water, that can slow down the flow, and that can make sure that not only do we get receiving waters at the end of a build watershed, like in the Potomac and Anacostia River without overflows, but that we actually are able to use that water, say, in drought situations like we have now, to make sure that trees are getting enough water, that our communities are not flooding with that water every time it rains, and we are able to get really "two-for" double benefits.

If you consider spending the money on things like street cleaning, as opposed to your deep tunnel, you get to pick up the trash and the toxics that are dropping from cars, and divert them from the storm water flow.

When you look at the number crunching that has been done by local municipal experts in Prince George's County, Maryland, by over 15 Federal and State and local Agencies that are cooperating in this city and county of Los Angeles with tree people, to engage in large scale application of these technologies, you are looking at

real cost savings and real water quality pick-ups at the time you are looking at neighborhood revitalization.

We can bring to bear some of those numbers for you and put them in front of the committee, so that you can take a look at the emerging economics and the emerging science that it backs up this intuitive notion that people have, that you can use natural infrastructure engineered as a way to begin to deal with some of the costs and environmental components of these problems.

Senator JEFFORDS. We will followup with you on that. I would be interested in seeing what you have.

Well, thank you all. We are reaching the end of the hearing. All of us have other things to do, and I am afraid I have to roar off, too.

I just want to thank you for your testimony. I ask all of you to be ready though, because we will probably have some followup questions for you, and we would ask you to respond as quickly as possible. I ask all of our members to submit their questions for the record as soon as possible, so that we may share them with you.

Thank you for coming. This has been a very, very helpful morning to me. There has been some excellent testimony. I know the hard work that goes into preparing testimony, and I want to let you know that I appreciate it, and I am sure the whole committee does, especially the staff.

Thank you, and the committee adjourns.

[Whereupon, at 11:30 a.m., the committee was adjourned, to reconvene at the call of the chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Thank you, Mr. Chairman for holding this important hearing today on the growing water and wastewater infrastructure needs in this country. I would first like to compliment our chairman and ranking member, and Senators Graham and Crapo for working so diligently to produce a bi-partisan water investment bill, S. 1961, that we will hear about today. This bill is an important first step in the process of dealing with the critical issue of how the Federal Government can best help local water systems provide clean and safe water for their communities.

I have spent a lot of time with these issues in the past, particularly during the development of the Safe Drinking Water Amendments of 1996. We worked hard to produce legislation that would relieve local water systems of unnecessary regulatory burdens, while ensuring that those water systems had the flexibility and the resources they needed to provide their customers with clean water.

I worked hard to protect the interests of small and rural water systems in that bill. Small systems cannot spread their costs of complying with State and Federal regulations among a large number of ratepayers. This dynamic hasn't changed, and I'm afraid it will become more of an issue as new regulations come online. In my State of Montana, we have over 900 separate drinking water systems. Almost all of them serve fewer than 10,000 people. I've been told some 60 to 70 percent of the water systems in Montana that receive funding through the Clean Water or Safe Drinking Water Revolving Loan Funds are considered small and/or disadvantaged communities. Some of them, like the area around Three Forks, Montana, have significant problems with arsenic.

I want to make sure that, as we move forward with water investment legislation, these small systems will again be given the resources and the flexibility they need to protect public health and the environment, without being subject to unnecessary or undue regulatory burdens. The operators of these systems are trying to provide a basic public service to their neighbors. I don't want us to fall into the trap that led us to the 1996 Safe Drinking Water Act Amendments, where we unfortunately required systems, States, and the EPA to do way too much, to dilute their resources pursuing a lot of different efforts, instead of concentrating on the most egregious contaminants and problems, and focusing priorities on the what a system should be

doing to make its water as pure as can be for the consumers. In a tight budget situation, this is even more important than ever.

That said, I support the increased authorization levels in S. 1961 for both the Safe Drinking Water and the Clean Water State Revolving Loan Funds. I think this committee can send a strong message that clean water is a top priority, and that we in Congress must make the necessary investments in the nation's water and wastewater infrastructure to protect basic public health and environmental needs. Few things are as important as clean and safe drinking water for our citizens.

I look forward to hearing the testimony of the witnesses today and working with my colleagues on this important legislation. Thank you again Mr. Chairman.

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

INTRODUCTION

Good morning, Mr. Chairman and members of the committee. I am Ben Grumbles, Deputy Assistant Administrator for Water at the U.S. Environmental Protection Agency (EPA). First, let me convey Tracy Mehan's regrets for being unable to be here today to speak with this committee. Second, I appreciate this opportunity to provide the Administration's views on S. 1961, the "Water Investment Act of 2002," and being able to discuss how to ensure that the nation's drinking water and wastewater facilities can meet the challenge of protecting our public health and water quality in the 21st century.

Through a strong and evolving local, State, Federal and private partnership, the United States has made great progress over the past three decades in reducing water pollution and assuring the safety of drinking water. The Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA) 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 rivers, lakes, and coastal waters. In particular, our cooperative investment in water and wastewater treatment, and pollution prevention has paid dramatic dividends for water quality and public health.

The economic and social benefits of improved water quality are readily evident from urban waterfronts to recreational water bodies to wild rivers all across America. We have also made dramatic progress in improving the safety of our nation's drinking water. Today, more than 90 percent of the population served by community water systems receives water from systems with no reported violations of health-based standards in place as of 1994.

CLEAN WATER AND DRINKING WATER STATE REVOLVING LOAN FUNDS

The financial demands that communities face in providing clean and safe water to all Americans are substantial, and the Administration is committed to helping find ways to meet those demands. 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 primary mechanism that EPA uses to help local communities finance water infrastructure projects is the State Revolving Fund (SRF), established in the 1987 CWA amendments and the 1996 SDWA amendments. The SRFs were designed to provide a national financial resource for clean and safe water that would be managed by States and 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 2.4 percent (the average rate during the year 2001) saves communities 23 percent compared to using commercial financing at an average of 5.3 percent.

To date, the Federal Government has provided more than $19.7 billion in capitalization funding to States for their Clean Water SRFs, more than twice the authorized level for the program. With the addition of the State match, bond proceeds, and

loan repayments, States have $37.7 billion in assets in their clean water SRFs. Since 1988, States have made nearly 11,000 individual loans for a total of about $34.3 billion, with another $3.4 billion either unallocated or being readied for loans as of June 2001. In fiscal year 2001, the Clean Water SRF issued a record total of 1,370 individual loans with a value of $3.8 billion. The Clean Water SRFs have provided between $3 and $4 billion in loans each year for several years, and are widely considered a tremendous success story. For fiscal year 2003, the President's Budget proposes funding the Clean Water SRF at $1.212 billion.

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 2002, Congress has appropriated $5.3 billion for the Drinking Water SRF program. Through June 30, 2001, States had received $3.6 billion in capitalization grants, which when combined with State match, bond proceeds and other funds, provided $5.2 billion in total cumulative funds available for loans. Through June 30, 2001, States had made close to 1,800 loans totaling over $3.8 billion, with another $1.4 billion either unallocated or being readied for loans. Approximately 75 percent of the agreements (41 percent of dollars) were provided to small water systems that frequently have a more difficult time obtaining affordable financing. By the end of fiscal year 2003, we expect the number of loans issued by State Drinking Water SRFs to reach 2,400, with about 850 SRF funded projects having initiated operations by that date. The fiscal year 2003 President's Budget proposes to fund the Drinking Water SRF at $850 million.

The Administration will continue to fulfill prior EPA commitments to capitalize the Clean Water SRF to revolve at a $2 billion average annual level and the Drinking Water SRF at a $500 million average annual level.

THE CHALLENGE AHEAD

With the important investments made by and achievements of all levels of government and the private sector, together we have substantially improved quality of the water in every State—even while our population sharply increased and the output of our economy more than doubled.

But the task America's intergovernmental, public-private partnership has undertaken—to protect public health and the environment by maintaining and improving water quality—is a continuing one. As our economy and population grow, partnership members must increase their efforts to provide clean and safe water every day. We must also periodically take a good look at the challenges ahead, and reassess the adequacy of the tools we have to meet those emerging challenges.

EPA's most recent Drinking Water and Clean Water Needs Surveys have identified $150.9 billion and $150.5 billion, respectively (both in 1999 dollars), in documented needs eligible for SRF assistance in the coming decades. More recent estimates associated with correcting sanitary sewer overflows may increase the estimated total Clean Water needs, and the Agency expects to release a new Clean Water Needs Survey in August 2002. Over the past year or so, several stakeholder groups have issued reports estimating water infrastructure needs that are substantially higher, based on different methodologies and definitions.

With that in mind, the Agency is actively working to improve information about long-term infrastructure needs, assess different analytical approaches to estimating those needs, and estimate the gap between needs and spending. Last summer, EPA presented its analysis—known as the Gap Analysis—to a diverse panel of industry experts. Overall, the reviewers commended the report as a reasonable effort to quantify the gap. We have made revisions to the analysis based on peer review input and we expect to release the Gap Analysis shortly.

In considering these studies and analyses, it is important to keep in mind a few points of context. First, there is no single "correct" number to describe the gap. Any gap study must be built using methodologies and definitions of need, which in turn rest on assumptions about present conditions nationwide, and desirable or appropriate policies to follow in the future. That raises the second point that while these gap numbers may be helpful to provide a broad sense of the challenge ahead, they cannot themselves be a clear guide to policy, because they do not take into consideration how the various roles of Federal, State and local governments should be balanced. Third, under any study, funding gaps are not inevitable. They occur only if capital and operations and maintenance (O&M) spending remains unchanged from present levels over the time covered by the study. What a proper analysis may suggest is that a funding gap will result if the challenge posed by an aging infrastructure network—a significant portion of which is beginning to reach the end of its useful life—is ignored.

I believe most partnership members would agree that the nation, through our partnership, needs to put more resources into water and wastewater infrastructure in the future than we have been doing; and, that we need to reduce costs by ensuring more efficient and productive use of such resources, through locally tailored, fiscally sustainable management and technical approaches. We need a strategy that addresses both the fiscal demand side (how to define and manage infrastructure needs) and the fiscal supply side (how to pay for those managed needs).

While much of the projected gap is the product of deferred maintenance, inadequate capital replacement, and a generally aging infrastructure, it is in part a consequence of future trends we can anticipate today. For instance, continuing population growth means that even increasing capacity at current levels of wastewater treatment will not be enough to prevent water quality degradation, and that development pressures on unprotected drinking water sources will increase. The same tools we need to make the fiscal demand side of the gap more manageable—like reducing the flow of wastewater and stormwater requiring treatment through conservation and nonstructural alternatives, and protecting our drinking water sources—will help us to deal with the water quality impacts of a growing population.

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

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

• *Promoting sustainable systems.*—Ensuring the technical, financial, and managerial capacity of water and wastewater systems, and creating incentives for service providers to avoid future gaps by adopting best management practices to improve efficiency and economies of scale, and reducing the average cost of service for providers.

• *Encouraging cost-based and affordable rates.*—Encouraging rate structures that cover costs and more fully reflect the cost of service, while fostering affordable water and wastewater service for low-income families.

• *Promoting technology innovation.*—Creating incentives to support research, development, and the use of innovative technologies for improved services at lower life-cycle costs.

• *Promoting smart water use.*—Encouraging States and service providers to adopt holistic strategies to manage water on a sustainable basis, including a greater emphasis on options for reuse and conservation, efficient nonstructural approaches, and coordination with State, regional, and local planning.

• *Promoting watershed-based decisionmaking.*—Encouraging States and local communities to look at water quality problems and drinking water source water protection on a watershed scale and to direct funding to the highest priority projects needed to protect public health and the environment.

This is an important and serious challenge. We would not be in this room today if we did not recognize that. That's good news in itself; and there's more, as we can see the tools, the means to realize these principles in practice, taking shape all across the country. Many States and local governments across the country have been changing the way they do business. As a result, they've successfully managed many of these infrastructure needs, using creative, individualized approaches that are cost-effective, environmentally protective, and socially equitable—efficient, clean, and fair.

The two SRFs have proven themselves to be effective means to help local governments address their needs. Now the task is to refine them to facilitate and encourage the use of these State and local innovations in every community in America. Indeed, your bill itself reflects the learning about SRFs that went on between 1987 and 1996, by adopting for the Clean Water SRF some of the innovations adopted in the Drinking Water SRF. It is important that communities have and use all the necessary tools to close the gap before it widens, so the tools can work together consistently and effectively in a fiscally sustainable way.

S. 1961, THE WATER INVESTMENT ACT OF 2002

I would like now to turn to S. 1961, the bill introduced by the Environment and Public Works Committee leadership.

The Administration shares the committee's goal of improving the nation's water quality and has submitted a budget that will continue progress toward achieving that goal by targeting non-point source pollution, the largest remaining problem.

However, the President clearly defined his priorities in the State of the Union as defense and homeland security. As the increased spending called for in this bill is not consistent with those priorities, the Administration does not support the funding levels contained in S. 1961. The Administration and Congress should look for creative ways to help the water and wastewater industries meet their needs.

At this initial stage of the committee's consideration of this bill, I will give the Administration's response to some of the bill's key approaches and major components. We would also like to take this opportunity to state the Administration's support for privatization incentives. On these, as well as other provisions that this testimony does not specifically address, we look forward to working with you and stakeholders during the committee's deliberations in the weeks ahead.

Project Eligibilities.—On the Clean Water side, the bill addresses project eligibilities, and clarifies that a broad range of projects that would improve water quality under Clean Water Act programs can be supported using the SRF. We believe that the provision authorizing assistance for projects or activities for conservation, reuse or recycling must be limited to those that have primarily a water quality benefit, or substantial SRF resources could be diverted to projects or activities whose primary objective and benefit does not further Clean Water Act goals.

Capacity Development/Priority List Funding.—The bill closely adapts for the Clean Water Act two important provisions from the 1996 Safe Drinking Water Act Amendments, on capacity development and SRF priority list funding, and adds asset management requirements in both Acts.

We believe that this demonstrates once again the effectiveness and durability of the approaches Congress adopted in 1996, and welcome the committee's use of the SDWA model here. In order for water and wastewater systems to achieve fiscal sustainability, these systems need to: have long-term technical, financial, and managerial capacity; optimize the efficient operation and useful life of their capital assets; and, direct funding to the highest priority projects needed to protect public health and the environment.

In these regards, S. 1961 moves in a generally positive and useful direction. As with any new approach, there are some questions about how aspects of these capacity development and asset management provisions would work in practice. Here again, we want to work with you and stakeholders to share and learn from our experiences with SDWA, and make sure that help in achieving these objectives can reach those who will need it, especially in smaller communities.

Disadvantaged Assistance.—Regarding disadvantaged assistance, the bill makes two major modifications. First, it adds to the Clean Water SRF the disadvantaged community provisions enacted for Drinking Water in 1996, enabling States to provide additional loan subsidization, including forgiveness of principal, to such communities as defined by the States. It also includes in the Clean Water SRF the extended loan terms available to disadvantaged communities under the Drinking Water SRF.

Second, it adds to the laws governing both SRFs a new provision, authorizing States to provide this additional subsidization to treatment works or public water systems which are not disadvantaged, so long as the assistance agreement with the recipient ensures that the subsidy will be directed to disadvantaged users within the community. We want to work with you to ensure that States or communities can use programs which are as effective as user rate systems in directing these additional subsidies to needy users.

The bill's provisions for aid to disadvantaged users specify that up to 15 percent of capitalization grants can be used for additional subsidies. It is not clear whether this 15 percent is within the 30 percent limit for disadvantaged communities or on top of it, as the bill's provisions are worded differently for the two SRFs. We oppose making the 15 percent additional to the 30 percent limit in both SRFs. Placing the 15 percent within the 30 percent would protect the availability of additional subsidies for disadvantaged communities while giving the States flexibility to provide such help to disadvantaged users as well.

The revolving loan funds will always face the challenge of striking a balance between important values—of offering additional support for low-income residents, small communities, and State programs on the one hand, and preserving the corpus of the fund so it can assist communities far into the future on the other. If new assistance to disadvantaged users is added on top of the 30 percent, it would allow about half of the capitalization grant to be removed before it ever enters the States' revolving funds. This would undercut the funds' capacity to serve as a viable resource for communities in perpetuity, and would disrupt a vital balance that the Administration believes we must maintain. We would like to collaborate with the committee to achieve disadvantaged assistance provisions that strike this important balance.

Loan Conditions.—For both the Clean Water and Drinking Water SRFs, the bill creates new provisions requiring several things of loan applicants as a condition of project approval. Taken together, these loan conditions are among the key provisions in the bill, and the Administration supports the objectives behind them as according with basic principles that should guide our infrastructure revitalization efforts. At the same time, we want to make sure that the conditions operate in ways that loan applicants can learn to handle, and that the SRFs can continue to function to provide the needed kinds of assistance.

One condition is a requirement that prospective loan recipients consult and coordinate with local, regional, or State agencies that may adopt land use, transportation, or watershed plans. S. 1961 also requires loan recipients: to develop and implement asset management plans; to have plans to achieve rate structures that reflect, as far as possible, the cost of service and include capital replacement costs; and to consider, throughout preconstruction phases, consolidation, partnerships, or alternative, nonstructural approaches.

We agree that local governments should undertake, and States must supervise, management and planning changes to ensure fiscally sustainable solutions. All of the studies indicate that the potential gap in water and wastewater infrastructure comes largely from replacement of aging pipes and O&M costs—both, historically, a responsibility primarily of local government (although pipe replacement is eligible under both SRFs). Through its loan conditions, S. 1961 encourages States and communities to look at water quality problems and drinking water source water protection on a watershed scale, and to adopt comprehensive strategies that integrate water management into whatever planning for sustainable communities they may be doing. And, it creates incentives for service providers to adopt best management practices to improve efficiency and economies of scale, reduce the cost of service, and avoid future gaps, while encouraging rate structures that cover costs.

These new conditions on assistance to communities are among the most important innovations in this legislation. Promoting a comprehensive examination of all cost-effective tools and options, on both the fiscal demand and supply sides, is key to building fiscal sustainability. The Administration believes that the potential gaps will become more manageable if these conditions can be designed and implemented effectively.

Having said that, we must all recognize that these new conditions are going to increase substantially the level of effort required to obtain an SRF loan. We must make sure that these conditions are framed in a workable way; that we provide a transition to the new conditions that equips applicants to address them in a timely way; that those who need special help in meeting the conditions can get it; and that small loans can continue to be provided without a level of analysis that's disproportionate to the investment sought. Here as elsewhere, we look forward to working with the committee to pursue these shared objectives in a practical manner.

SRF Fund Transfer Authority.—In addition, the bill would make permanent the States' authority to transfer funds between the Clean Water and Drinking Water SRFs. This is an important enhancement of State flexibility to address their highest priority needs, and we welcome the committee's proposal to turn what began in 1996 as a short-term experiment into a well-established tool to promote cost-effective investment.

Promoting Technology Innovation.—This strategy to renew our water and wastewater infrastructure for the 21st century puts a high premium on optimizing the efficient use of our current capital assets and the new investments we must make. That will require the use of innovative technologies for improved services at lower life-cycle costs, which in turn means supporting research and development on these innovative technologies and practices.

Substantial reductions in life cycle costs are possible through the use of innovations such as: (1) new construction and repair practices; (2) remote monitoring and real-time control of water and wastewater systems; and (3) advanced sensors for contaminants and structural integrity. Research and development, in coordination with demonstration efforts, is needed to assure that these and other advancements are available to community decisionmakers. We want to work with the committee on ways to promote this objective.

Legal Issues.—EPA has legal concerns regarding two provisions of S. 1961. On judicial review, the provisions amending both Acts are written so broadly they could prevent judicial enforcement of virtually all provisions of the SRF statute and other applicable Federal statutes as well. On State water rights, one subsection essentially duplicates existing language in the Clean Water Act, while the second raises several issues of legal applicability and potentially problematic unintended consequences. However, we do recognize and want to work with all interested members

of the committee to see that the underlying concerns reflected in these provisions are addressed.

CONCLUSION

In summary, notwithstanding our continuing concerns with the funding authorization levels proposed in this bill, we appreciate the committee's initiative in taking up this important issue, and particularly in its efforts to build fiscal sustainability in water and wastewater infrastructure. We look forward to continuing our constructive participation in your efforts to refine this legislation. Thank you for the opportunity to present the Administration's views on this bill. That concludes my prepared remarks, and I would be happy to answer any questions.

RESPONSES OF BENJAMIN GRUMBLES TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. In discussions with stakeholders before the introduction of S. 1961, we heard much about needing to maintain State flexibility but also the need to fund innovative approaches and nonpoint source pollution. S. 1961 allows States to list nonpoint sources on their priority lists, a change from current law. We do not mandate the funding of nonpoint sources instead leaving State the flexibility to decide which projects to fund. Should these priorities be mandated by the Federal Government or left to the States, with public input, to determine?

Response. We believe it is appropriately left to the States, with public input, to ultimately determine what projects should be funded through their CWSRF. The CWSRF program is primarily a State-run program, and a State is in the best position to decide, with input from its citizenry, how CWSRF funds should be used.

We believe that S. 1961 appropriately requires that States use all available water quality data (such as data and information developed pursuant to Clean Water Act sections 303(d), 303(e), 305(b), 319, and 320) to determine their water quality problems across the State and to develop a priority ranking system to address those water quality problems. Funding projects in priority order, to the maximum extent practicable, will bring about the highest level of water quality benefit.

Question 2. In your testimony, you voice support for encouraging the private sector's participation in both water and sewer systems. Can you speak more to what benefits you believe investor-owned utilities have brought to the management of water and sewer systems and why for some communities they may be a good alternative?

Response. Privately-owned utilities in capital-intensive operations such as electric and natural gas service have frequently used asset management, demand and pricing strategies, and private contracting. This potentially relevant experience on these approaches should be considered in the water and sewer context.

Many local governments are seriously considering the possible role of the private sector in providing water and wastewater services in their communities, hoping to take advantage of private sector skills and market experience, to increase efficiency in service delivery, and to obtain access to investment capital. Private sector involvement can be as basic as provision of limited services under contract or as complete as full ownership and operation of the utility.

While some form of public/private partnerships may be completely appropriate for some communities, we believe that the more important consideration is technical, financial, and managerial capacity to operate and maintain a water or wastewater system. High performing public entities can perform equally well as high-performing privately-owned or operated facilities. EPA's objective is to improve capacity when appropriate so as to better protect public health and water quality across the country.

To help close the infrastructure gap, some communities may decide to enter into public/private partnerships of one form or another. We think it appropriate to remove barriers where they exist so that communities who choose to can engage with the private sector. Ultimately, though, we believe the decision to engage in privatization of water or wastewater systems is best left to the community itself based on their individual circumstances and situation.

Question 3. Can you describe for the committee the various programs available to small communities to help them not only comply with Federal and State regulations but also operate and maintain their facilities? Do these programs include discussion of how to reduce nonpoint source pollutants which can reduce the cost to the treatment works and the water system? Given that each of us continues to hear that there is not enough technical assistance available, what more can be done?

Response. Training and technical assistance are cornerstones for building sustainable water and wastewater systems capable of providing appropriate public health and environmental protection. As discussed below, numerous training and technical assistance programs are funded by EPA and other Federal Agencies. The key to helping communities develop sustainable systems for public health and environmental protection lay not in providing additional technical assistance, but in focusing existing assistance on core needs and in establishing appropriate performance and accountability measures for technical assistance providers.

The priority direction for all technical assistance should be the development of sustainable system capacity for performance. The focus should not be on "doing" things for systems but rather on teaching systems "how to do" things and indeed on building system self-sufficiency for future learning.

In terms of publicly owned treatment works, EPA partners with several organizations to provide technical assistance and training to small communities.

Technical assistance programs provide advice, assistance, and training pertaining to the installation, operation, and maintenance of treatment works in small communities. They include:

• The Rural Community Assistance Program (located at *http://www.rcap.org/*), which addresses management, financing, construction and the Clean Water Act compliance needs of wastewater treatment, collection, and disposal systems in small communities;

• The Small Community Outreach and Education network, which helps small communities provide self-sufficient wastewater systems through technology, financial management, pollution prevention, and public education;

• The National Rural Water Association (*http://www.nrwa.org*) offers training and technical assistance to small systems in all aspects of providing safe drinking water;

• The Drinking Water Technology Assistance Centers, a network of eight university-based centers, work to protect public health, improve system sustainability, and enhance compliance by: verifying technology performance, pilot testing innovative technologies, and providing training and technical assistance;

• EPA's On-Site Technical Assistance 104(g) program, which provides no-cost, over-the-shoulder operation and maintenance, financial management, and technical assistance to municipal wastewater treatment plant operators; and

• An on-line message board (located at *http://www.wef.org/techinfoctr/index.jhtml*), which allows small communities to communicate with each other and obtain answers to their technical questions.

Various education programs provide training to small communities in the areas of treatment works operation and trouble-shooting. They include:

• The National Environmental Training Center for Small Communities (located at *http://www.estd.wvu.edu/netcsc/netcsc—index.htm*), which supports environmental trainers who work with small communities to improve drinking water, wastewater, and solid waste services;

• The National Small Flows Clearinghouse (located at *http://www.estd.wvu.edu/nsfc/nsfc—index.htm*), which provides national information on collection systems in order to help small communities meet their wastewater treatment needs; and

• The Youth and the Environment Training & Employment Program, which provides under-privileged high school students with an awareness of job opportunities in the environment and allows for hands-on training in wastewater treatment plant operations.

In terms of nonpoint source technical assistance, EPA has created a website (located at *http://www.epa.gov/owm/decent/index.htm*) for onsite/decentralized wastewater systems that provides information on management, funding, technology, and public outreach to assist small communities when using or considering decentralized systems to manage their wastewater needs. EPA's nonpoint source management program uses a significant portion of its 319 grant funds to provide technical assistance for nonpoint source needs.

Note that the Department of Agriculture also provides training and technical assistance related to point and nonpoint sources in rural areas.

We believe these programs, and the funding levels included in the President's FY 2003 budget for these programs, are sufficient to address technical assistance needs.

Question 4. In crafting this legislation, Senators Jeffords, Crapo and Graham and I all sought to find ways to prevent another trillion dollar request 20 years from now. Under the construction grants program, the Federal Government invested $53 billion over 18 years for the construction of treatment works. With those facilities now nearing the end of their useful life, the owners of those facilities are back asking for more money. You also support a provision in the bill to extend the Safe

Drinking Water Act's capacity development requirements to the Clean Water Act and require a full assessment of each facilities assets. How well have the Safe Drinking Water provisions worked in weeding out systems that did not have capacity and sustaining the viability of other water systems? What improvements can be made to the program, if any?

Response. The State capacity development strategies are in the early stages of implementation, and there is not yet a track record sufficient to make a judgment on their effectiveness. It is clear at this early stage that the opportunity presented by strategy development has been valuable in helping States to define the focus of their efforts to help systems develop capacity.

The requirement that all DWSRF recipients demonstrate technical, financial and managerial capacity, has likely helped to improve the viability of systems receiving assistance. For example, in Vermont, in evaluating the capacity of 59 systems, the State found that 46 needed to make changes to ensure that they would meet the State's requirements. The State required that the systems make the necessary changes as a condition of the loan. Without the requirement to assess the capacity, it is possible that these 46 systems would have continued business as usual.

In addition to requirements for capacity development, we believe that the provisions for asset management, consideration of cost-effective nonstructural, conservation, and restructuring alternatives, and consultation with local, State, or regional planning agencies are also important for building sustainability for water and wastewater systems, improving management and reducing life-cycle costs. The Administration supports the objectives behind these provisions as according with basic principles that should guide our infrastructure revitalization efforts. At the same time, we want to make sure that the conditions operate in ways that are workable for loan applicants and States alike, and that the SRFs can continue to function to provide the needed kinds of assistance.

RESPONSES OF BENJAMIN GRUMBLES TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Please provide the committee with data, studies, analysis of State law and other information on States' requirements for public participation during the creation of the priority list for projects to be funded under a State SRF?

Response. Given the time constraints associated with this request, we are not able to provide data, studies, and analyses of State law for this question and the two following it. We did ask States to provide us some information to help inform the committee and have attached them to this package. While we will provide a general response to each question, we refer you to the attachments for state-specific material.

Each SRF program has requirements related to public participation in development of their Intended Use Plan which describes how the State intends to use funds in its program—including the priority list of projects to be funded. For the DWSRF program, these requirements are at 40 CFR 35.3555(b). For the CWSRF program, the requirements are at 40 CFR 35.3150(a). Many States are subject to additional legal requirements or have developed procedures that dictate how public review is conducted. We have attached information received from several States to help respond to the question.

West Virginia: For the CWSRF, the draft IUP and list are made widely available. A public meeting is held, with 30 days advanced notice, to discuss the contents of the priority list. The State mails out the draft to all proposed assistance recipients on the priority list and their respective engineering firms, regional planning and development councils, and other State agencies. There is a 2-week period after the meeting when comments can be received that may impact the list, prior to finalization. For the DWSRF, the State makes the priority list available through a posting in the State journal, the website, provides copies to other agencies, and makes copies available in offices throughout the State. A public meeting is held in the central office and to date, there has been little or no public input. Occasionally they will receive some comment from other agencies.

Kansas: The priority List and Intended Use Plan are prepared once a year. The State gathers information throughout the year on specific problems, needs, and projects from KDHE staff in the NPDES compliance (effluent violations and raw sewage overflows), sludge disposal programs, KDHE field staff that conduct inspections and respond to complaints, City and County officials, and consulting engineers. A Draft Priority List and IUP is distributed to cities and counties that have projects listed in the documents, and also to other Federal and State agencies, consultants, equipment suppliers, and other interested parties, 350 copies in total. A Public

Hearing notice is mailed with each copy and is also scheduled and advertised in the Kansas Register (similiar to the Fed Reg). The comment period is 5 to 8 weeks, and all comments receive individual written response, including Reg 7 EPA. The Final List and IUP is prepared and distributed to those who received the draft, plus anyone else that wants it.

Georgia: The polices of the program which address the priority point system are updated annually and approved by the Board of Directors at about the same time as a draft IUP is presented. In addition, an annual announcement of a public hearing on the draft IUP is posted on the State's website and is sent to over 1,500 interested. At the public hearing, the draft IUP is presented and public comments are solicited. GEFA has not received any adverse comments in over 8 years (potentially longer). Comments normally range from communities/consultants wanting to add projects or other non-profit groups seeking funding.

Nebraska: The CWSRF IUP development cycle starts with an annual needs survey (October) to cities, counties and engineers. In November, the State holds a stakeholder meeting of about 30 interested individuals and entities that benefit from the SRF to discuss policies and direction. Three meetings are held in December around the State to present program changes and seek comment. The IUP and priority list are developed January—April 15. Then the draft IUP is public noticed and a formal hearing is held in June. Changes to the draft are made in the hearing and the final IUP is approved by the Environmental Quality Council (a 16 member board representing various interests in the State).

Maryland: The State makes available for public review and comment both the draft Project Priority List and Intended Use Plan, and holds a formal public hearing.

Virginia: The Virginia Dept. of Health 1974 Waterworks Regulations created a public participation committee known as the Commissioner of Health's Waterworks Advisory Committee (WAC). The WAC brings together stake holders every 2 months to discuss current and future issues. Annually, the State formally solicits input via mail (current mailing list about 3500) to create the draft project list and then again to receive comments on the final. The State also holds a public meeting to receive comment, following requirements in Virginia's Administrative Processes Act. The same mailings are placed into the Virginia Register (equivalent to the Federal Register) and on VDH website. The State also holds workshops (this year at 5 different locations) to discuss the program details, to respond to questions, and to obtain feedback. The State also conducted a survey of clients in 2001 to learn ways to improve their procedures. For the CWSRF, the IUP and Priority Funding List are presented annually to the public for review and comment. Each year before the IUP and priority funding list is submitted to EPA, it is taken before a citizen Board (SWCB) for tentative approval. These Board meetings are open to the public and the agenda for the meeting is made available to the public. Special agenda summaries are also mailed to interested and impacted parties. Following Board action, Virginia's tentatively approved IUP and yearly funding list is re-opened for public review and comments. Notice requesting public comment is published in six regional newspapers. In addition, notice of the meeting or hearing to receive public impute is subsequently mailed to appropriate and interested groups and individuals. Also, all proposed modifications to Virginia's SRF program implementation criteria and/or its priority ranking structure undergo the same public scrutiny process.

Alabama: The State publishes its priority lists in the four major newspapers in the State and are sent to several hundred individuals, State and Federal agencies, and environmental groups for review, in addition to being posted on the State's website, for a public comment period of 45 days.

Utah: The Drinking Water Board approves any revisions to the DWSRF priority list quarterly. The list is submitted to Utah's Resource Development Coordinating Committee (RDCC) for review. The RDCC's agenda is sent to all State & Federal agencies, local association of governments and town officials, and the media. When major revisions, occur the list is sent to all drinking water systems, associations of governments, consultants, etc.

Missouri: Both the CWSRF and DWSRF programs have public hearings after the draft IUP is mailed to all cities, counties, sewer districts, legislators, engineering firms and parties on our mailing list (30-day public notice period).

Alaska: Annually, Alaska mails a notice to all eligible participants inviting them to submit information for proposed projects. After a scoring and ranking process, a draft priority list is mailed out to all eligible participants and made available on the internet for 30 days. The State then considers all comments and publishes a second priority list for 30 days, again considering any public comment before finalizing the list. During both of these public comment periods, the State invites suggestions for improvement to the scoring criteria and makes appropriate changes.

Washington: For the DWSRF, the State develops a draft priority project funding list which is part of the draft IUP, and is subject to a 30-day public review and comment period (including a public hearing). The public comment period is advertised in three major newspapers across the State, on the DOH website, and at the State library. Very few comments and testimony are received, and very few people attend the hearings. In the event comments are received, they are taken into consideration when the IUP is finalized. For the CWSRF, virtually all the information about its water quality financial assistance programs is posted on the departmental web site. Annually, the State solicits applications for water quality financial assistance, including loans from the Washington Water Pollution Control Revolving Fund, generally January to March. Early in the solicitation period, the State holds four workshops around the State to answer any questions about the process, the application materials, and the project priority system. The draft Intended Use Plan and offer list is then published for a 30-day public review. During the public review period, at least one public meeting is held to solicit public comment. The final IUP is then published on the departmental web site.

New York: The draft IUPs are distributed very widely to public officials, all known environmental groups, and other interested parties, is posted on the website, and noticed in the Environmental News Bulletin. Then the State holds a joint public meetings for DW and CWSRF and has a comment period after public hearing. The final IUP is published, widely distributed, and posted on the website. Amendments are mailed to same mailing list. Public interest has fallen off considerable since 95–96 for CW, since 99 for DWSRF. Usually no one or very few people attend meetings or submit comments, outside representatives from the communities.

New Jersey: The draft IUPs are distributed very widely to public officials, all known environmental groups, and other interested parties (a very extensive mailing list: 1200 for CW 2000 for DW), and is posted on the website at least 45 days. Then the State holds a joint public meetings for DW and CWSRF and has a comment period after public hearing. The final IUP is published, widely distributed, and posted on the website. Public interest has fallen off considerable since 95–96 for CW, since 99 for DWSRF. Usually no one or very few people attend meetings or submit comments, outside representatives from the communities.

Puerto Rico: There is only one POTW that is a loan recipient, and they are really the only ones that show up at the public meetings. Draft and final IUP are publicly noticed in papers and libraries, but no one attends the public meetings.

Idaho: Idaho sends all eligible borrowers a letter soliciting projects for the IUP. After the projects are scored and ranked, a draft of the IUP and the project priority list are posted on DEQ's website, sent to all applicants and/or consultants related to projects on the list, and advertised in statewide papers for a 30-day public comment period. The draft IUP and project list are also posted on EPA Region X's website, indicating the 30-day public comment period. After the 30-day public comment period ends, a public hearing is held, after being advertised in statewide newspapers and on the DEQ website. The Board of directors then formally approve the IUP, project priority list, and projects funded that year.

Oregon: The State sends all eligible borrowers a letter soliciting projects for the IUP. Any interested community sends the State a preliminary application which the State uses to score and rank projects. Only projects that are ready to proceed are considered for actual funding that year and are placed, in priority order, on the fundable range portion of the IUP. The entire IUP, project priority list, and fundable range are advertised in State newspapers for a 30-day public comment period and sent to EPA Region X, which places the documents on its website indicating the 30-day public review period. With every new handbook which determines the method for the priority listing, there is a public comment and hearing process.

Tennessee: In terms of meeting notices, the State does a mass mail-out to cities, engineering consultants, county executives, utility districts, plant operators etc., totaling about 1100 letters. Projects are scored according to Tennessee regulations, and the State posts the draft and final priority ranking lists on their website.

Florida: Florida publishes the notice of hearing in the Florida Administrative Weekly, and send the draft priority list and general information to all interested parties. The draft priority list includes a brief description of each project, proposed funding, the type of funding, the priority score, and the population.

Illinois: In accordance with State statute, Illinois publishes any proposed rulemaking (including the priority systems for DW and CWSRF) in the Illinois Register. Annually the State publishes a notice of the hearing on the Intended Use Plan in a quarterly publication, posts a notice on their website, and also mails out copies of the priority lists and draft IUPs to individuals and organizations on the State's mailing list.

Wisconsin: Wisconsin publishes the project priority list and includes it as a subject of an annual public hearing. The public has extensive participation opportunities during the promulgation of the administrative rule which defines the ranking system used to create the priority list.

New Hampshire: New Hampshire publishes a public hearing notice in the Manchester Union Leader (a State-wide newspaper) both 30 days and 14 days in advance of the hearing. The draft priority list is sent to all the sewered municipalities and those municipalities with landfills that will require closing. The State holds the public hearing in August of each year and open the hearing for public comments and accept public input for 2 weeks after the hearing. The priority list is adjusted based on public comment.

Mississippi: A notice of a public hearing is run three separate times in The Jackson Clarion-Ledger (a newspaper with statewide circulation) regarding the draft IUP, and any draft amended IUPs. The draft IUP and any amended IUPs are posted on the State's website and mailed to consulting engineers, municipalities, and rural water associations who have participated in the program in the past, as well as any other interested parties. The Executive Director of the American Council of Engineering Companies, the Executive Director of the Mississippi Municipal League, and the Executive Director of the Association of (County) Supervisors are members of the State's Board, and they notify their members of the draft IUP and the hearing date. The State will also make presentations (and booths when appropriate) to the Mississippi Rural Water Association, the Mississippi Water and Pollution Control Operators' Association, the American Council of Engineering Companies, the Mississippi Public Works Directors' Association, the Water Environment Federation, and the Mississippi Association of (County) Supervisors regarding the priority list process and the approximate date of availability of the IUP.

Oklahoma: The State holds a public meeting on the SRF Project Priority List and any revisions made to the priority rating systems. A notice is published in a statewide publication 30 days prior to the public meeting. The State also circulates information about the Priority List and a description of each proposed project. In addition, prior to the public meeting, copies of draft IUP and Priority List are mailed to interested parties and potential loan recipients.

Rhode Island: The State holds a public hearing annually.

Arkansas: Arkansas has a statewide public notice, a 30-day public comment period, and a public hearing for both Intended Use Plans and the Project Priority Lists.

Louisiana: The priority list and IUP are made available to the public for comment at a scheduled public hearing.

Massachusetts: Massachusetts holds several public hearings (all following the same public notification requirements) as a project moves towards the SRF program. The Notification requirement is two statewide circulation newspaper, internet, and notification to the Secretary of State. Both spoken and written testimony is accepted at the hearing; only written comments after the hearing. Most notably the "NEPA Like" review requires a public hearing for each application; all permit requests require public hearings. The draft priority list is published 30 days in advance of the public hearing and presented at a public hearing, without project descriptions. The hearing that has a 30-day notice prior to the hearing and a 30-day comment period after the hearing. This year the State will hold its first public hearing and 30-day comment period at the outset of the SRF solicitation process to set watershed funding priorities. This hearing will give communities notice that solutions to certain problems in each watershed will be given watershed planning points in the upcoming project evaluation.

Hawaii: Hawaii publishes a public notice in a statewide circulated newspaper on the draft IUP and Project Priority List. These documents are made available at each district health office throughout the State. A public hearing is scheduled only if there is significant interest.

Vermont: Vermont regulations for IUP and project priority list development include statewide publication of a meeting notice (in 3 daily newspapers which have general circulation in the State) 30 days prior to holding a public hearing on a draft Priority List and IUP. The Draft list, IUP, and a 5-year projection of pollution control projects are distributed to approximately 300 individuals and organizations (municipal officials, consultants, legislators, State officials, etc.). Public comment is received at any time prior to, during, and up to 7 days following the hearing. Following the close of the comment period, the adopted list and IUP together with a responsiveness summary are distributed to the above individuals and organizations.

New Mexico: The State notifies entities on its mailing list and advertises in The New Mexico Register and newspapers of general circulation, inviting entities to submit applications for funding. When the priority list is completed, the State again

advertises and requests comments for a 30-day comment period. The State used to schedule public hearings for the priority list but nobody ever showed up. Based on good communication with communities and interest groups, the belief is that they are in favor of the projects. Also, because the State has sufficient funding to move forward with all projects that have been ready to proceed, there has not been controversy or competition between communities for CWSRF funds.

Minnesota: The Project Priority List is prepared according to a priority system that is established in Minnesota's administrative rules. The development of the priority system rules followed the extensive pubic participation process required when any rules are developed. In addition, the Project Priority List is included as part of the annual Intended Use Plan which is provided in draft to all interested parties during a public comment period.

Maine: The draft IUP is mailed to all potential treatment works projects each year with a copy of the priority system for comments.

Nevada: The State publishes the draft priority list and IUP along with a notice of a public hearing. The public notice is mailed to over 100 entities (counties, GID, environmental groups, etc.) and is also published in 4 major newspapers (Reno Gazette, Las Vegas Journal, Carson Capital Paper, and Elko Free Press). The State also announces the public hearing on its web page to allow public input concerning the proposed projects.

North Carolina: The State held a public hearing with prior notification on the adoption of rules for the priority system. The State also holds a public hearing on each year's IUP/priority list. Notification consists of publication of the hearing in the North Carolina Register, selected newspapers in the State, and notices to stakeholders and selected interested parties.

California: The State has NEPA-like reviews, environmental assessments, and environmental impact statements for qualifying projects which seek input from the various State agencies that may have an interest in or be impacted by the projects. Even the smallest projects are sent to public notice (including local government) and noticed to other State agencies. Additional coordination and consultation takes place on an informal basis.

Kentucky: Kentucky publishes a statewide meeting notice on the draft priority list in newspapers and on its website. They then notify the public and hold a public meeting on the draft and respond in writing to any comments received.

Montana: Each year, Montana publishes notice in its 5 major newspapers announcing the availability of draft Intended Use Plans and project priority lists, along with a scheduled public hearing date. A 30-day public comment period is also provided. The announcement and IUPs are also posted on the State website. The DWSRF program uses an advisory committee that includes members representing the Montana League of Cities and Towns, the Montana Association of Counties, and each House of the Montana Legislature to help develop the draft list.

Colorado: The State publishes public hearing notices in the Colorado Journal and the Denver Post. Draft priority lists are sent to all communities on the list and everyone that requests a copy from the public notice. To date the only public input has been communities asking to be added to the list. There have been no controversies in the program since Colorado (through leveraging) has been able to fund all communities that requested loans and were ready to proceed.

Iowa: The State prepares a draft funding list and presents it to its Environmental Protection Commission for information. The following month it is again part of the EPC meetings. Press releases re hearings on the draft list go out to the technical/professional organizations, and everyone that applied for funding is sent a direct notice which includes the draft IUP. Once the hearing is held, the State prepares a responsiveness summary and request EPC approval. During each of the three EPC meetings statewide notice is made, the agenda of the EPC meeting is made available and if anyone request a copy of the agenda brief or the IUP they obtain a copy prior to the meeting. Usually, no one shows up for hearings on the IUP.

Delaware: First, if there are any amendments to the project priority criteria from the previous year, the changes are presented to stakeholders at a public workshop with requests for comments. They are also sent to EPA for comments and approval. Solicitation for projects sent to all eligible parties and interested stakeholders. The draft PPL, which is created utilizing Project Priority Criteria, is then sent to all those who applied for funding. Notice of public workshop to review the draft PPL is sent to all eligible systems and interested stakeholders. Comments and questions are accepted prior to and during workshop. The final PPL is created after all questions and comments have been addressed.

Louisiana: Public hearings for the priority list are usually attended only by State staff and a court reporter to make a transcript.

Question 2. Please provide the committee with data, studies, analysis of State law and other information on whether individual States require asset management plans when administering loans under the SRF?

Response. While States may not require recipients to have (or develop) a formal asset management plan as a requirement of funding, many require that systems have similar plans or establish replacement funds to address future infrastructure needs. In the DWSRF program, systems may have to provide documentation that would speak to elements of an asset management plan as part of the demonstration of technical, financial and managerial capacity. See the attached for additional State information.

West Virginia: No asset management plans are requested or required when administering SRF loans. The DWSRF requires projects that will receive funding to have a Capacity Development assessment completed on the system. This will review the system's financial, managerial and technical capabilities and make recommendations for improvements. If there were negative findings, then the DW SRF would require the system to correct any deficiencies prior to issuing a Binding Commitment. The Public Service Commission (PSC) also issues a Certificate of Convenience and Necessity prior to a water system making modifications to their system. The PSC will review the financial aspects of the project and make the determination if the system has the rate structure to make the debt service payments and still be a financially viable system. The loan applicant has to receive the Certificate from the PSC before the DW SRF will close the loan.

Kansas: Kansas follows the Construction Grant requirements. The Operation, Maintenance, and Replacement expenses must be determined by the engineer for existing and new facilities, and the User Charge system must provide sufficient revenues for these expenses. O, M, and R charges must be proportional to use. The Replacement Account is required to be established to set aside funds for future major equipment items (usually anything over $2000 cost) that have a useful life more than 1 year and less than 20 years. The Replacement Account is a separate sinking fund savings account to insure money is available at the future time equipment needs to be replaced. The financial capability review required with SRF loans also insures adequate funds are collected to repay the loan.

Georgia: The State has no asset management requirement, but an Operation and Maintenance Manual is required to be submitted within 1 year of project start-up. For some of the more sophisticated consultants, these manuals are fairly elaborate, often detailing higher-level operational issues.

Nebraska: State legislation requires loan recipients to develop and implement a long-term wastewater treatment works management plan for the term of the loan, including yearly renewals.

Maryland: Maryland has no requirement. However, financial advisory services may be provided to small communities on how best to achieve/maintain financial capacity (usually an outcome of the State's financial/credit review).

Virginia: State law, which existed prior to the Federal capacity development requirements, allows the State to require a Comprehensive Business Plan (CBP) for permit issuance or to require corrections at an ill-performing waterworks. The CBP addresses capacity to operate the waterworks in the long term. In addition the VDH Waterworks Regulations require a Preliminary Engineering Report (PER) for any new project to address that project as well as the existing waterworks facilities. CWSRF regulations currently do not require the loan recipient to develop an asset management plan. The existing program does, however, review and evaluate the recipient's current and proposed operation, maintenance and replacement (O/M&R) cost and borrowing impacts. The loan agreement requires that each system be operated in a sound and economical manner and that the loan recipient maintain the system in good repair and operating condition. The program requires the development of an adequate and appropriate sewer use ordinance and the loan agreement requires that the recipient maintain an adequate user charge fee structure to assure proper continued operation. The loan program evaluates the impact borrowing has on the residential users of the system. This information is shared with the potential recipient in order to evaluate its yearly operational budgeting impacts. In addition, DEQ offers and provides technical support and assistance to any locality or operator experiencing operational problems.

Alabama: The State has no formal asset management plan requirements. However, a financial advisor under contract with this Department conducts a thorough review of each SRF recipient and advises them of any needed changes to ensure viability of the system. This service has proven effective, as evidenced by a zero default rate for the SRF programs.

Utah: Utah has nothing directly associated with asset management as such. Each applicant provides an engineering report summarizing its needs and the latest in-

spection report is evaluated and taken into consideration. The capacity development review is made according to Utah's adopted standard. Each loan recipient is required to establish and maintain throughout the life of the loan a capital facilities replacement account with annual deposits equaling 5 percent of the system's annual budget including debt service and depreciation. Other systems are encouraged to do the same since the interest rate is discounted for those having such accounts.

Missouri: Communities within the State are slowly but steadily moving to perform asset management pursuant to GASB 34 requirements.

Alaska: The State does not require a formal asset management plan as a condition of receiving an SRF loan. However, in our project consultation phase, these types of plans are encouraged and may afford the project a higher priority ranking. Our experience has been that this type of incentive is much more effective than requiring an asset management plan by regulation. If a system misses the funding cutoff by a few points because they didn't have an asset management plan, the next year they certainly will have one.

Washington: Water system plans identify necessary capital construction projects, associated costs, and payment strategies. The principal goal of water system planning is to make the best use of available resources in order to provide high quality service and protect the health of utility customers. The State looks at the utility's water system plan as the foundation, whereby the utility takes a comprehensive look at all of its needs, desires, and requirements. The State considers a water system plan (or small water system management program) to be part of the system capacity requirements.

New York: The CWSRF program does not require this at present. Larger communities such as NYC have well defined planning and budgeting programs that produce 5- and 10-year capital plans typically. For the DWSRF, applicants must provide their current adopted capital and operating budgets, financial statements (audited if available) for the 3 most recent fiscal years, their official statement or document associated with the most recent public issuance of debt, cost documentation for the refinancing of costs already paid, and stand-alone financial reports that have been developed by the applicant within the last 3 years.

New Jersey: For private water systems, the Board of Public Utilities determines financial and managerial capabilities and reviews various financial and organizational documents from the private water company including Annual Reports and Management Audit Reports. The Department of Community Affairs looks at annual budgets/audits for the publicly owned water systems, including municipalities, counties, etc.

Oregon: Asset management plans are not required, but to obtain an SRF loan, a community must either have a Facility Plan, Plans and Specifications, and Operations and Management Plan. Additionally, when reviewing user charge systems prior to awarding a loan, the State requires a rate system that not only covers the cost of repaying the CWSRF loan but also O&M costs.

Idaho: Asset management plans are not required, but to obtain an SRF loan, a community must either have a Facility Plan, Plans and Specifications, and Operations and Management Plan. Additionally, when reviewing user charge systems prior to awarding a loan, the State requires a rate system that not only covers the cost of repaying the CWSRF loan but also O&M costs.

Tennessee: Asset management information is obtained and reviewed by the State through the following documents: facilities plans, operating and maintenance manuals, user rate systems, etc.

Florida: The State requires project sponsors to meet capacity development requirements. While this does not specifically address asset management, it does provide documentation that the systems are managing their resources adequately.

Illinois: Pursuant to State rules on planning, a loan applicant has to look at what is needed to achieve and maintain compliance. In order to do that, the engineer has to look at the existing assets and evaluate their viability. In reviewing user charge systems prior to loan award, the State makes sure that the established rates are adequate to not only pay off the loan but are adequate to pay for operation, maintenance, and replacement.

Wisconsin: Although the State does not require assets management plans as a condition of receiving SRF loans, it does require that loan recipients establish and maintain an equipment replacement fund. Wisconsin also has in place an extensive compliance maintenance program which requires each POTW to annually assess and report on the physical conditions and performance of the treatment works. One of the objectives of the compliance maintenance program is to extend the useful life of the treatment facilities.

Mississippi: Part of the financial capacity assessment of the water system capacity assessment program asks the following:

• Is the municipality current in submitting audit reports to the State Auditor's Office?
• Was a copy of the latest audit report available for review at the time of the survey?
• Does this audit clearly show that water and sewer fund account(s) are maintained separately from all other municipal accounts?
or:
• Has the rural water system filed the required financial reports with the State Auditor's Office and were these reports available for review?
• Does the latest financial report show that receipts exceeded expenditures?
And regardless of whether the system is municipal or rural:
• Has the water system raised water rates in the past 5 years or can the system provide acceptable financial documentation clearly showing that rate increase is not needed and that revenue has consistently exceed expenditures by at least 10 percent?
• Does the system have an officially adopted policy requiring that water rates be routinely reviewed and adjusted as appropriate, and was this policy available for review during the survey?
• Does the water system routinely follow an officially adopted cutoff policy for customers who do not pay their water bills, and was this policy made available for review during the survey?
• At the time of the survey, were 5 percent or less of the customers (active meters) of the water system delinquent in paying their water bills?

As part of the loan application process, each applicant is required to show whether the current rate structure is sufficient to make the note. If it is not, a proposed rate increase must be included.

Under State law, municipalities must authorize repayment from their portion of the taxes collected by the State Tax Commission, and counties must authorize repayment from their homestead reimbursement funds. Should these not be sufficient to make the repayment amount, then a check is required.

Listed as part of the Management Capacity Assessment portion of the Water System Capacity Assessment program is:
• Have acceptable written policies and procedures for operating this water system been formally adopted and were these policies available for review during the survey?
• Have all board members completed Board Member Training (required of all members newly elected after passage of State law)?
• Does the Board of Directors meet monthly and were minutes of Board meetings available for review during survey?
• Does the system have any SDWA violations within the past 24 months?
• Does the water system have the ability to provide water during emergencies (generator, emergency tie-ins, etc.)?

Oklahoma: Oklahoma SRF loan recipients agree to covenants in the loan agreement that the system will be operated and maintained in good condition. The State has implemented an annual asset inspection program for all completed loan projects to insure that this loan covenant is being complied with. Asset inspections verify annually if the borrowers infrastructure is being operated and maintained. Also, all loans require net revenue available for debt service to equal at least 125 percent of the maximum annual amount required to repay the loan. Excess revenues may be utilized by the borrower for O, M & R expenditures. Net revenues and debt coverage ratios of each borrower are verified annually as annual audits are reviewed by the State. For the DWSRF, all systems must meet our capacity development guidelines which require the system to have adequate financial, managerial and technical capacity.

Rhode Island: All CWSRF borrowers received construction grants and are still operating under those requirements for O, M, and R.

Louisiana: The State does not require an asset management plan, but does require an annual audit for State review. Plans may exist as part of the audit report. Louisiana also requires the development of a rate structure with an annual review to assure that the cost of operating and maintaining the system will be covered, and the development of an O&M Manual for use by employees of the system.

Massachusetts: The State has maintained the requirement that O&M manuals must be reviewed and approved by DEP prior to a treatment works completion certification can be accepted. Projects funded under revenue bonds must provide an initial rate structure that covers O&M, debt service, and budget reserves to maintain the fiscal health and stability of the system. Future capital debt must be approved and made subordinate to SRF debt. Annual financial statements and reports are required for revenue bonds as well.

Hawaii: The State does not require an asset management plan, however, they conduct an annual operation and maintenance inspection of all POTWs through which they review their sewer user charge systems in terms of financing operation, maintenance and replacement costs and debt service requirements as well.

Vermont: No formal asset management plan is required; however, municipal loan recipients are required by State law to adopt a capital budget and program. Also, as part of the pollution control funding program, the State assists municipalities with development/changes to user charge systems.

New Mexico: Although the State does not require a formal asset management plan, they do have the following components in place. They require review of the existing and/or proposed rate structures as well as a form of dedicated revenues by pledging a repayment stream via an ordinance that is adopted through the entity governing body. In addition, a debt reserve and replacement reserve is required. They also coordinate technical assistance for operators and managers of facilities constructed with CWSRF funds. This is considered the most effective use of limited dollars and staff time to assure that facilities are operated to meet water quality requirements and to prolong the useful life of facilities.

Minnesota: Municipalities that have the financial capability to borrow SRF funds for construction or rehabilitation of water and wastewater facilities can be reasonably expected to continue to have sufficient financial capability to incur debt for the capital cost of future improvements. Many communities do have asset management plans and some establish a capital replacement fund for future improvements. Minnesota has a State supplemental assistance program that can provide grants or other assistance in combination with CWSRF funds for high cost projects. Recipients of these funds are required to establish a long-term capital replacement fund which can only be used with approval from the Public Facilities Authority.

Maine: The State does not require asset management plans, but does require a facilities plan that addresses age of system and other pertinent information. Larger communities with staff do assess their equipment and manage their assets.

North Carolina: DWSRF loan recipients must meet ready to proceed criteria to receive funding, which include having engineering plans and specifications approved by the State prior to construction. For an authorization to construct to be issued, the system must have prepared a Water System Management Plan which includes asset management considerations such as the projected useful life of the equipment and how they plan to fund the maintenance and replacement. The guidance document requires: a positive cash flow for the upcoming five year period; adequate capital to finance equipment replacement; an operating cash reserve greater than or equal to one-eighth of the annual operating, maintenance and administrative expenses of the water system that will be fully funded at the end of the first year of operation; an emergency cash reserve greater than or equal to the cost of replacing the largest capacity pump that will be fully funded at the end of the fifth year of operation (or if they applicant owns multiple water systems, showing reserves affording greater or equal capabilities, or showing equivalent financial capacity to comply with requirements); budget and expenditure control procedures and adoption of generally accepted accounting procedures.

California: California requires several elements that might be included in an asset management plan. These include a user rate structure to assure sufficient funds to properly operate and maintain the facilities and the Wastewater Capital Reserve Fund to provide funds for replacement of some equipment.

Kentucky: All projects must go through a program and credit review before being approved. Any asset management issues at that time are placed as conditions of funding. The State is available to work with communities to remedy any deficiencies.

Montana: Systems' operating and maintenance budget, which may include any reserve funds (such as capital replacement), and rate structure, etc. are addressed in the Preliminary Engineering Reports and reviewed during the application process. For the drinking water program, this is also done in conjunction with the capacity development review.

Colorado: Colorado currently requires communities to have a 10-year capital improvement plan as well as a user charge system that covers O&M, Replacement and debt service.

Question 3. Please provide the committee with data, studies, analysis of State law, and other information on whether coordination and consultation takes place between water facility planners and State transportation planners, watershed planners, and land use planners?

Response. Coordination and consultation with relevant State agencies is commonly conducted as part of the environmental review process. SRF projects subject

to Federal cross-cutting authorities must also comply with the Demonstration Cities and Metropolitan Development Act which instructed Federal Agencies to consult with local officials to ensure smoother coordination of their assistance programs and to ensure that projects funded under Federal programs are consistent with local planning requirements. States may also have their own laws and regulations relating to coordination with State agencies. See the attached for additional State information.

Alabama: The Intended Use Plan is provided to a large group of diverse interests. In addition, recipients are required to coordinate with the USFWS, COE, historic preservation officer, and regional planning agency prior to submitting a request for funding. The State's environmental review process again provides for these organizations, other agencies, and the public at large to comment on these projects. Alabama's water planning program and SRF programs are both administered by the same division in the environmental regulatory agency.

Alaska: Both SRF priority lists are available to other State and local government planning entities. (There are no county governments in Alaska.) At the planning and design phase of a project, an extensive coordinated review occurs through the State Division of Governmental Coordination within the Governor's Office.

Arkansas: The Arkansas Soil and Water Conservation Commission is responsible for the State Water Plan, NPS planning and monitoring, and ground water planning and monitoring, plus providing State and Federal funding for water projects.

California: During the planning process project alternatives are considered in light of these various plans both as part of the project report and environmental review. The contents of the project report is specified in the SRF Policy and the environmental review document, for the most part, by CEQA.

Colorado: Colorado has a site application/approval process on all new or upgrades of POTW's. This process requires the POTW to get comments and approvals from adjacent communities, counties, and regional water quality planning agencies. Counties also have a similar 1041 permitting process which includes public hearings on proposed construction. The SRF planning process also requires public meetings on proposed projects.

Delaware: All DWSRF projects in Delaware must be approved by the Cabinet Committee on State Planning Issues (CCSPI) prior to issuance of a binding commitment. The CCSPI is managed through the State Planning Office and consists of Cabinet Secretaries from many of the Departments in the State, including Dept. of Natural Resources and Environmental Control, Dept. of Transportation, Dept. of Public Safety, Dept. of Education, Dept. of Agriculture, Dept. of Health and Social Services, Dept. of Finance, State Housing Authority and Budget Office. A project will not be approved unless it is in compliance with "Livable Delaware", the State Land Use Planning Act and with County Comprehensive Plans.

Florida: All projects must go through the clearinghouse, so the appropriate staff in each department have the opportunity to provide input prior to any design work being authorized. Because each facility plan is also reviewed by numerous programs within the Department of Environmental Protection, there are additional opportunities for coordination on various issues, such as consolidation, watershed/source water protection, and land use planning.

Georgia: Under Georgia's current Governor, Roy Barnes, GEFA is taking the lead in addressing water related issues on a regional basis and the associated issues that the committee may have interest in. More information is available through the State's website at: *www.northgeorgiawater.org* The Executive Coordinator is Ted Larrabee who can be reached at 404/463-7206.

Hawaii: Hawaii does not have a process of integrating all planners from different agencies, however, Hawaii's Revised Statutes, Chapter 243, requires that all projects using State land, funds and resources must submit an environmental assessment which is reviewed by all State agencies. Also, if a project involves a change of zoning, the Land Use Commission must submit the proposed project for all State agencies review.'

Idaho: Facility plans for POTWs include consideration of related plans such as land use plans, comp. plans, etc. The facility planning process also includes a detailed environmental review process under the Federal Environmental Policy Act. There is no formal consultation with the entities that develop these other plans.

Illinois: Coordination with various levels of government is done on an as needed basis. It is definitely not needed on every project. There is no specific requirements for the coordination, although agencies have opportunity for input into the planning process through the public participation process.

Kansas: The environmental review process requires a public meeting and public hearing of the applicant, and intergovernmental review by interested Fed and State agencies. Planning and Zoning authority is at the city and county level of govern-

ment, at their option. Wastewater projects must be in conformance with county-level and/or city-level plans, as typically a "special use permit" (rezoning) is required for a new wastewater treatment plant site. Local agencies also do water long range planning, and land use plans, and transportation plans to an extent. Watershed planning is done at the State level, if done at all. (KDHE does TMDLs for water quality, but water quantity (flooding) is by others.) The environmental clearance documents are sent to about 16 interested Fed and State agencies, the regional Planning Commission if there is one, the local newspapers, EPA, and other interested parties.

Kentucky: Kentucky has help several "Smart Growth" forums across the Commonwealth over the past year. It is the Governor's intent to pass legislation relating to Smart Growth initiatives.

Louisiana: There is no coordination between the different planners in the State.

Maine: A new law passed (PL770) requires that all State and Federal moneys loaned or granted for sewer extensions must be in growth designated areas to avoid sprawl.

Maryland: This is at the discretion of the borrower when planning water/sewer projects. However, prior to providing SRF assistance, the State undertakes a State Clearinghouse Review, which offers several State agencies an opportunity to review the proposed project and offer any comments. Projects also have to be in compliance with the State's Smart Growth/Priority Funding Area legislation.

Massachusetts: The Massachusetts SRF program is integrating the Massachusetts Watershed Initiative (MWI) into the annual priority setting mechanism. The MWI is also implementing the Community Preservation Act—our version of Smart Growth. This effort just completed a build-out analysis of all 351 communities. The Community Preservation Act requires the community to accept the build out plan. In addition, the acceptance also allows the community to charge 3 percent of the first $100,000 of a property sale to provide funds for land acquisition, historic property restoration, and affordable housing. The State will match funds used from the 3 percent to subsidize expense. Communities that accept the Community Preservation Act receive 10 points on any State funded program priority lists.

Minnesota: The Minnesota Public Facilities Authority is the responsible for management of the CWSRF and the DWSRF and the financial administration of the loan programs. The Authority is made up of the Commissioners or their delegates from six State departments: Pollution Control Agency, Health, Agriculture, Finance, Transportation and Trade and Economic Development. The make up of the Authority and the good relations between Authority staff and the other departments allows for extensive coordination and consultation. Authority staff also consult regularly with staff from the State planning office. Minnesota has also established a high degree of coordination with Federal Agencies, including USDA Rural Development and the Army Corps of Engineers, as well as the State staff that administer HUD block grant funds. This State-Federal coordination has been very successful.

Missouri: The State does coordination as part of its NEPA-like environmental review requirements.

Montana: No coordination generally occurs between the water/wastewater facility and transportation or land use planners unless those agencies were to provide comment during the environmental review process. During that process, at a minimum the applicants must provide information and request comments from Montana Departments of Environmental Quality, Fish Wildlife and Parks, Natural Resources and Conservation, the State Historic Preservation Officer, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers. Other agencies may also be contacted, as applicable, for a specific project. Some coordination with transportation planners may also occur at the local level on a project specific basis when integral to construction. Coordination does occur regularly between the major State and Federal Agencies that provide funding for public works projects in Montana. This organization is called the Water, Wastewater, and Solid Waste Action Coordinating Team (W2ASACT) and meets bi-monthly to review status of current and future projects. If a new drinking water source is proposed as part of a project, the State's DEQ Source Water Protection program does become involved in the review process. The WPCSRF program uses an integrated priority list ranking system that considers TMDL development and watershed issues. Projects are ranked by these priorities for TMDL development.

Nebraska: Coordination and consultation is generally done at many levels on a regular basis and specifically to some extent on an individual project basis. The critical people that need to be involved in any given situation (program or project) are brought together when needed.

Nevada: The State promotes coordination and planning across appropriate levels of government to maximize use of existing infrastructure, to control sprawl, to pro-

mote watershed protection, etc. The Infrastructure Of Nevada Communities (INC) was established to bring together groups like RCAC, the Nevada Bureau of Health, State Division of Water Planning, Groundwater Task Force, Conservancy Boards, Nevada Division of Environmental Protection and others to address water quality infrastructure needs at the most affordable cost.

New Hampshire: The State requires that each application for a SRF loan be forwarded to the Office of State Planning to undergo the Intergovernmental Review Process.

New Jersey: Depending on the level and scope of a given project, the Department requires coordination with different groups and permitting agencies such as the Watershed Management and Permitting Program which promotes a watershed-based approach enabling the Department to better address regional problems and opportunities, assess the implication of various water supply issues, and better evaluate pollution from all sources including identifying the most effective way to control nonpoint source pollution in the project area. The existing SRF program structure in New Jersey requires that, as a condition to qualify for funding, applicants must receive all applicable permits and approvals to undertake the project.

New Mexico: There is coordination done with the Surface Water Bureau and the Ground Water Bureau of the New Mexico Environment Department. All CWSRF projects are funded in coordination with the State water quality management plan. There is currently no coordination with State transportation planners or land use planners. There are no State land use planners. There is no State land use planning requirement or even a State planning office in New Mexico.

New York: Environmental review process and documents and forms that have to be prepared by local communities address land use and watershed issues; transportation issues not as much. Public notice of environmental review documents is made to all affected agencies. There is significantly more coordination in urban areas than in rural areas. Formalization of the coordination efforts among drinking water and wastewater planners, specifically State and Federal funding agencies, has recently taken place in New York. Part of this effort is devoted to providing training and outreach to planners and officials at all levels of government and to the private sector. This outreach is aimed at raising the level of interest for other planners to consult and coordinate their efforts with the water planners.

North Carolina: NEPA-like reviews, environmental assessments, and environmental impact statements for qualifying projects seek input from the various State agencies that may have an interest in or be impacted by the projects. Even the smallest projects are sent to public notice (including local government) and noticed to other State agencies. Additional coordination and consultation takes place on an informal basis.

Oklahoma: With respect to water facility plans, all SRF loans are coordinated with the appropriate regional planning agencies, State water regulatory agency. Prior to project planning approval concurrence must be gained from the State regulatory agency (208 & facility standards). Substate planners are all notified during the planning process. There is no coordination with State transportation planners. There is coordination with watershed plans. All SRF loans are coordinated with the appropriate Federal/State/local water shed planners (208 Management Plan Water Quality Standards, NPDES, State construction permits/stormwater runoff), COE 404 permitting process, and local floodplain coordinators. This coordination is done during the planning and/or design stage. Coordination with land use plans is done as it applies to prime farmland protection and threatened or endangered species. Generally, the Oklahoma SRF projects are not development projects, but upgrades or expansion existing facilities to enhance watershed protection and to bring communities into compliance with the appropriate Federal act.

For DWSRF projects, the DEQ also requires each DWSRF project to submit a environmental and engineering report to be reviewed first by the project coordinator and district engineer respectively. The environmental assessment is sent out to local, State and Federal Agencies for comment prior to approval.

Oregon: For POTWs the State's facility planning requirements include consideration of related plans such as land use plans, comp. plans, and watershed plans. The facility planning process also includes a detailed environmental review process under the State's Environmental Policy Act. Through master plans, water planners must consider traffic patterns & proposed development in planning for source capacity, storage capacity & water movement in the distribution system. Less coordination historically goes on with watershed planners here, though it is increasing. Oregon's Drinking Water Program has a land use planning requirement. A construction plan is reviewed or approved only when accompanied with a signed statement of land use compatibility from the local land use planning authority based upon a State approved land use plan. Oregon Revised Statutes 448.165, Water Systems.

Rhode Island: At the facility planning stage, communities must get in contact with State historical, DOT, statewide planning. Facility plans are not approved until the statewide planning office has provided comments.

Tennessee: Coordination and planning across appropriate levels of government agencies is done through the existing Interdisciplinary Environmental Reviews. The Tennessee Division of Community Assistance Contacts the following Agencies during the planning phase of all CWSRF/DWSRF projects: Department of Agriculture, Department of Economic and Community Development, Department of Transportation, Division of Air Pollution Control, Division of Archaeology, Division of Groundwater Protection, Division of Natural Heritage, Division of Solid Waste Management, Division Water Pollution control Division of Water Supply, Tennessee Historical Commission, Tennessee Wildlife Resources Agency, Tennessee Valley Authority, US Army Corp of Engineers, US Fish and Wildlife Service.

Utah: The SRF program does not talk directly to the planners at the State level. The local association of government coordinates those issues as, at times, the county commissions. The usual projects that are funded involve renovation of existing works or are so small they don't impact local planning. Communities vary as to the involvement of planners in their infrastructure, its maintenance, improvement or expansion. Water conservation and management are big issues and a water management and conservation plan are required of each recipient of financial assistance as are inclining block rates for water service.

Vermont: ANR is currently proposing a change to the priority system that would limit funds to projects that will support "smart growth" and avoid those projects defined as sprawl inducing. There has been increased coordination on new projects between growth analysts, land-use planners, project engineers, and department staff to address growth issues/secondary impacts at the outset of facilities planning. An initiative is underway to develop ways for addressing water quality impacts related to sprawl in regulatory reviews conducted by the department.

Virginia: For the DWSRF—Virginia law created an entity—the Planning District Commission (PDC)—that is charged with coordinating resources. Each PDC is responsible for a particular geographic area that usually will encompass 4 to 5 counties (http://www.institute.virginia.edu/vapdc/pdcmap.htm) and serve as a clearinghouse for review of application for DWSRF Federal funds. The PDCs receive advance information regarding any impending DWSRF activity. The environmental review process involves these types of entities described in the question. In addition, VDH issues transmittal letters with construction permits to approve projects. Reference is made that local permits that apply must be obtained. Of course this includes land zoning.

For the CWSRF—While loan procedures do not specifically require that each loan recipient coordinate its planned wastewater project activities with area and State water facility planners, transportation planners, watershed planners and land use planners, it would be unrealistic to imply that no communication or coordination is apparent. Any proposed wastewater and sewer conveyance projects is required to obtain the necessary permits to construction and alter land use. Local governments and its consultants know the importance of early and adequate communication and coordination during the planning stage of a project in order to obtain necessary permits. State law requires local governments to develop and maintain land use plans. When the capitalization grant is prepared, DEQ is required to notify the State's regional planning authorities of the SRF contemplated projects across the Commonwealth. In addition, all environmental assessments (reports) prepared for a SRF planning project are required to be formally submitted to various State and local regulatory agencies. Each loan recipient must schedule, properly notice and hold a public hearing to receive comments on its planned activity. Once this is finalized, the State issues and publishes its environmental review statement or a categorical exclusion statement. This again is published in a local newspaper and public comments are solicited in regards to the State's environmental clearance being issued for the project. In Virginia, it would be highly unlikely that any agency, group or individual could claim that they were not given ample notice of any impending project and/or given the opportunity to comment and be consulted during the planning process of a project.

Washington: DOH (DWSRF) coordinates with a variety of Water Resource Inventory Areas across the State at various levels; participates in regional planning efforts/coordination that cross all planning boundaries (land use, transportation, watershed, critical areas, adequacy, fish and wildlife). Water system plans are submitted to local governments for review and all plans for systems over 1000 connections are required to follow the SEPA process. Each plan is developed by the water system/consultant and submitted to DOH for review and approval. The process coordinates with Ecology on water resource issues.

For POTW projects funded through the CWSRF, the State's facility planning requirements include consideration of related plans such as land use plans, shoreline management plans and watershed plans. The facility planning process also includes a detailed environmental review process under the State's Environmental Policy Act.

West Virginia: There is no official coordination, per se, however the West Virginia Infrastructure and Jobs Development Council (IJDC) coordinates the water and wastewater projects that seek any State funds in West Virginia and water systems may request funds at the same time wastewater systems are, or economic development requests in areas that may be pursuing loans. The projects are reviewed technically and financially prior to receiving approval from IJDC. The review process also includes alternatives to the proposed projects. Specifically if there is existing infrastructure that could provide the same service as the project proposes. If there are less expensive alternatives, then the project will have to be justified to receive approval from IJDC. The DW SRF is a member of the IJDC. As a part of each project, an environmental review is conducted and if there are potential impacts, then the project design may have to be reevaluated.

Wisconsin: The State requires that all projects receiving loans undergo a review under the State equivalent of the National Environmental Policy Act. This review involves coordination between State and local government planners. The State also requires approval of a facilities plans for each treatment facility. The facility plan approval requires that the project conform with water quality management plans developed under Section 208 of the Federal Water Pollution Control Act Amendments by local government planning agencies. Facility plans must also conform with water basin plans that are developed by WDNR staff. There is also a requirement that the wastewater facility plans be reviewed by A–95 planning agencies (regional planning agencies or local government planning agencies) with comments provided to WDNR. In all cases it is likely that some level of unmandated consultation does occur between water facility planners, land use planners and transportation planners, appropriately at the local government level. In addition, the WI priority scoring system assigns additional points to projects that are consistent with local resource management plans.

Louisiana: Coordination currently exists through the clearinghouse review that affords other agencies an opportunity to review and comment on proposed projects. In addition, Louisiana is in the process of making the SRF a part (Volume 7) of the Louisiana Water Quality Management Plan under Municipal Waste Treatment. The SRF program is being used as part of the watershed planning effort under the WQM plan, which depends on the SRF program to provide a substantial part of the program for municipal waste treatment. This is useful to both the watershed planning part and the land use planning since the two overlap.

Question 4. In meeting with stakeholders before introduction of S. 1961, I came to understand that the problem of nonpoint source pollution is one of the most unmet problems confronted by the Clean Water Act. To address that problem, we made nonstructural projects eligible for funding under a State SRF in S. 1961. However, in subsequent meetings, I have learned that nonstructural projects are rarely considered because the plans to implement their construction and the mechanisms for their payment are different than wastewater treatment facilities. How can we ensure that nontraditional projects are funded so as to address the unmet need of nonpoint source pollution problems?

Response. We believe that the requirements related to the priority setting system will go far to increase the number of nonpoint source projects that are funded through the Clean Water SRF. As written, the bill would require that States use available water quality data (e.g., information developed by the State under CWA sections 303(d) and 305(b); the State's continuing planning process developed under section 303(e), the State's nonpoint source management program under section 319, any estuary plans developed under section 320 etc.) to determine their overall water quality problems in the State. Inherent in this is an acknowledgment of the various sources of water quality problems and their relative contributions, whether they be point or nonpoint source. Then the States would have to develop a priority ranking system that ranks eligible projects to address those problems. The priority ranking system combined with the requirement to fund projects in priority order, to the maximum extent practicable, will work together to achieve improved water quality benefits, whether they are related to point source or nonpoint source solutions. EPA is working with the States to streamline the water quality data reporting process and improve the quality of the data.

RESPONSE OF BENJAMIN GRUMBLES TO ADDITIONAL QUESTIONS FROM SENATOR BAUCUS

Question. Other panelists have testified that the infrastructure for water and sewer systems is in considerable disrepair. Does this situation pose a significant public health hazard? If it does pose a major risk to public health, should that affect the budget priority afforded water and wastewater infrastructure funding by this Administration?

Response. Substantial work remains to address remaining risks associated with wastewater infrastructure in our nation. In terms of the 900 cities across the country with combined sewer systems, EPA reported in its January 29, 2002, Report to Congress that although cities have made substantial progress and investments in CSO control and are realizing public health and water quality benefits, CSOs continue to pose a public health and environmental threat.

Sanitary sewer overflows also represent public health and water quality threats. EPA estimates that there are at least 40,000 sanitary sewer overflows each year. Untreated sewage from these overflows can contaminate our waters, causing serious water quality problems and threatening drinking water supplies in addition to fish and shellfish. Untreated sewage can also back up into basements, causing property damage and threats to public health for those exposed to untreated sewage. As collection systems continue to age, sanitary sewage overflows may increase unless substantial effort is made to properly manage, repair, and replace systems.

Any time there is a failure in a drinking water transmission or distribution pipe, there is a potential risk to public health caused by disruptions to the treatment process and introduction of contaminated water into the distribution system. As pipes continue to age and deteriorate, deficiencies could contribute to an increase in waterborne disease outbreaks. The vulnerability of surface and ground water sources of drinking water to contamination can also pose a risk to public health. States are conducting assessments to determine the susceptibility of sources to contamination, but if States and water systems fail to take the next step of actually implementing protection measures, there will be little benefit to public health.

The Administration considers water quality and public health protection as priorities and is committed to improving the nation's water quality and ensuring the safety of drinking water. The President's FY 2003 budget request underscores this commitment. The President's budget provides the largest SRF request in the history of the SRF programs. However, the President did clearly identify in his State of the Union address his highest priorities as defense and homeland security. Appropriation levels that are higher than those included in the President's budget would not be consistent with those priorities.

RESPONSES OF BENJAMIN GRUMBLES TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. Although S. 1961 proposes a higher authorization level than the EPA supports, do you believe an investment of $20 billion for clean water and $15 billion for drinking water projects over 5 years can be effectively managed to meet the nation's needs? At what financial level will the State Revolving Funds be self-sustaining after this investment period?

Response. The President's Budget proposes funding of $1.212 billion for the Clean Water SRF and $850 million for the Drinking Water SRF. At these funding levels, the CWSRF will revolve at an average level of over $2 billion and the DWSRF will revolve at an average level of $500 million annually through FY 2035. As of June 2001, approximately $3.4 billion in CWSRF funds and $1.4 billion in DWSRF funds remained unallocated by the States.

While the SRFs have proven to be highly effective programs, the bill's authorization levels are not consistent with the President's Budget.

The Administration looks forward to working with the committee on a fiscal approach centered appropriately on shared responsibility, particularly on incentives for creative and innovative approaches now being used to address these issues by numerous States and communities.

Question 2. Are the levels of technical assistance for small communities over the next 5 years called for in the bill ($7 million per year for communities of less than 3,300 people located in a rural area, $5 million a year for Small Public Water Systems Technology Assistance Centers, and $1.5 million a year for the Environmental Finance Centers) appropriate investments?

Response. We believe the appropriation levels included in the President's FY 2003 budget represent appropriate funding levels for technical assistance to small communities.

Question 3. Have State program managers generally demonstrated appropriate competency and expertise to fully implement the goals of the Clean Water Act and the Safe Drinking Water Act? If so, is the flexibility provided in S. 1961 adequate to reflect the role of States on the front-line of environmental management and utility infrastructure oversight?

Response. Yes, we believe that Clean Water and Drinking Water SRF program managers demonstrate appropriate competency and expertise to fully implement the goals of the Clean Water Act and the Safe Drinking Water Act, although some States report resource constraints in managing their programs. We believe in providing States with flexibility to meet the goals of the Clean Water Act and Safe Drinking Water Act. For example, the FY 2003 President's Budget proposes extending through FY 2003 States' authority to transfer funds between their Clean Water and Drinking Water SRFs, which will allow States to address their highest priority water infrastructure needs. We appreciate the committee's recognition of this useful authority.

As was noted in the Deputy Assistant Administrator for Water Ben Grumbles' testimony on February 26th, the Administration supports the objectives behind the new loan conditions in S. 1961 as according with basic principles that should guide our infrastructure revitalization efforts. At the same time, we want to make sure that the conditions operate in ways that are workable for loan applicants and States alike, and that the SRFs can continue to function to provide the needed kinds of assistance.

Question 4. How do you believe the EPA would administer the demonstration program to promote the goals of the title?

Response. Although it is difficult to provide much detail at this early stage, we would anticipate that the demonstration program would be run through a competitive process in which potential projects are ranked and selected based on their ability to promote technology and management innovations and increased efficiency, and S. 1961's specific criteria.

STATEMENT OF DOUGLAS H. PALMER, MAYOR, TRENTON, NJ, ON BEHALF OF THE U.S. CONFERENCE OF MAYORS

Mr. Chairman and members of the committee. My name is Douglas Palmer. I am the Mayor of Trenton, NJ and Chair of the Conference of Mayors' Urban Water Council.

The Conference of Mayors is a national nonpartisan organization that represents more than 1,100 cities across the nation. We represent the largest water and wastewater systems in the United States.

Mr. Chairman, I would like to thank you and the other members of the committee for introducing S. 1961, the Water Investment Act of 2002.

I would also like to thank you for holding these hearings and for inviting me to give the Mayoral perspective on water and wastewater investment issues.

As you know the issue of water and wastewater infrastructure is critical to our nation and to our nation's cities. To maintain healthy and viable communities, we must make sure that our water and drinking water supply is clean and safe.

However, to do that, costs money. The estimate to build, rebuild and maintain our water and wastewater infrastructure has been estimated to cost close to $1 trillion.

As Mayors we have recognized that there is not enough local, State or Federal money available to satisfy all the water infrastructure needs in the nation.

The Urban Water Council was created to focus on these issues. Its purpose is to assist local governments in providing high quality water resources in a cost-effective manner.

The Urban Water Council has identified three basic approaches to help cities finance the water and wastewater infrastructure development necessary to comply with clean and safe drinking water laws. These include:

- Providing grants to municipalities, either directly or through States, for water and wastewater infrastructure where there is an affordability issue or when a community faces severe environmental problems;
- Expanding the 30-year *no-interest* loan category under the State Revolving Fund loan program for water and wastewater infrastructure investment; and
- Modifying current tax law by removing Private Activity Bonds (PABs) used for water and wastewater infrastructure from the State volume cap.

In our opinion, these approaches are the best means to meet our water infrastructure needs.

WHAT WE FIND PRODUCTIVE AND POSITIVE ABOUT THE BILL

The bill you have introduced has many excellent components.

We agree with the committee that the focus of this bill should be on water infrastructure investment instead of a new set of provisions that would require municipal water and sewer operators to assume even greater responsibilities when the current infrastructure is clearly insufficient to deal with current water quality compliance criteria. Local elected officials are engaged in trying to achieve water quality goals, but we need a chance like this to focus on such achievements, and not be redirected to new goals.

The bill authorizes $20 billion between 2003 and 2007 for the SRF categories under the Federal Water Pollution Control Act; and $15 billion for the SRF categories under the Safe Drinking Water Act. These SRF authorizations are clearly not enough to subsidize the funding necessary to "close the needs gap", but a combined $35 billion boost over the next 5 years is also clearly much more than previous funding levels. For this, we are grateful to the Senate, and we support this approach.

S. 1961 also incorporates some innovative concepts, two of which are deemed crucial by the Conference of Mayors in creating the right conditions for successful achievement of water quality goals. First, the proposed Section 103 provision that would require a recipient of SRF funds to consider, among other things, "forming public-private partnerships or other cooperative partnerships" is a step in the right direction. It has been our experience since the mid-90's that alternative approaches to planning, financing and operating water and wastewater projects can yield greater public benefits for the amount of money invested. While choosing a public-private partnership approach should not be prescriptive, it should be made possible for those cities that want to take advantage of such an approach.

The Urban Water Council has prepared two reports, which are available on our website at *www.usmayors.org*, that describe over 40 public-private partnership projects that have realized savings related to operation and maintenance of water and wastewater facilities. Regulations under the Federal tax code were modified in 1997 to allow long-term (20-year plus) outsourcing of public infrastructure facilities. This tax regulation modification, along with Executive Order 12803 which modified the construction grant repayment provision, have removed serious Federal impediments that cities have faced When Congress and the Administration provide the right types of financial incentives, local elected officials can establish public-private partnerships that benefit our citizens and the environment.

The Conference of Mayors adopted policy in 2001 to encourage competition in the design-build-operate phases of new water and wastewater infrastructure. This policy was adopted once it was determined that competition for both surface and sub-surface infrastructure projects need not be as costly as the traditional design-build methods employed in the past. The Lynn, Massachusetts experience is an example of what can be achieved by using competitive approaches to design, build and operate water infrastructure that is intended achieve compliance with the zero discharge requirements for storm waters. In that example, the city was required to eliminate overflows and traditional design-build-operate planning anticipated a $400 million (plus) solution. A competitive bid process, however, anticipating a public-private partnership approach yielded a zero discharge solution that cost less than one-quarter of the traditional approach. Hence, it is possible through competition to achieve compliance with water quality goals at a cheaper price.

The second innovative approach incorporated in S. 1961 is under Title III, Section 302—the demonstration program for water quality enhancement and management. One of the most difficult problems we face as cities involves achieving State water quality objectives and total maximum daily loads (TMDLs) and the virtually unregulated nonpoint sources that are usually outside our jurisdictions.

The U.S. Environmental Protection Agency (EPA) has recognized that agricultural and livestock land uses contribute a major portion of nonpoint source pollution in many areas. Many of our cities are engaged in watershed management efforts to deal with nonpoint sources (including urban runoff). Yet there is a critical lack of regulatory drivers forcing the agricultural and livestock land users to contribute to the solution. In some cases, the timing of pending TMDL requirements will force cities to pay for water treatment caused in part by the upstream, non-urban land users.

The Conference of Mayors adopted an action plan for sustainable watershed management in 1998. One of the five principles of that plan is to focus on non-urban,

nonpoint source water pollution, and pursue public policy that would assign responsibility to pay for the treatment of polluted water commensurate with the contribution of the pollutant loadings. The action plan also clearly calls for allowing the agricultural and livestock land users to employ best practices and least cost approaches that are effective in lieu of stringent and costly regulations. Mayors fully recognize that these land users, although they may or may not be part of our cities, are important contributors to our regional economies. While we prefer to use the powers of persuasion to convince them to participate in the water pollution solutions, we have begun to experience failure in cooperative efforts, and have in some instances resorted to legal actions.

The demonstration projects provision of S. 1961 can provide some of the appropriate financial incentives necessary to bring voluntary cooperative efforts to bear to solve the water quality designation/TMDL problems that we are facing. The Conference of Mayors supports this innovative approach. It is our belief that Congress can do more to specify in this bill that achieving water quality goals in watersheds through the use of SRF financing to install technology that is currently available to ameliorate the impact on streams lakes and estuaries from animal feeding operations will be more cost effective than requiring downstream cities to pay for the upstream pollution.

We support the proposed requirement for recipients of an SRF loan to develop and submit asset management plans that specify how water and wastewater facilities will be properly maintained over time. Asset management is critical to the preservation of infrastructure. We have a long history of experience with using asset management planning; this is not a new or radical concept. We would like to mention that formalizing such a requirement as a condition of receiving SRF funding should be integrated into the loan program in a cautious way. The focus of our efforts at the local government level should remain principally with ensuring the proper treatment of drinking water and wastewater for public health and local economy reasons. The asset management plan is important, but the current proposal on what is acceptable is not entirely clear. We would be happy to work with the committee to explore what an appropriate scope and details of an asset management plan should be.

WHAT CAN BE IMPROVED IN THE BILL

The bill specifies that disadvantaged communities can receive SRF loans with a 30-year repayment term. Perhaps the most significant shortcoming of the S. 1961 proposal is the lack of a similar 30-year repayment term for other communities. A 30-year, no-interest loan program administered under the SRF program would provide a financial incentive that many local elected officials would welcome. It obviously would make new infrastructure investment more affordable than the traditional 20-year loan period. It also has the potential to increase aggregate water infrastructure investment because local government now has to make difficult choices on where to spend limited financial resources.

Similarly, the bill does not contain any reference to removing private activity bonds used for water and wastewater from the State volume caps. I understand fully that changing the tax code is not in the jurisdiction of this particular Senate Committee. However, I would like to convey to this committee that one of the most fruitful financial incentives the Congress can provide for increasing aggregate water infrastructure investment is to make certain that the largely unfunded environmental mandates and environmental goals they impose on local government should not be impeded by a rigid and inflexible tax code.

If public-private partnership approaches based on competitive pricing in the market place is increased, then more water projects can be completed with a given amount of financing than what would occur via traditional financing approaches. If this hypothesis is true, then shifting some, but not all, of the water investment financing to private activity bonds should lead to improved water quality in the aggregate. What we have found to be true in general is that more money spent on water treatment results in improved water quality. While there are some exceptions to this assumption, the reverse is almost inevitable—"no investment leads to continually deteriorating water quality".

There is also no mention in S. 1961 of the imminent need for water systems to conduct security assessments and retrofit the proper anti-terrorist controls necessary to ensure the safety of our water supplies, and the physical integrity of our water infrastructure. We would be happy to work with the committee to recommend a provision to address this problem in S. 1961.

We also support the committee's provisions addressing clarification of the State intended use and priority projects lists. It is important to the cities we represent

to ensure that states fully understand the close relationship between water quality and watershed management, and that the SRF program can play a critical role if states prioritize solutions that focus on the other, non-urban land uses in the watershed that contribute to impacts on streams, lakes and estuaries.

CONCLUSION

On behalf of the Conference of Mayors and the Urban Water Council I wish to thank you again for this opportunity to speak before this committee. We look forward to working with you as you move forward on this very important piece of legislation.

RESPONSES OF MAYOR DOUGLAS PALMER TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. Recognizing that there are concerns about excessive and uncontrolled growth in several areas in the United States, the proposed legislation requires that States consider a number of factors to ensure that water projects do not encourage sprawl. The legislation seeks that water projects are coordinated with local land use plans, regional transportation plans, and State, regional, and municipal watershed plans. Do you think that this requirement can be implemented with noticeable results?

Response. It is the Conference of Mayors belief that better comprehensive planning is essential to discourage sprawl. Comprehensive planning needs to include transportation systems, housing developments, placement of schools, and placement of water and sewer lines. Requiring water projects to be coordinated with local land use plans will serve as a valuable tool to assist local officials as they attempt to implement better regional growth plans. New housing developments are usually dependent upon water and sewer lines being available. If they are not available, housing developments may have to consider areas where the infrastructure is already in place. We believe this will significantly encourage development to occur in already existing communities.

Question 2. Some communities are concerned that the community development requirement to consult and coordinate with other plans may become an unintended mandate and discourage projects from participating in SRFs. How do you believe communities would respond to this requirement?

Response. Each community will respond differently to this requirement depending upon the way input is currently solicited. As long as there is enough flexibility to allow a community to meet these needs in their own fashion, we think it would serve as a valuable mechanism for better planning and community development.

Question 3. Is a call for consideration of consolidation, public-private partnerships, and other approaches a positive outcome for communities?

Response. A call for considering consolidation, public-private partnerships and other approaches will be a very positive outcome for many communities. It has been our experience that communities who consider public-private partnerships realize cost-saving solutions regardless of whether they decide to go with the public-private solution due to the increased competitive process. For those communities who have done public-private partnerships, we have many examples of cost-savings solutions being employed, additional private sector investment and resources being brought to bare, and environmental risk-sharing being undertaken from both parties. For many communities it has been a very positive solution.

Question 4. How do you think your communities would participate in the demonstration program established under the bill?

Response. There are a number of different ways communities may utilize the demonstration program outlined in the Senate bill. A problem that many cities are dealing with involves animal waste and non-point source pollution in watersheds. Traditionally, efforts to improve water quality involved the application of treatment technology at the POTW. This approach reaches an economy of scale when the POTW is designed to handle point source discharges from households, institutions and commercial establishments. Industrial point sources also must employ pretreatment before discharging effluent into the sewer. When the source of the pollution is upstream in the watershed the technology employed at the POTW may not be the right technology or sufficient technology. Such situations call for treatment or mitigation measures in the watershed. A new project in Chino, California addresses non-point source pollution, water quality and energy generation. An anaerobic animal waste digester was built by the Inland Empire Water Authority that is capable

of managing the manure from roughly 4,000 head of cattle. The digester generates methane gasses in a closed system and converts the gas into 450,000 kilowatts of electricity via a gas turbine. The electricity is used to clean and reclaim brackish water, and the remaining electricity is sold to the grid. The residual from the digester still has nutrient value, and is mixed with greenwaste in a composting operation. This arrangement provides answers to non-point source water quality problems, animal waste management, and energy needs. It is out thought that other communities may want to address. This is just one example of a potential demonstration project that could turn into a best practice that is implemented by other communities. Without these demonstration projects, a community may not be able to explore innovative, cost-saving solutions to their problem.

Question 5. S. 1961 calls for a nationwide assessment that identifies areas of the United States at risk for water shortage or surplus in the next 50 years. The assessment, to be conducted by the USGS, would provide a "State of the water resources" for the nation, identify Federal research priorities, and share information to States and all stakeholders. Do you perceive that such an assessment will be helpful to the strategic planning and operation activities to respond to the identified regional risks?

Response. Yes, it would be helpful. At the national, State, and local level, it is imperative that we have good, current data that addresses the "State of water resources" in this country. This is necessary to better understand the situation, to frame up the appropriate issues to our constituents, and to make sound decisions to deal with the issues in the present and the future.

STATEMENT OF JOSEPH A. MOORE, ALDERMAN, CHAIR, ON BEHALF OF THE NATIONAL LEAGUE OF CITIES

Mr. Chairman, members of the committee: I am Joseph Moore, Alderman from the city of Chicago, and chair of the National League of Cities' Energy, Environment and Natural Resources Committee. I am here today to testify on behalf of NLC and the 18,000 cities we represent across the United States on S. 1961, the Water Investment Act of 2002.

First and foremost, I would like to congratulate the four cosponsors of S. 1961 for recognizing the need for a renewed Federal partnership in helping finance the rehabilitation and replacement of the nation's aging water infrastructure. We deeply appreciate your willingness to commit $35 billion over the next 5 years to our wastewater and drinking water infrastructure needs. The introduction of S. 1961 demonstrates your understanding that the nation's cities and towns truly face an uphill struggle in assuring the continuation of the environmental progress made in the past 30-plus years and need your help in protecting the significant investments we have jointly made.

Accordingly, while we understand that the current statutes—the Clean Water Act and the Safe Drinking Water Act—authorize the expenditure of SRF resources for infrastructure rehabilitation and replacement, NLC nevertheless believes water infrastructure should be one of the expressed priority purposes of S. 1961. As the committee well knows, infrastructure replacement costs are expected to approach $1 trillion over the coming two decades and should therefore be highlighted as a principal and primary purpose of this statute.

NLC also advocates including water security as an appropriate use of these funds. Our wastewater and drinking water facilities were constructed with little, if any, thought given to? the potential for the unprecedented terrorist activities of the type witnessed on September 11th. The security mechanisms built into these systems were not designed for anything; of that magnitude. We believe Federal assistance to enhance wastewater and drinking; water security needs—especially those involving vulnerability assessments and capital investments—is both necessary and a legitimate use of these funds.

While NLC applauds the bill's attempt to provide non-refundable assistance to communities that do not meet the definition of a "disadvantaged community" by providing subsidies that will benefit the poor populations in those cities, it is unclear how this provision would be implemented. The idea is laudable in concept; we are uncertain whether it will work in practice. We would like the opportunity to work with you on developing this provision so that it is acceptable to you and accomplishes the intended objectives for us.

Other provisions in S. 1961 affecting funding which NLC supports include:

• the extension of the transferability provisions allowing the use of a portion of the wastewater and/or drinking water funds to be used interchangeably;

• revisions to the ;allocation formula in the Clean Water SRF to reflect needs more closely;
• the extended repayment period for loans from the SRFs. We would recommend, however, that these provisions be applicable to all loans, not just those for small communities;
• the addition of source water protection as an eligible activity for funding; and,
• inclusion of demonstration projects to promote innovative technology and new approaches to water quality management and supply. For too long, the Federal Government has been inadequately involved in the development of new and more cost-effective ways to come into compliance with the requirements of the Clean Water and the Safe Drinking Water Acts. We would strongly urge you add stormwater as an appropriate category for demonstration programs as well. Given that most municipalities will begin implementation of the stormwater program next month, and given the likely application of TMDLs to stormwater at some point in the future, we are sorely in need of information and demonstration programs on how to accomplish such objectives.

ISSUES OF CONCERN

In parts, S. 1961 seems rather overly prescriptive. While we understand the legitimate concerns of the Federal Government in protecting its investments, NLC believes that if the proposal imposes too many mandates as a condition for the receipt of funds, they may prove to be a disincentive to apply for them—regardless of need.

Many water systems already have asset management programs in place. Likewise, many utilities have kept their rate structures up-to-date. It is important to recognize these achievements in the context of eligibility requirements. While there are utilities which have not implemented new management techniques and/or updated their rates, NLC believes there may be better alternatives to assure proper operations and adequate rate structures than new mandates with respect to such activities. Furthermore, NLC is concerned that utilities that already have asset management programs in place, and have imposed rate increases to maintain and operate their systems effectively, not be barred from, or have lesser status in, accessing these funds. We would like to work with you to assure that all water systems are well managed and that rate structures—to the maximum extent feasible—are adequate to meet the short- and long-term needs of local water utilities.

NLC is also concerned that states may not have adequate capacity, or the expertise to develop the required strategies. Congress is aware that the states are currently struggling with the TMDL program, and are expected to have significant resources involved in these activities for the foreseeable future. If, because of these or other priority responsibilities at the State level, asset management strategies are not developed, we also have concerns about the penalty. From the local government perspective, reducing Federal assistance to the State by 20 percent penalizes the local governments in that state. We are aware that these types of penalties are supposed to insure that the affected local governments pressure the states to develop their strategies. But, such pressures don't always work—especially when the states are overloaded with their own responsibilities—responsibilities that are subject to lawsuits if not completed.

Other criteria of concern to NLC are those with respect to public/private partnerships and consolidation.

Public/Private Partnerships.—NLC is newly arrived at discussions about the impact of international trade agreements on the privatization of local services and the relationship of such agreements to the maintenance of local control and autonomy. So while having little expertise, NLC considers it important to raise the issue for further review by the committee. As the committee undoubtedly knows, the majority of the large private water companies operating in the United States are foreign owned. At the local level, we have concerns that contracting with these foreign-owned companies may—because of the terms and conditions of international agreements—adversely affect the ability of a local government to make many critical determinations about the utility once it is under contract with such a private partner. We would be happy to provide expert resources and additional information to the committee on this issue and ask only that there is a full understanding of the ramifications of public/private partnerships in the water business before requiring or encouraging; such activities in Federal law.

Consolidation.—The provisions relating to consolidation of systems are also somewhat perplexing. As we read the proposal, systems are encouraged to consider consolidation to become more effective and efficient. Our first question is whether this is a requirement to be eligible for funding. If so, there are some systems that already serve millions of customers and further consolidation is neither feasible nor

sensible. Our second question is whether the committee is willing to remove Federal impediments to consolidation—for example, § 1926(b) of the Agriculture Act of 1961, which disallows absorption of any drinking system indebted to the Farmers Home Administration. Numerous cities have attempted to expand their service areas to unincorporated areas served by this small system, or to areas surrounding the small system service area. Federal law precludes their doing so. States that have attempted to deal with this issue find that even they may not override Federal law. Many of these small systems are inefficient and marginally protective of public health. State and local efforts at consolidation in such areas have been barred by Federal law.

Mr. Chairman, members of the committee, thank you for the opportunity to testify for the National League of Cities and for taking the initiative in developing, proposing and starting the legislative process on S. 1961, the Water Investment Act of 2002. NLC looks forward to continuing to work with you on making this one of the most important and effective pieces of legislation in the 108th Congress.

STATEMENT OF NANCY STONER, DIRECTOR, CLEAN WATER PROJECT, NATURAL RESOURCES DEFENSE

Good morning, Mr. Chairman, and members of the committee. I am Nancy Stoner, Director of the Clean Water Project at the Natural Resources Defense Council (NRDC), a national environmental group that has a long history of working to protect our nation's waters through the Clean Water Act. I am also one of the cochairs of the Clean Water Network, a coalition of more than 1,000 groups supporting clean water from around the country. I present this testimony on behalf of both NRDC and the Clean Water Network. My expertise is primarily on clean water, not safe drinking water issues, so while I will touch on both, I will focus my remarks on the Clean Water State Revolving Fund.

Thank you for holding this timely hearing today on S. 1961, the Water Investment Act of 2002, which would reauthorize the Clean Water Act and Safe Drinking Water Act State revolving funds (SRFs). This is a tremendous opportunity for the Congress to provide increased funding and essential improvements in these programs.

RESTORE OUR WATER INFRASTRUCTURE INVESTMENT

The Federal Government's investment in wastewater and drinking water treatment over the last 30 years has brought tremendous progress in cleaning up our rivers, lakes, and coastal waters and in ensuring the safety of our drinking water. For example, EPA has documented a dramatic decrease in loadings of sewage contaminants into our waterways from the wastewater treatment plants that we built through the construction grants and clean water State revolving fund programs. Progress in Water Quality: An Evaluation of the National Investment in Municipal Wastewater Treatment, U.S. EPA 2–72 (June 2000)

That progress, however, has been eroded by water pollution resulting from urban stormwater, agricultural runoff and of discharges of inadequately treated sewage from our deteriorating collection systems and wastewater treatment facilities. In fact, the same EPA report that trumpets our tremendous success to date in reducing sewage contamination predicts that, if we do not substantially increase investment and treatment efficiency, by 2025, we will again have pollutant loadings from domestic sewage that are as high as they were in 1968—the highest in our nation's history.

And untreated sewage is not the only growing water pollution problem. NRDC's annual report on beach pollution shows increasing beach closures and advisories due to bacterial contamination of coastal waters for 10 of the 13 years reported. Testing the Waters (Eleventh Edition), Natural Resources Defense Council (August 2001). The number of closures in 2000 was the highest ever. While some of the increase is due to better monitoring and reporting of beach pollution, stormwater pollution continues to increase as development replaces soil and vegetation with paved surfaces that collect and convey pollutants directly into our waterways. Stormwater Strategies, Natural Resources Defense Council 23–38 (May 1999). We need to step up our investment now to keep these sources of pollution from overshadowing our previous water quality gains.

INCREASE FUNDING AND SPEND IT ON MORE ENVIRONMENTALLY BENEFICIAL PROJECTS

The environmental community would like to see water infrastructure legislation achieve three major goals:

1. Substantially *increase funding* for State clean water and safe drinking water projects.
2. Spend that money on *more cost-effective and environmentally beneficial* projects.
3. *Improve public participation* in the funding process and increase State accountability for the expenditure of Federal funds.

I will describe each of these issues and our proposals addressing them through this legislation in turn, but, as an initial matter, I would also note that we are concerned that reauthorization of the Clean Water and Safe Drinking Water SRFs not be used as a vehicle for rolling back clean water or safe drinking water protections. We urge the Congress to stick narrowly to the issue of developing a new paradigm for water infrastructure funding that will better meet the needs of our nation and will provide greater environmental benefit for each dollar spent. That is a large enough task for the moment.

MIND THE GAP

As was discussed extensively at the Fisheries, Wildlife & Water Subcommittee's oversight hearing last spring, the funding gap between water infrastructure needs and available resources is very large and continues to grow. Yet, the current Clean Water and Drinking Water SRFs are grossly insufficient to meet our nation's water quality needs, which include repairing and replacing aging sewer plants and collection systems, controlling contaminated stormwater, minimizing polluted runoff, and remedying decaying and out-of-date drinking water treatment, protection, and distribution systems. We need to authorize substantially more SRF funds to close the gap between our water needs and available Federal funding. The U.S. Environmental Protection Agency and the Water Infrastructure Network estimate that $23 billion must be invested annually in the next 20 years to replace aging infrastructure and to meet the requirements of the Clean Water Act and the Safe Drinking Water Act.

While there are differing estimates of the amount of additional funding needed, the need for greater investment in clean water and drinking water infrastructure is clear and undisputed. Any reauthorization of the Clean Water and Safe Drinking Water SRFs must substantially raise the funding levels for those programs. We commend the sponsors of the Water Investment Act of 2002 for supporting substantially increased funding over the next 5 years, but urge you to look ahead and to authorize additional spending for at least the next 10 years. We know now that we will continue to need vastly increased water infrastructure financing beyond 2007. We should begin to plan now to meet those future needs by authorizing them in this legislation.

FUND THE SMARTEST, MOST BENEFICIAL PROJECTS

The growing funding gap suggests not just the need for more funding, but also the need to begin to spend that funding more wisely to obtain the greatest amount of environmental benefit per taxpayer dollar invested in water infrastructure. We should not merely rebuild our wastewater systems using the hard infrastructure technologies of the past. We must become smarter about stretching our Federal investment in water infrastructure by spending more on "green infrastructure"—non-point and non-structural solutions that are more efficient and more environmentally effective than traditional concrete and pipe solutions. We need to take advantage of the innovative approaches that have been developed over the past several decades that allow us to use onsite source controls (like rain gardens), stream buffers, conservation practices, and other approaches to prevent pollution. These approaches reduce the amount of water that needs to be conveyed to centralized treatment facilities, thereby reducing the cost of operating those facilities.

INCREASE FUNDING TO ADDRESS POLLUTED RUNOFF

For years we have known that polluted runoff is the most significant source of water pollution in the nation for lakes, streams, and coastal waters. Yet, year after year, we continue to direct the vast majority of Federal funding to point source discharges. According to EPA, between 1987 and last summer, only 4 percent went to non-point source projects. Four years ago, EPA adopted a goal of increasing the annual percentage of Clean Water SRF funds loaned for non-point source projects to 10 percent by 2001. EPA pledged to "work with States and territories to ensure that State loan funds are used for the highest priority polluted runoff projects that meet the programs' financial criteria." Clean Water Action Plan, U.S. EPA 57 (Feb. 1998). This goal has not been met. In fact, the percentage of Clean Water SRF funds used for non-point sources has not increased in the 4-years since this pledge was made.

We need to do more than continue talking if we are going to begin to see the real changes in water quality that are the goal of the SRF program.

PREVENT POLLUTION AND REDUCE COSTS WITH "GREEN INFRASTRUCTURE" APPROACHES

While States are allowed to fund non-point source projects under the Clean Water SRF, many of them continue to fund traditional, centralized wastewater treatment approaches even when a non-point or non-structural solution would be less expensive, more effective, and provide non-water quality benefits. Similarly, while States are also authorized to fund non-structural drinking water protection (such as buffer zones or easements), many States have failed to use this authority despite the cost-effectiveness and environmental benefits of such projects. While hard infrastructure projects are an important component of addressing our wastewater needs, we can often mitigate these needs and do a better job of cleaning up the water by funding a combination of cost-effective, non-structural, preventive projects (green infrastructure) and innovative and alternative engineering strategies. Use of distributed, non-structural, pollution prevention approaches in addition to modernization of aging, decaying treatment plants, collection systems, and distribution systems can forestall the need for even more costly approaches and investments in the future.

Non-structural and non-point approaches can also provide a wider array of benefits than hard infrastructure, like pipes and wastewater treatment facilities, can. Those benefits include improved wildlife habitat, enhanced drinking water supplies, energy savings, smog reduction, decreased flooding, and higher property values. Stormwater Strategies, NRDC, Chapter 12 (Sept. 2001). These approaches result in cleaner bodies of water, a greener environment, and better quality of life. Green infrastructure is already working in a number of communities across the nation, saving money and enhancing environmental quality.

PROVIDE A SPECIFIC FUNDING INCENTIVE FOR NON-STRUCTURAL AND NON-POINT SOLUTIONS

The Water Investment Act of 2002 takes a step in the right direction on this issue by clarifying that non-structural and non-traditional approaches to wastewater needs are eligible for funding under the Clean Water SRF. However, this clarification alone is not sufficient to overcome the institutional barriers to using SRF funds for non-point and non-structural solutions to address wastewater and stormwater pollution. Those institutional barriers include the relative ease of making one large loan for a major construction project rather than making many small non-point source loans, the greater voice of sewer authorities than most potential non-point loan recipients in setting priorities at the State and local level, the bias of many engineering firms for traditional, hard infrastructure projects, and the greater difficulty that many non-point source recipients have in paying back loans since they often do not have a guaranteed source of revenue as water and sewer authorities do. Some States also have laws or regulations that prevent non-point sources from obtaining SRF loans, even when their projects can provide greater environmental benefit at lower cost.

State and local officials repeatedly tell us that these institutional barriers to funding non-point and non-structural solutions with Clean Water SRF moneys will be overcome only if we provide incentives for their use. That's why NRDC and the Clean Water Network support providing a specific incentive for non-point, non-structural approaches for cleaning up our waters. In particular, we support providing an incentive of additional funding of up to 10 percent of base funding for any State that voluntarily sets up a SRF clean water fund for projects that provide non-structural protection to surface waters, including agricultural best management practices that benefit impaired watersheds, non-structural stormwater and low-impact development practices, conservation easements, land acquisition for water quality protection, stream buffers, wetlands restoration and other non-point source or estuary projects.

This incentive approach relies on lessons learned from the Intermodal Surface Transportation Efficiency Act of 1991 and its successor, the Transportation Equity Act for the 21st Century, which allocated 10 percent of State surface transportation funds for environmental enhancement projects that improve transportation systems and the quality of life in our communities. Transportation enhancements preserve the human and natural environment, increase the transportation mode choices available to citizens, and encourage coordinated State, local, and public involvement in transportation decisions. This multi-billion dollar program has received broad support from State and local communities by making funding available for non-traditional transportation projects, including the restoration of a historic train station

in Tampa, Florida, creation of a park in Manchester, Vermont, and the construction of a rail-trail in Mineral Wells, Texas.

The Water Investment Act of 2002 contains funding a demonstration program to promote innovations in water supply and treatment technology. While such a program would helpful to spur continued innovation in water and wastewater technologies, many green infrastructure approaches have been in use for more than a decade. They have been demonstrated to be effective and should be promoted for widespread use, not merely piloted, at this point.

DIRECT FUNDING TO THE GREATEST ENVIRONMENTAL AND FISCAL NEEDS

In addition to the monetary incentive for non-point and non-structural solutions, we support a number of other mechanisms to ensure that taxpayer dollars are spent on projects that will address the greatest environmental and fiscal needs.

FUND ONLY ENVIRONMENTAL PRIORITIES

First, we need to require that Clean Water SRF funds be spent to address those projects identified by the State as its top priorities. The Safe Drinking Water SRF already has such a provision. There is no good reason why clean water funds, unlike safe drinking water funds, should be squandered on projects that are not identified as top priorities. This loophole in the current statute must be closed.

GIVE PRIORITY TO PROJECTS ADDRESSING SIGNIFICANT PUBLIC HEALTH AND ENVIRONMENTAL NEEDS AND NEEDS OF DISADVANTAGED COMMUNITIES

Second, we need to prioritize projects that meet the most significant public health and environmental needs and those that help disadvantaged communities the most. We support providing an explicit priority for projects on these bases, as the Safe Drinking Water Act already does, and also support principal forgiveness and other means to ensure that disadvantaged communities and users receive greater access to SRF funds. We also recommend two mechanisms to ensure that this mandate is adhered to—improved EPA oversight of State priority lists and intended use plans and increasing public participation and involvement in setting priorities and in monitoring use of the funds. With little oversight by US EPA and almost no public involvement today in the creation of intended use plans and identification of priorities, there is very little indication of whether Federal dollars are supporting the most pressing public health or environmental needs. Meaningful public participation in the best way to ensure that environmental and fiscally sound choices are made. Ensuring such participation is the best way for Congress to protect and build support for its clean, safe water investment.

END SRF FUNDING FOR SPRAWL DEVELOPMENT

Third, we need to stop using SRF funds to subsidize new sprawl development. Sprawl development makes pollution worse in the long run by bringing more and ever-larger parking lots, roadways, and driveways to more and more watersheds. The volume of polluted runoff is significant—a 1-acre parking lot produces 16 times more runoff than an undeveloped meadow. And the aggregate costs to our environment are adding up. Urban runoff causes nearly half of the impairment of estuary miles assessed by EPA. Disturbingly, U.S. Department of Agriculture figures show that sprawl is accelerating. The 2.1 million acre-a-year development rate in the 1990's is 50 percent higher than in the previous decade. The increase in paved surfaces leads directly to increased flooding, stream channel degradation, habitat loss, increased water temperature, contamination of water resources, and increased erosion and sedimentation. By using our scarce taxpayer dollars to fund sprawl, instead of repair, rehabilitation, and replacement of existing sewer systems, we could exacerbate water pollution in the long run. Sprawl will happen, but the Federal Government shouldn't help foot the bill. Congress should make the Safe Drinking Water Act requirement that projects in State plans not support future growth a part of the Clean Water Act State Revolving Loan Fund as well.

FUND ONLY LAW-ABIDING ENTITIES

Fourth, we need to discontinue funding for entities that are in significant noncompliance with the Clean Water Act and that have not made a commitment to remedy those violations in the future. Funding of significant violators undermines efforts of law abiding entities to raise funds for their wastewater needs. We will never have enough Federal funding to address all wastewater needs. We need to provide incentives for communities to step up to the plate now and raise funds at the State and local level as much as possible to address their wastewater and

stormwater problems, not to stay in violation and wait until more funding becomes available. The Clean Water Act SRF should be available only to entities that have committed to comply, not those that have thumbed their noses at the regulatory requirements.

INFORM THE PUBLIC ABOUT PUBLICLY FUNDED PROJECTS

Fifth, we need to improve the publicly available information about the projects that taxpayer dollars are used to fund. Currently required reports on the use of SRF funds provide little useful information and are not routinely available to the public. The public has a right to know which projects are being funded at taxpayer expense and what they are accomplishing. The Water Investment Act of 2002 does little to improve State accountability for the use of funds or public availability of such information.

AMERICANS WANT CLEAN, SAFE WATER

As poll after poll has shown, Americans want clean, safe water and are willing to invest more to get it. We applaud you for moving forward with legislation to address the public's demand for clean water. We urge you to ensure that the bill you pass is the best, most effective one possible to meet that demand. Only if Congress substantially increases funding for State clean water and safe drinking water projects, spends that money on more cost-effective and environmentally beneficial projects, improves public participation in the funding process, and increases State accountability can we hope to achieve the clean and safe water Americans want and deserve. This year is the 30th Anniversary of the Clean Water Act. Let's move ahead this year with legislation that will ensure clean and safe drinking water for years to come.

Thank you for providing me with the opportunity to testify today. We have drafted specific language on each of these issues and would like to work with you to address them. I would be happy to answer any questions you may have.

RESPONSES OF NANCY STONER TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. The bill specifically encourages development and use of non-structural alternatives and low-impact development technologies. These approaches are eligible to compete for State Revolving Fund moneys. Additionally, the new demonstration program would be authorized at $20 million per year over 5 years to promote innovations in these technologies and approaches. Do you believe that these incentives will increase the implementation of these technologies and approaches?

Response. Non-structural approaches and low-impact development technologies are eligible for funding now under the SRF program. While it is helpful to identify these approaches as among those eligible for funding, it is, in our view, insufficient to overcome the barriers to their use. The demonstration program is also a step in the right direction, but it is not enough to address the problem. First, the demonstration projects are not limited to non-structural means of protecting surface waters. In fact, they are not even limited to projects that provide greater environmental benefit than existing projects or to projects focused on water quality as opposed to other water issues. The demonstration program is authorized to fund only 10 projects per year, yet nonstructural methods of protecting surface waters are well beyond the pilot project stage. They are well-established and documented means of providing multiple environmental benefits, often at lower cost than conventional methods, particularly for controlling contaminated stormwater. While we appreciate that the intent of this provision is to promote these approaches to those who may be unfamiliar with them, we are concerned that setting up only a small pilot program for these types of approaches will wrongly suggest that these approaches are experimental and marginal, and will not encourage communities to consider these as integral components of any program to effectively control sewage, stormwater, and other nonpoint source loadings into impaired waterways. Many communities will incorporate these strategies into their resource protection programs if the financial and institutional platform is available.

We urge you to provide direct incentives to applicants through subsidization incentives as well as a set-aside to encourage States to direct more funding for nonpoint and nonstructural solutions. We urge that the final Senate bill ensure that nonstructural surface water protections receive no less than 10 percent of States' total SRF allocations. We urge you to consider incentives for potential loan recipients as well, including additional subsidization for these types of projects in the form of principal forgiveness or negative interest loans. Due to the multiple barriers

to efficient use of non-structural projects (as discussed more fully below), incentives at every level of the funding process would be helpful to begin spending our limited Federal resources more wisely on the most environmentally beneficial projects.

Question 2. In your testimony, you mentioned that many "green" infrastructure approaches have been in use for some time throughout the country. Could you elaborate on why some communities are resistant to more widely adopting them?

Response. Incentives are needed to overcome significant institutional barriers at the State level to using SRF funds for non-point and non-structural solutions to address wastewater and stormwater pollution. State and local officials repeatedly tell us that these institutional barriers to funding non-point and non-structural solutions with Clean Water SRF moneys will be overcome only if we provide significant incentives for their use. Those barriers include the relative ease of making one large loan for a major construction project rather than making many small non-point source loans, the greater voice of sewer authorities than most potential non-point loan recipients in setting priorities at the State and local level, and the biases of many engineering firms for traditional, hard infrastructure projects. Some States also have laws or regulations that prevent non-point sources from obtaining SRF loans, even when their projects can provide greater environmental benefit at lower cost.

There was a lot of discussion of barriers to the use of non-point and non-structural approaches to water protection at the EPA conference on "Paying for Water Quality: Managing Funding Programs to Achieve the Greatest Environmental Benefit" that concluded on March 15, 2002. Federal, State, and local SRF experts from the across the country attending the conference expressed their support for mechanisms to increase Federal funding for non-point, non-structural, and watershed approaches. Several participants described our current allocation of SRF resources as "grossly inefficient." Participants identified a number of barriers to effective use of this money now. Among the barriers discussed at the conference were limitations on eligibility (including operations and maintenance funding for decentralized systems and funding for stormwater controls on private lands within NPDES permitted municipalities), State prohibitions on using SRF funds for non-point source activities, State prohibitions on funding private entities, insufficient resources at the State level to fund staff to do many small loans for non-point projects (as opposed to one large loan for a treatment works), a "stovepipe mentality" among SRF administrators, traditional funding priority for large communities, and the lack of knowledge of many smaller communities about funding options.

Question 3. Since there is an inherent risk in trying new approaches, should communities that undertake innovative, but untested approaches be compensated if the proposal fails to serve its intended purpose or inadvertently contributes to increased water pollution?

Response. Non-structural and non-point approaches are not inherently more risky than traditional approaches for protecting surface waters. Traditional approaches also fail, at least occasionally, and when they do fail, they are likely to have more catastrophic effects than an approach that relies on multiple barriers to protect the water (such as distributed stormwater storage and filtering throughout a watershed) rather than a centralized solution. One example of the type of problems that traditional approaches can have is found in Milwaukee, WI, which spent $2.8 billion on deep tunnels to store combined sewage during rain events, but which underestimated the amount of storage needed and the amount of seepage into the tunnels, and has consequently had to divert more than 13 billion gallons of untreated sewage into Lake Michigan since 1994, despite that investment. In addition to raw sewage discharges into Lake Michigan, which is Milwaukee's primary source of drinking water, Milwaukee's groundwater contamination is also reported to have resulted from sewage exfiltration from Milwaukee's deep tunnels. The long-term experience with conventional approaches is that over time they begin to deteriorate and not operate in accordance with the design efficiency. Large-scale maintenance requirements are often ignored or postponed, particularly in times of reduced municipal funding. Many end-of-pipe approaches require sophisticated operations and maintenance, which, if not consistently performed, may cause significant pollutant loadings to receiving waters.

While it is certainly true that technologies for restoring wetlands, installing stream buffers, and implementing distributed stormwater controls continue to evolve and improve over time, they are, we believe, inherently less risky than centralized controls because they incorporate a treatment train approach that offers redundant and multiple opportunities to treat pollutants. While one rain garden or eco-roof that is improperly designed or maintained may fail, it is very unlikely that 100 or 1000 such micro-scale facilities in a community would all fail. Furthermore,

a component in the design of distributed stormwater approaches relying on soil and vegetation is to have a backup system (often underdrains) that capture overflow runoff in the event of a very large rain event. See, e.g., Start at the Source (Bay Area Stormwater Management Agencies Association, 1999)

RESPONSES OF NANCY STONER TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. In your testimony, you say low impact development technologies and innovative approaches have been used with great success across the country, and yet, cities may still be reluctant to use them. Unless we address some of the reasons why States and municipalities are not using these technologies, the 10 percent bonus you suggest in your testimony will go unused.

I cannot support a mandate on States that would eliminate their flexibility. Short of doing that, what would you recommend we do at the Federal level to increase the comfort level with these technologies?

Response. We believe that providing one or more monetary incentives for the use of non-structural means of protecting surface waters will encourage States and municipalities to remove a number of barriers to the use of these cost-effective approaches. We agree with you that we need to structure the funding for these initiatives so that there is not unspent money. We can do that by allowing EPA to hold the new money set aside in reserve for States that spend at least 10 percent of their funding on eligible projects. That money could be distributed to other States for such projects in subsequent years in the event that any money was left in the fund at year's end.

We appreciate your inquiry concerning other options for increasing SRF funding for nonstructural and non-point projects as well. Although there are several improvements that we would suggest to the language, the provision in the companion House bill (H.R. 3930) that would allow States to provide additional subsidization, including forgiveness of principal and negative interest loans for innovative and alternative processes, materials, and techniques is worthy of your consideration. We believe that the incentives provided should be focused on the most environmentally beneficial of these approaches including, agricultural best management practices that benefit impaired watersheds, non-structural stormwater and low-impact development practices, conservation easements, land acquisition for water quality protection, stream buffers, and wetlands restoration. Non-municipal non-point and non-structural recipients often have greater difficulty in paying back loans since they often do not have a guaranteed source of revenue for repayment. We urge that the final bill ensure that nonstructural surface water protections receive no less than 10 percent of States' total SRF allocations and that incentives be provided to States and potential loan recipients, including non-municipal entities, to use green infrastructure approaches.

Question 2. There is one community in New Hampshire who is considering a few of these low impact development technologies. They are currently awaiting an engineers report on what different approaches there are to addressing CSOs. Rain gardens and constructive wetlands would reduce the amount of storm water overflowing into the local waterbody.

However, will they take away enough water to significantly reduce the amount of pipe separation or the size of the holding reservoir to actually reduce a communities costs? Can you quantify this?

Response. There are several communities within the United States and internationally that are using nonstructural and non-point measures to reduce combined sewer overflow volumes. We commend New Hampshire communities for evaluating what such approaches can do to improve water quality, save money, and provide non-water quality environmental benefits for its citizens. Portland, Oregon's Clean River Plan addresses the very questions that you pose. Portland Clean River Plan relies upon streambank restoration, downspout disconnection, eco-roof installations, tree plantings, naturescaping, wetlands restoration and enhancement, and distributed stormwater controls as well as more traditional sewer separation and pumping techniques to reduce overflows. Portland estimates that its Clean River Plan will reduce CSO volume by 94 percent, reduce stormwater runoff by almost 1 billion gallons each year (495 million gallons from additions of trees and vegetation and 500 million gallons from inflow projects), relieve basement flooding for 8,000 properties currently at risk, and prevent 100,000 cubic yards of sediment from entering waterways each year. Portland's Clean River Plan; Frequently Asked Questions, Portland Department of Environmental Services (Feb. 2000).

Portland has also demonstrated on a lot-level basis that non-structural approaches save money. For example, Portland, Oregon's Museum of Science and In-

dustry (OMSI) used green infrastructure stormwater management techniques in its 20-acre site, including grass swales and "mini-wetlands," that store and filter nearly 70 percent of the runoff from a 6-acre parking lot. These techniques have been documented to remove 50 percent of sediment and other contaminants that would otherwise have poured into the city's stormwater system, and have saved the museum $78,000 in hard infrastructure costs (e.g., manholes, pipes, trenching, catch basins). A Cost Comparison of Conventional and Water-Quality-Based Stormwater Designs, Portland Department of Environmental Services, pp 1–3, (1996).

There are also monitored data to answer your question as well from Tokyo, Japan, where infiltration has been used to mitigate CSO volume, reduce urban runoff, and recharge groundwater since 1983. Within a 5.5 square mile area, Tokyo installed 33,300 infiltration pits, 122 acres of permeable pavement, and over 175 miles of infiltration trenches. The cost of this approach was determined to be about 33 percent less than conventional open pond detention systems and only 10 percent of the cost of storage vaults. Tokyo found that this approach reduced CSO volume by 81 percent and storm drain flows by up to 50 percent. It also reduced suspended solids loads by 91 percent and biochemical oxygen demand (a measure of the amount of oxygen-depleting pollutants) by 95 percent (Fujita and Koyama).

Question 3. You have also raised the issue of funding in priority order. My State has a well run program that is small enough to allow them to fund projects as those projects are ready to go. In other words, funding can continue to flow if the No. 2 project on the list has its local bond denied.

Or take for example a very small community a long a small waterway in a State that also has a major estuary, like Chesapeake Bay or Long Island Sound which are likely to consume most of a State's priority list. A State may want the flexibility to give that small community money as it becomes available but isn't a position to make it one of the top priorities in the State because it impacts so few people.

Why is this flexibility a problem?

Response. We support allowing the State to move forward with the next priority project if one project is not ready to proceed. We also support allowing the State to have a priority system that allows funding for both large and small projects, but would suggest that the system be transparent and that the public have a meaningful opportunity to comment upon those funding priorities. In other words, the State's approach to funding should not solely be based on only the applicant and the State's view of funding priorities, but should take into account the perspectives of members of the public who have a different view than State officials and staff.

RESPONSES OF NANCY STONER TO ADDITIONAL QUESTIONS FROM SENATOR WYDEN

Question 1. Ms. Stoner, in your written testimony you stated: We should not merely rebuild our wastewater systems using the hard infrastructure technologies of the past. We must become smarter about stretching our Federal investment in water infrastructure by spending more on "green infrastructure"—nonpoint and non-structural solutions.

As an incentive to promote this strategy you recommend providing additional funding of up to 10 percent of the base for any State that voluntarily sets up a clean water State revolving fund for projects. that would include: Best management practices that benefit impaired watersheds, nonstructural stormwater and low-impact development practices, conservation easements, stream buffers, and other non-point source or estuary projects.

Could you provide examples to illustrate these "non-structural" wastewater strategies are in fact "smarter" and that they will help stretch Federal investments to improve water quality?

Response. While hard infrastructure projects are an important component of addressing our wastewater needs, we can often mitigate these needs and do a better job of cleaning up the water by funding a combination of cost-effective, non-structural, preventive projects (green infrastructure) and innovative and alternative engineering strategies. Use of distributed, nonstructural, pollution prevention approaches in addition to modernization of aging, decaying treatment plants, collection systems, and distribution systems can forestall the need for even more costly approaches and investments in the future. They should represent a significant component of every State's Clean Water State revolving fund.

Once again, some of the best information comes from Portland, Oregon, which identifies the following among the benefits of its Clean River Plan:

- Greatly improved water quality
- Reduced stormwater volume and pollutant loadings

• Better habitat for fish and other wildlife due to lower pollution levels, streambank restorations, and in-stream habitat restoration
• More green space for people to enjoy
• Less frequent flooding
• Improved fish recovery efforts
• Thermal pollution reduction
• Improved air quality
• Greater community involvement and stewardship

Portland's Clean River Plan: At a Glance, Portland Department of Environmental Services (Feb. 2000).

Case studies on a variety of non-structural means of protecting surface waters from contaminated stormwater runoff are included in NRDC's 1999 report, *Stormwater Strategies: Community Responses to Runoff Pollution,* which is available in full on NRDC's website, *www.nrdc.org.* Those case studies include the following:

• Staten Island Bluebelt (NY)—New York City estimates that its use of natural systems (open space, streambeds, and wetlands) will save it $50 million as compared to the cost of additional subsurface storm sewer lines
• Charles River Valley (MA)—Preserving wetlands to store flood waters cost $10 million or one tenth the cost of constructing a dam to prevent flooding of $100 million and provides aesthetic and ecological benefits as well
• Hillsborough County (FL)—Residential development that preserves vegetation and open space cost lowers maintenance costs and increases property value for residents as well as providing secondary environmental benefits for the neighborhood.
• Fort Bragg (NC)—Environmental design for new vehicle maintenance facility saved $1.6 million out of an $8 million site design budget while serving both environmental and non-environmental goals.
• Village Homes (CA)—Stormwater-sensitive site design for residential community in Davis saved $800 per lot in construction costs, provide higher resale values than adjoining traditional neighborhoods, and yields excellent floodwater protection and water filtration as well as aesthetic and recreational benefits for residents.
• Prairie Crossing (IL)—Conservation design that includes restored prairies, wetlands, and swales reduces pollution, provides valued homeowner amenities, and provided cost savings for developer of between $1.6 and $2.7 million.

Information about the economic and environmental benefits of one type of non-structural approach to controlling stormwater, i.e., "low impact development," is discussed in depth in the update to *Stormwater Strategies: Community Responses to Runoff Pollution*, which NRDC released in CD-ROM format in September of 2001. That chapter is attached in full for your reference.

Question 2. Would you describe how a 10 percent incentive to States for funding nonstructural wastewater approaches might work, and given the States interest in retaining as much flexibility as possible, why you believe we should set aside funds exclusively to promote these types of investments?

Response. The incentive funds would be reserved by EPA to provide to States that had enough qualifying projects to use 10 percent of their allotted funds. If one or more States did not reach that goal and there was, therefore, unused money, it would be provided the following year for the use of any State on qualifying projects. This structure would accomplish several things:

• it would ensure that at least 10 percent of SRF funds nationally were spent on the more environmentally beneficial projects
• it would encourage every State to spend at least 10 percent of these projects, but would not mandate that they do so
• it would provide additional incentives to States to fund even more of these projects if there were some States that chose not to do so; and
• it would not allow any SRF funds to go unspent.

We support directing funds to projects involving non-structural protections for surface waters to try to redirect some of the resources that are not now being spent on the most environmentally beneficial approaches to pollution control. We recognize, however, that there are very worthy traditional sewer and stormwater projects and support continuing to provide substantial funding to those projects as well, particularly to address economically stranded treatment works and collection systems in our urban centers. We do not believe it necessary to direct SRF funds to those projects because they already receive a large share of the funding, but we do support prohibiting SRF funds to be used for new collection systems in previously undeveloped areas or to fund anticipated future growth. Such a provision will not only prevent our SRF dollars from subsidizing sprawl, but will also ensure that existing systems receive adequate funding.

The Low Impact Development Approach

(excerpted from Stormwater Strategies, NRDC)

Introduction

Low Impact Development (LID) has emerged as a highly effective and attractive approach to controlling stormwater pollution and protecting developing watersheds and already urbanized communities throughout the country.[12.1] Several LID practices and principles, particularly the source control approach and the use of micro-scale integrated management practices have the potential to work effectively as stormwater quality retrofits in existing ultra urban areas as well.[12.2] Developments in and application of LID techniques that have occurred since the original publication of Stormwater Strategies motivated this new section, which is an addendum to the discussion of strategies for addressing stormwater in new development and redevelopment covered in Chapters 5 through 11.

LID stands apart from other approaches through its emphasis on cost-effective, lot-level strategies that replicate predevelopment hydrology and reduce the impacts of development. By addressing runoff close to the source, LID can enhance the local environment and protect public health while saving developers and local governments money.

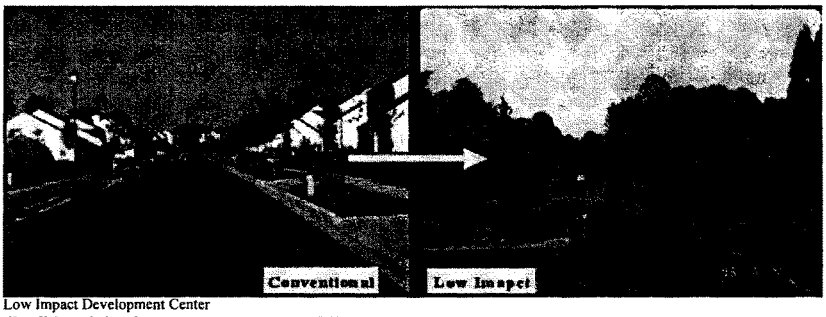
Low Impact Development Center

LID uses lot-level strategies like this rain garden to replicate predevelopment hydrology and to reduce the environmental impacts of development

Below is a discussion of LID, its principles, practices, and benefits followed by 13 new case studies. The case studies provide examples of several LID practices and describe how they are being applied throughout the country. These practices are the building blocks of LID design and, when integrated in a systematic way, provide substantial benefits to the developer and community.

What Is Low Impact Development?

LID is simple and effective. Instead of large investments in complex and costly engineering strategies for stormwater management, LID strategies integrate green space, native landscaping, natural hydrologic functions, and various other techniques to generate less runoff from developed land. LID is different from conventional engineering. While most engineering plans pipes water to low spots as quickly as possible, LID uses micro-scale techniques to manage precipitation as close to where it hits the ground as possible. This involves strategic placement of linked lot-level controls that are "customized" to address specific pollutant load and stormwater timing, flow rate, and volume issues. One of the primary goals of LID design is to reduce runoff volume by infiltrating rainfall water to groundwater, evaporating rain water back to the atmosphere after a storm, and finding beneficial uses for water rather than exporting it as a waste product down storm sewers. The result is a landscape functionally equivalent to predevelopment hydrologic conditions, which means less surface runoff and less pollution damage to lakes, streams, and coastal waters.



Low Impact Development Center
Traditional development pattern versus LID.

LID is economical. It costs less than conventional stormwater management systems to install and maintain, in part, because of fewer pipe and below-ground infrastructure requirements. But the benefits do not stop here. The associated vegetation also offers human "quality of life" opportunities by greening the neighborhood, and thus contributing to livability, value, sense of place, and aesthetics. This myriad of benefits include enhanced property values and re-development potential, greater marketability, improved wildlife habitat, thermal pollution reduction, energy savings, smog reduction, enhanced wetlands protection, and decreased flooding.[12.3] LID is not one-dimensional; it is a simple approach with multifunctional benefits.

LID is flexible. It offers a wide variety of structural and nonstructural techniques to reduce runoff speed and volume and improve runoff quality. LID works in constrained or freely open lands, in urban infill or retrofit projects, and in new developments. In a combined sewer system, LID can reduce both the number and the volume of sewer overflows. "[12.4] Opportunities to apply LID principles and practices are infinite – almost any feature of the landscape can be modified to control runoff (e.g., buildings, roads,

walkways, yards, open space). When integrated and distributed throughout a development, watershed, or urban drainage area, these practices substantially reduce the impacts of development.

Seattle Public Utilities

Projects like "SEA Streets" in Seattle, WA demonstrates the benefits of using a series of integrated strategies that mimic and rely on natural processes.

As urbanization continues to degrade our lakes, rivers, and coastal waters LID is increasingly being used to reverse this trend, resulting in cleaner bodies of water, greener urban neighborhoods, and better quality of life. LID offers a strong alternative to the use of centralized stormwater treatment. It aims to work within the developed and developing environment to find opportunities to reduce runoff and prevent pollution. LID controls stormwater runoff at the lot level, using a series of integrated strategies that mimic and rely on natural processes.[12.5] By working to keep rainwater on site, slowly releasing it, and allowing for natural physical, chemical, and biological process to do their job, LID avoids environmental impacts and expensive treatment systems.

LID Runoff Control Objectives
• minimize disturbance
• preserve and recreate natural landscape features
• reduce effective impervious cover
• increase hydrologic disconnects
• increase drainage flow paths
• enhance off-line storage
• facilitate detention and infiltration opportunities

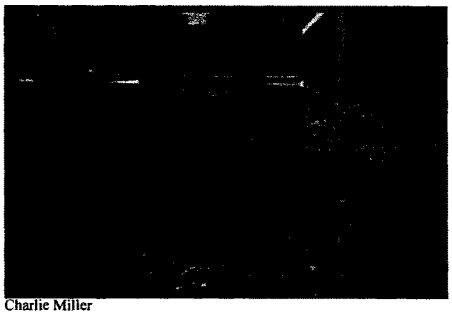
Low Impact Development Principles and Practices

Portland Bureau of Environmental Services

This landscaped court yard at a Portland, OR apartment complex captures runoff from the roof allowing it to soak into the ground.

LID is grounded in a core set of principles based on the paradigm that stormwater management should not be seen as stormwater disposal and that numerous opportunities exist within the developed landscape to control stormwater runoff close to the source.[12.7] Underlying these principles is an understanding of natural systems and a commitment to work within their limits whenever possible. Doing so creates an opportunity for development to occur with low environmental impact. The principles are:[12.8]

- integrate stormwater management early in site planning activities
- use natural hydrologic functions as the integrating framework
- focus on prevention rather than mitigation
- emphasize simple, nonstructural, low-tech, and low cost methods /LI>
- manage as close to the source as possible
- distribute small-scale practices throughout the landscape
- rely on natural features and processes
- create a multifunctional landscape



Charlie Miller
Roof gardens, like this one in Philadelphia, effectively and economically control rooftop runoff, a major source of urban stormwater.

LID uses a systems approach that emulates natural landscape functions. A near limitless universe of runoff control strategies, combined with common sense and good housekeeping practices, are the essence of a LID strategy.

RiverSides Stewardship Alliance
Cisterns are a simple way to prevent runoff close to the source; they also conserve water for future use.

These basic strategies, also known as integrated management practices, rely on the earth's natural cycles, predominantly the water cycle, to reduce land development impacts on hydrology, water quality, and ecology. Integrated management practices combine a variety of physical, chemical, and biological processes to capture runoff and remove pollutants at the lot level).

Ten Common LID Practices

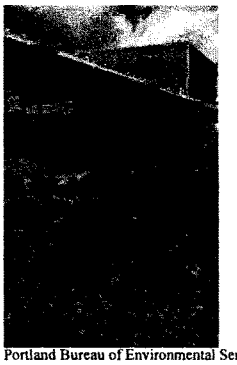
1. Rain Gardens and Bioretention
2. Rooftop Gardens
3. Sidewalk Storage
4. Vegetated Swales, Buffers, and Strips; Tree Preservation
5. Roof Leader Disconnection
6. Rain Barrels and Cisterns
7. Permeable Pavers
8. Soil Amendments
9. Impervious Surface Reduction and Disconnection
10. Pollution Prevention and Good Housekeeping

LID Practices Use Natural Functions to Trap and Treat Runoff. [12:9]

- Physical: increases interception, infiltration, and evapotranspiration; facilitates sediment removal, filtration, and volatilization; stabilizes soils to reduce
- sedimentation and erosion.
- Chemical: facilitates adsorption, chleation, ion exchange, and organic complexing.
- Biological: increases transpiration, nutrient cycling, direct uptake, and microbal decomposition.

Several strategies focus on disconnecting roofs and paved areas from traditional drainage infrastructure and conveying runoff instead to bioretention areas, swales, and vegetated open spaces. LID also strives to prevent the generation of runoff by reducing the impervious foot print of a site, thereby reducing the amount of water that needs treatment. The end hydrological results are a reduction in runoff volume, an increased time of concentration, reduced peak flow and duration, and improved water quality.

Developers apply most LID strategies on the micro-scale, distributed throughout the site near the source of runoff. They customize strategies according to site conditions in order to reduce specific pollutants and to control runoff, a technique known as site foot-printing. LID is particularly effective when practices are integrated into a series of linked, strategically placed and designed elements that each contribute to the management of stormwater.



Portland Bureau of Environmental Services
Disconnecting roof leaders from traditional drainage infrastructure and instead directing it to vegetated areas prevents stormwater pollution.

Bioretention, a core LID practice, provides a good example of how LID management practices work. What looks like a nicely landscaped area is in fact an engineered system that facilitates depression storage, infiltration, and biological removal of pollutants. Developers usually place bioretention areas in parking lot islands, at the edge of paved areas, at the base of buildings, or in open space areas. Runoff is directed to these low-tech treatment systems instead of conventional stormwater infrastructure. Bioretention areas use plants and soil to trap and treat petroleum products, metals, nutrients, and sediments. Bioretention areas, also know as "rain gardens," are relatively inexpensive to build, easy to maintain, and can add aesthetic value to a site, without consuming large amounts of valuable land area.[12.10]

Low Impact Development Center
Bioretention is a core LID technique that uses physical, chemical, and biological processes to control runoff and reduce pollution.

LID includes integrating land and infrastructure management. Activities such as street sweeping, toxic-free and low-impact landscaping, frequent cleaning of catch basins, sediment control, and downspout disconnection all reduce runoff contamination. LID

works equally well in new development and redevelopment projects and is easily customized to complement local growth management, community revitalization, and watershed protection goals.[12.11]

LID is much more than the management of stormwater; it is rethinking the way we plan, design, implement, and maintain projects. Comprehensive programs usually complement LID practices with broader issues such as: considering where growth disturbance should occur; increasing awareness of the cumulative impacts of development; involving the community and raising watershed awareness; developing direct social marketing of LID retrofit actions to households, institutions and commercial establishments; creating a rational institutional framework for implementing stormwater management, and establishing an authority to guide and administer stormwater management activities.

LID and Retrofitting the Ultra Urban Environment

The fundamental approach of using micro-scale management practices and source control has great potential to generate substantial benefits in existing urbanized watersheds.[12.13] LID principles and practices are particularly well-suited to ultra urban areas because most LID techniques, like rain gardens and tree planter boxes, use only a small amount of land on any given site.[12.14] Many LID practices, including bioretention, are good for urban retrofit projects since they are easily integrated into existing infrastructure, like roads, parking areas, buildings, and open space.

RiverSides Stewardship Alliance

Numerous opportunities exist throughout the urban landscape to incorporate LID practices.

LID practices can be applied to all elements of the urban environment. For example, bioretention technology can effectively turn parking lot islands, street medians, tree planter boxes, and landscaped areas near buildings into specialized stormwater treatment systems.[2.15] Developers can redesign parking lots to reduce impervious cover and increase stormwater infiltration while optimizing parking needs and opportunities. Innovative designs for urban areas may also include roof gardens, methods for capturing and using rainwater, and use of permeable pavement in low traffic areas, parking areas, and walking paths.[12.16] Furthermore, LID strategies can help beautify the urban environment and create desirable public open space.

Low Impact Development Center
Tree-box filters and other LID practices are particularly well suited to ultra urban areas because they use only a small amount of space

Low Impact Development Center
Developers can build or retrofit parking lots using LID strategies and optimize parking needs.

Seven Benefits Of Low Impact Development

- Effective
- Economical
- Flexible
- Adds value to the landscape
- Achieves multiple objectives
- Follows as systems approach
- Makes sense

- **Effective**.

Research has demonstrated LID to be a simple, practical, and universally applicable approach for treating urban runoff.[12.17] By reproducing predevelopment hydrology, LID effectively reduces runoff and pollutant loads. Researchers have shown the practices to be successful at removing common urban pollutants including nutrients, metals, and sediment. Furthermore, since many LID practices infiltrate runoff into groundwater, they help to maintain lower surface water temperatures. LID improves environmental quality, protects public health, and provides a multitude of benefits to the community.

- **Economical**.

Because of its emphasis on natural processes and micro-scale management practices, LID is often less costly than conventional stormwater controls. LID practices can be cheaper to construct and maintain and have a longer life cycle cost than centralized stormwater strategies.[12.18] The need to build and maintain stormwater ponds and other conventional treatment practices will be reduced and in some cases eliminated. Developers benefit by spending less on pavement, curbs, gutters, piping, and inlet structures.[12.19] LID creates a desirable product that often sells faster and at a higher price than equivalent conventional developments.

- **Flexible.**

Working at a small scale allows volume and water quality control to be tailored to specific site characteristics. Since pollutants vary across land uses and from site to site, the ability to customize stormwater management techniques and degree of treatment is a significant advantage over conventional management methods. Almost every site and every building can apply some level of LID and integrated management practices that contribute to the improvement of urban and suburban water quality.[12.20]

- **Adds value to the landscape**.

It makes efficient use of land for stormwater management and therefore interferes less than conventional techniques with other uses of the site. It promotes less disturbance of the landscape and conservation of natural features, thereby enhancing the aesthetic value of a property and thus its desirability to home buyers, property users, and commercial customers. Developers may even realize greater lot yields when applying LID techniques.[12.21] Other benefits include habitat enhancement, flood control, improved recreational opportunities, drought impact prevention, and urban heat island effect reduction.

- **Achieves multiple objectives**.

Practitioners can integrate LID into other urban infrastructure components and save money. For example, there is a direct overlap between stormwater management and Combined Sewer Overflow (CSO) control such that municipalities can use LID to help remedy both problems.[12.22] Lot level LID applications and integrated stormwater management practices combine to provide substantial reductions in peak flows and improvements in water quality for both combined and separated systems.

- **Follows a systems approach**.

LID integrates numerous strategies, each performing different stormwater management functions, to maximize effectiveness and save money. By emulating natural systems and functions, LID offers a simple and effective approach to watershed sensitive development.

- **Makes sense**.

New environmental regulations geared toward protecting water quality and stabilizing our now degraded streams, rivers, lakes, and estuaries are encouraging a broader thinking than centralized stormwater management. Developers and local governments continue to find that LID saves them money, contributes to public relations and marketing benefits, and improves regulatory expediencies. LID connects people, ecological systems, and economic interests in a desirable way.

TreePeople c1998
Children at The Broadus Elementary School remove asphalt to replace with trees and grass.

Low Impact Development Strategies

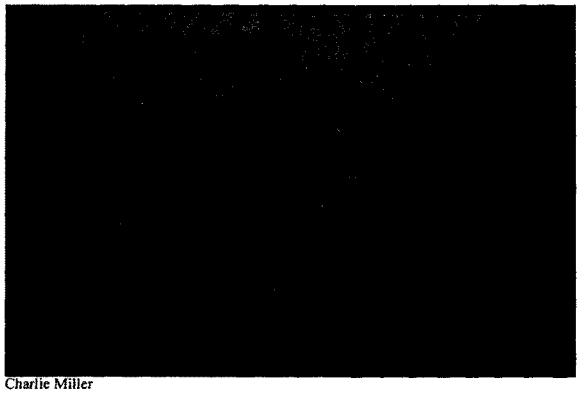
Case: Vegetated Roof Helps Green City, Philadelphia, PA
Case: Low Impact Development Subdivision, Frederick Co., MD
Case: LID at Naval District Washington, DC
Case: Urban Stormwater Control Project at the Environmental Center of the Rockies, Boulder, CO
Case: T.R.E.E.S. Reduces Runoff, Los Angeles, CA
Case: SEA Streets Leaves Legacy, Seattle, WA
Case: City Partners with Property Owners to Promote LIDs, Portland, OR
Case: Stormwater Treatment System is a Work of Art, St. Paul, MN

Additional Examples
Case: Jordan Cove Urban Watershed Study, Waterford, CT
Case: Florida Aquarium Stormwater Research/Demonstration Project, Tampa, FL

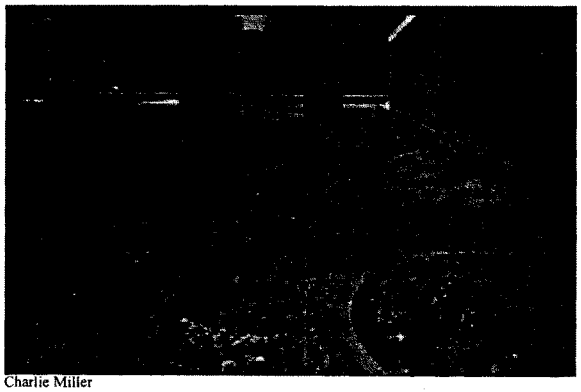
Case: Gap Creek Subdivision, Sherwood, AR
Case: LID for Optimum Water Quality Protection of Water Supply Reservoir, Highpoint, NC
Case: Zero Impact Development Ordinance to Protect Streams, Lacey, WA

Vegetated Roof Helps Green City

Philadelphia, PA[12.23]
Population: 1,585,577
Area: 135 square miles
Highlight: Green roof uses Low Impact Development principles to capture and treat runoff at the source.



Charlie Miller
Fencing Academy roof before green roof retrofit



Charlie Miller
Fencing Academy after green roof retrofit.

Roofs cover a significant portion of the urban landscape and generate large volumes of stormwater runoff. By the same token, they provide an excellent opportunity to control runoff if they are covered with plants. Europeans have been using vegetative roof covers for more than 25 years to control runoff, improve air quality, and save energy. Extensive roof gardens or "green roofs," as they are often called, are beginning to appearing on commercial, industrial, institutional, and residential buildings in the U.S., opening new territory for stormwater management.

Green roofs offer an exciting chance to apply low impact development (LID) principles. They are typically composed of growth media and vegetation on a high-quality waterproof membrane. This veneer of living vegetation is highly effective at capturing, retaining, and filtering runoff. The waterproof membrane prevents leaking. By controlling runoff at the source and absorbing pollutants, green roofs prevent stormwater pollution.

The benefits, however, extend beyond water quality. Green roofs conserve energy by keeping roofs cool in the summer and insulated in the winter. They save money by reducing land area needed for stormwater management practices, which is especially important in densely populated areas with high real estate values, and by extending the life of a roof. Vegetated cover reduces ware and tear caused by temperature related expansion and contraction and protects the roof from ultraviolet (UV) radiation and cold winds that break down traditional roofing materials.[12.24] Roof gardens typically have a 50-year life expectancy. Extensive green roofs cost between $5 and $12 per square foot to install; add an additional $10 to $20 for roofs that need waterproofing. Green roofs also have substantial aesthetic benefits. They make a building or cityscape more pleasant to look at and some vegetated roofs, known as "intensive" green roofs, can be designed to be accessible and used as park and building amenities.

The green roof project at the Fencing Academy of Philadelphia is a 3,000-square-foot extensive roof garden installed and monitored by Roofscapes, Inc. on top of an existing building. The system makes use of natural processes to detain and treat a 2-year 24-hour storm event. The vegetated roof cover is on average 2.75 inches thick, and includes a synthetic under-drain layer, a thin, lightweight growth media, and a meadow-like planting of perennial Sedum varieties. The designers selected plants appropriate for the region and setting. The system weighs less than 5 pounds per square foot when dry and less than 17 pounds per square foot when saturated. The light weight allows installation on existing conventional roofs without structural adjustments.

The roof system can reproduce open-space runoff characteristics for rainfall events up to 3.5 inches. Little or no immediate runoff occurs for rainfall events delivering up to 0.50 inches. For these events, modeling predicts a 54 percent reduction in annual runoff volume. Actual monitoring using 14- and 28-square-foot trays over a nine-month period showed that the trays captured 28.5 inches of the 44 inches of rainfall recorded during this period. The roof garden is also effective at reducing the temperature of runoff that does occur since the temperature of the green roof stays cooler than conventional roofs in

warm months. This helps reduce "thermal shock" caused by flash runoff from hot roof surfaces, which can have a significant impact on aquatic ecosystems.

Green roofs are easily incorporated into both new and existing development. Some factors that must be considered, however, are the load-bearing capacity of the roof deck, the moisture and root penetration resistance of the roof membrane, roof slope and shape, hydraulics, and wind shear. Roof gardens like the one described at the Fencing Academy of Philadelphia are excellent opportunities to apply LID principles and achieve multiple benefits. Widespread use of roof gardens would substantially reduce stormwater runoff and urban water pollution problems while helping to improve air quality, conserve energy, reduce urban heat island effects, and add beauty and green space to urban settings.

Contact: Charlie Miller, P.E., Roofscapes, Inc., 7114 McCallum Street, Philadelphia, PA 19119, 215-247-8784, cmiller@roofmeadows.com.

Low Impact Development Subdivision

Frederick County, MD[12.25]
Population: 195,277
Area: 633 square miles
Highlight: Total low impact development (LID) site design reduces runoff, saves developers money, and provides downstream peak discharge control.

Developers conceived the Pembroke Subdivision using a low-impact approach right from the start. In doing so, they created an economically desirable development that protects the environment and exhibits the benefits of a multifunctional landscape. Pembroke is a half-acre plot residential development located in northern Frederick County, Maryland. It is the first low impact development (LID) subdivision permitted in Frederick County and one of the few comprehensive LID subdivisions in the country. To date, most projects that have incorporated LID practices and principles are limited to a single lot in scope and therefore, do not realize the greater environmental benefits of the management practices spread across a drainage area.

In Pembroke, developers addressed runoff using "volume control" techniques as opposed to the more traditional "peak discharge" approach that uses a network of catch basins and pipes to convey runoff from an entire development to stormwater management ponds. The volume control approach allowed developers to replicate predevelopment runoff patterns using micro-scale integrated management practices that capture and treat rainwater close to where it hits the ground. The use of LID practices and principles throughout the development enabled developers to eliminate the use of two stormwater management ponds that they had envisioned in an earlier site conception. This elimination represented a reduction in infrastructure costs of roughly $200,000. In place of the stormwater management ponds, the developer preserved two-and-a-half acres of

undisturbed open space and wetlands, which aid in the control of stormwater runoff. This also resulted in a considerable saving in wetlands mitigation impacts.

Extensive use of LID site foot-printing techniques allowed the site design to preserve approximately 50 percent of the site in undisturbed wooded condition. This design feature was very beneficial to maintaining pre-development hydrologic conditions. Site foot-printing also enabled developers to gain two additional lots by using a LID design, increasing the 43-acre site yield from 68 to 70 lots. This "density-bonus" added roughly $100,000 in additional value to the project.

Developers also reduced effective impervious cover and saved money by converting approximately 3,000 linear feet of roads from an "urban road" section to a "rural road." They did so by replacing curbs and gutters with vegetated swales and reducing paving width of the road from 36 to 30 feet. The use of swales saved the developers $60,000 in infrastructure construction and the reduced road width lowered paving cost by 17 percent, while at the same time reducing overall imperviousness.

In order to satisfy County criteria for adequate downstream conveyance, developers conducted a downstream impact analysis. The analysis examined the ability of a LID site design to maintain predevelopment peak discharge conditions for a range of storms including the 1, 2, 10, 50 and 100-year storms This analysis was important because many public works personnel perceive innovative LID stormwater management techniques to be capable of addressing water quality issues, but insufficient to provide downstream peak discharge control for the larger flood flows. The developers had initially based site LID hydrologic analysis on the 1-year storm (2.5 inch rainfall), which is part of the criteria for water quality control in Frederick County. The downstream analysis revealed, however, that the 1-year storm design was not sufficient to maintain predevelopment peak discharges for the 10, 50 and 100-year storms. They then used an incremental iterative procedure to determine additional control requirements to provide necessary downstream control. This analysis showed that increasing the design storm to a 2-year storm (3.0 inches of rainfall), provided required downstream protection over the complete range of flood events (10, 50 and 100 year storms).

The results of this study have great significance for future stormwater management policy and design criteria. These results clearly illustrate tremendous advantages achieved by incorporating a runoff volume control approach and LID technology. It also demonstrates that conventional stormwater management designs that use a peak-discharge detention approach along with stormwater management ponds are not as effective as a LID approach. The hydrologic flaws associated with the peak-discharge detention approach are numerous, and include:

- Peak discharge control does not typically address the maintenance of groundwater recharge.
- Peak discharge approaches alter the frequency and duration of flood flows resulting in stream channel degradation.

- Peak discharge approaches can actually exasperate downstream flooding conditions due to the super-positioning of runoff
- hydrographs.
- Peak discharge approaches, particularly the use of regional facilities, provide no protection for streams above the regional facilities.

Using an integrated LID stormwater management approach reduces or eliminates many of these problems.

* This case study was provided by Michael Clar, President, Ecosite, Inc., 2001.

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LID at Naval District Washington

Low Impact Development Center
Retrofit of the Dental Clinic parking lot showing bioretention islands and infiltration area between parking rows.

Washington, DC[12.26]
Population: 606,900
Area: 61.4 square miles
Highlight: The Navy demonstrates Low Impact Development (LID) effectiveness and applicability by installing a number of LID retrofits throughout the Washington Navy Yard, helping to protect the Anacostia and Potomac Rivers and Chesapeake Bay.

Polluted urban runoff is a serious environmental and public health problem in the District of Columbia (the District). As in other urban areas, the hydrology of District waters is changed and contaminated by pollution borne by stormwater. Pollutants from everyday activities degrade the rivers, posing health risks, destroying habitat, and limiting citizen and visitor enjoyment. Surface runoff that discharges through separate sewer systems and

combined sewer overflows are the most significant sources of pollutants to District waters, causing almost 70 percent of their overall impairment.[12.27]

Approximately 65 percent of the District's natural groundcover has been replaced with impervious surfaces, which generate large quantities of surface runoff and cause severe water pollution problems.[12.28] For example, dissolved oxygen levels in the Anacostia become so low during the summer that fish kills can occur.[12.29] Bacteria levels are sometimes hundreds to thousands of times higher than the allowable levels, putting the health of those whom come in contact with the water at risk.[12.30] Monitoring shows that District waters are too polluted to allow swimming.[12.31] Neither the natural drainage systems nor the stormwater system are capable of adjusting to the dramatic hydrologic changes that are occurring in the District as a result of urban development.

As part of an overall effort to help protect and restore the quality of the Anacostia and Potomac Rivers and the Chesapeake Bay, Naval District Washington adopted a low impact development (LID) approach to stormwater retrofit and new facilities construction projects. This LID effort complements the Navy's effort to update the 150-year old separate-storm sewer system. Video investigations, cleaning, and system modernization led the way to the installation of ten Naval District Washington pilot projects that demonstrate the use of LID techniques in ultra-urban areas. Researchers will document and evaluate construction costs, maintenance requirements/costs, and pollution control effectiveness.

The project employs a variety of LID practices and principles, focusing on existing parking lots, roads, rooftops, and landscaped areas throughout the Washington Navy Yard. The LID practices collect runoff from these surfaces, filter pollutants, and control runoff volume and timing before discharging to the Anacostia River through the existing storm sewers. Engineers designed the bioretention retrofits to intercept stormwater preferential pathways and to treat the first one-half inch of rain at a minimum. Each unit treats about 0.5 acres of impervious surface.

The two main areas of LID retrofits are in the Willard Park and Dental Clinic parking lots. Naval District Washington installed several bioretention and detention cells to retrofit the parking area at Willard Park as part of the replacement and repair of existing parking structures. Some sections of the parking lot are specially designed to store water and release it slowly to reduce peak discharge. To save space and maximize parking, Naval District Washington installed bioretention strips between parking areas. Additional features include rain barrels that collect and store roof runoff for later irrigation and storm drain inlets that prevent trash and debris from entering the river. The retrofit of the Willard Park lot resulted in minimal disturbance and no loss of parking spaces.

Low Impact Development Center
Bioretention strips are just one of the LID practices used at the Navy Yard to control runoff.

As part of major reconstruction of the Dental Clinic parking area, Naval District Washington installed bioretention islands, sand filter gutter strips, and permeable pavers between parking rows. Permeable pavers are a matrix of paving blocks and gravel that allow stormwater to infiltrate into a stone filled water storage area beneath the surface. Where the future use of the existing surface could not be altered, Naval District Washington installed underground storage cells. These detention cells help slow runoff and reduce peak discharge but do not offer any water quality treatment.

Low Impact Development Center
Permeable pavers used in areas of low traffic flow or between parking rows allow runoff water to be infiltrated into the ground without reducing the amount of parking.

Additional LID practices are distributed throughout the Navy Yard. For example, disconnected building downspouts infiltrate rooftop runoff and storm drain inlet

structures trap sediment, litter, and debris. The Navy Yard also installed a tree-box filter at the 9th Street gate. Tree-box filters are mini bioretention areas installed beneath trees that can be very effective at controlling runoff, especially when distributed throughout the site. Runoff is directed to the tree-box, where it is cleaned by vegetation and soil before entering a catch basin. The runoff collected in the tree-boxes helps irrigate the trees. Finally, Naval District Washington amended soils in some open space areas with aggregate gravel, although generally subsurface conditions are not conducive to infiltration.

Of the 60 acres of impervious surfaces at the Navy Yard, these demonstration projects addressed runoff from about 3 acres. Other end-of-pipe treatment systems are in place that treat an additional 10 acres. About 25 percent of the facility has stormwater controls in place. In addition, Naval District Washington has repaired the storm sewer system to stop leaks and prevent interaction between surface water and groundwater at the site. Naval District Washington is preparing a region-wide LID plan to address stormwater runoff at their satellite facilitates.

Future plans call for LID retrofitting of other naval facilities in the Chesapeake Bay watershed. LID concept plans have already been completed for the following naval installations:

1. Potomac Naval Annex
2. US Naval Observatory
3. Nebraska Avenue Naval Annex
4. Anacostia Naval Annex
5. US Naval Academy

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Urban Stormwater Control Project at the Environmental Center of the Rockies

Boulder, CO[12.32]
Population: 83,312
Area: 22.6 square miles
Highlight: Strategic landscaping and micro-scale stormwater management that mimics natural systems reduce runoff and harvest rain water for irrigation.

Len Wright
The Environmental Center of the Rockies uses a micro-scale management system located in front of the building to control runoff on site.

When it learned that 70 percent of Pollutants reaching nearby Boulder Creek were the result of nonpoint sources, the Land and Water Fund of the Rockies (the LAW Fund) took initiative and Enacted corrective measures. They had already retrofitted a building to house the new Environmental Center of the Rockies using "green" architecture strategies, which included reflective windows, a new roof made from recycled materials, and roof mounted solar collectors. The LAW Fund saw the Environmental Center with its highly visible, urban setting as a perfect place to take sustainable design a step further. They decided to "green" the landscape surrounding the building and retrofit its parking lot using Low Impact Development (LID) techniques. The project created an aesthetically pleasing setting that performs natural stormwater functions and conserves water.

Len Wright
Rooftop and parking lot runoff flow into a vegetated location.

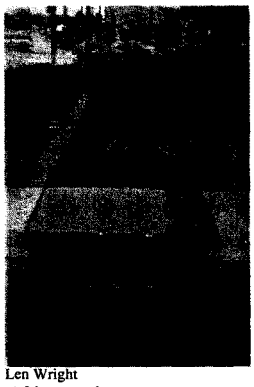
The LAW Fund, with the help of Denver's Wenk Associates and Joan Woodward, professor of landscape architecture, created a "closed loop" landscape that captures and treats runoff on-site instead of conveying it to city waterways. To accommodate the site's

location in a semi-arid climate (annual average precipitation depth is about 18.6 inches) the design focused on detention and infiltration practices that incorporate native drought-resistant plants. The system uses integrated management practices such as retention grading, vegetated swales, and bioretention cells (rain gardens) to capture and treat runoff. It uses these features in conjunction with a smaller parking lot, disconnected roof leaders, water harvesting, and landscaping that emphasizes native vegetation. These practices work together to:

1. conserve water and energy
2. decrease stormwater runoff discharge to city sewers and
3. decrease transport of water-born pollutants from the facility.

Len Wright
One of the two vegetated swales used to manage stormwater at the Environmental Center for the Rockies

Project designers created this system of swales and rain gardens, amended with sandy loam to increase infiltration, to infiltrate and cleanse up to one-half the volume of a hundred-year flood event. The system should also effectively treat the first flush of runoff, which picks up most of the pollutants deposited on impervious surfaces. Strategic grading of the parking lot directs all runoff through two infiltration swales along the edge of the paved area. Designers engineered the swales to filter both coarse materials and finer particles and pollutants. A buried permeable landscape barrier prevents clogging of filter media in the bottom of the swale. Then, the swales convey runoff to vegetated areas in the parking lot itself and at the front of the building, or to nearby bioretention areas. This depression storage allows excess runoff to be stored for later evapotranspiration.



Len Wright
A bioretention area captures and treats runoff from ECR parking lot.

In addition, the LAW Fund reduced the amount of effective impervious cover at the site by eliminating 22 percent of the parking spaces, removing an extra sidewalk, disconnecting roof leaders, and landscaping the open space around the building. Before the retrofit, the 24,108 square-foot site was predominately irrigated turf grasses and impervious parking, pedestrian, and building surfaces. Now, more than 30 percent of the site is pervious, landscaped surfaces.

A water balance study indicated that the landscape system infiltrates between 70 and 80 percent of the water applied to the site as either precipitation or irrigation water, with less than one percent of the applied water leaving the site as runoff. Vegetation plays an important role in this process, using the remaining 20 to 30 percent of the applied water. Water quality monitoring has not been a focus of this project. However, researchers believe the system is protecting local water quality since it retains and infiltrates almost all runoff on site.

The LAW Fund wanted to harvest as much runoff as they could to irrigate the vegetated portions of the site. For example, harvested roof runoff goes directly to planter boxes, which overflow onto the parking lot if capacity is exceeded. This reduces irrigation demand substantially. Landscaped garden terraces provide a pleasant place for outdoor meetings and educational programs and help to buffer the building from the adjacent road that handles more than 30,000 cars daily. This multifunctional system also uses shade trees throughout the parking lot to intercept precipitation and help reduce surface runoff.

The City of Boulder, Wright Water Engineers, US Environmental Protection Agency, and Colorado University continue to monitor the site and evaluate the system. The Colorado University is also monitoring the site and analyzing data through the Boulder Area Sustainability Information Network (BASIN) project. The LAW Fund is developing a long-term maintenance plan for the site, which will be cheaper than conventional landscape maintenance requiring mowers, extensive irrigation, weed trimmers, and

pesticides. A 16-minute video presentation of the project is available through The City of Boulder's Channel 8 television station.

The Environmental Center of the Rockies project is one of 25 projects selected by the National Forum on Nonpoint Source Pollution. The National Geographic Society and the Conservation Foundation started the forum, which addresses issues by identifying innovative, nonregulatory options that balance economic and environmental needs. A list of the 25 projects can be found on the World Wide Web at: http://www.lawfund.org/ecr/ecr25demo.htm. Funding and support of the project came, in part, from The National Geographic Society, The Conservation Fund, and the U.S. Geological Survey.

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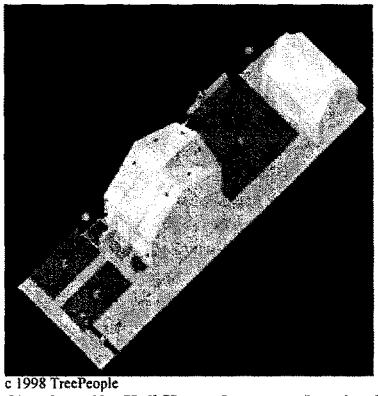
T.R.E.E.S. Reduces Runoff

Los Angeles, CA[12.33]
Population: 3,485,398
Area: 469 square miles
Highlight: The Hall House demonstration site uses lot level low impact development practices designed to capture and treat all the runoff from this residential site.



Site plan of he Hall House demonstration site showing location of LID techniques used: a) cistern collection system, b) vegetated/mulched swales, c) retention grading.

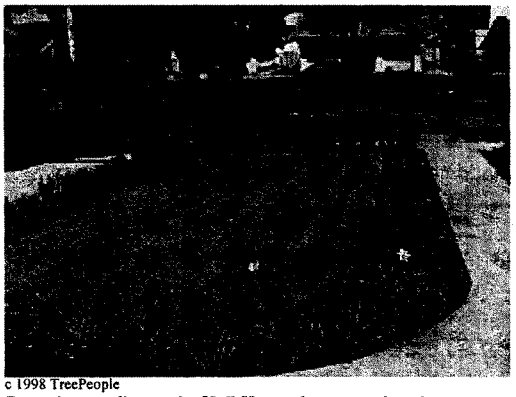
Water and air pollution, drought, flooding, youth unemployment, urban blight are some of the challenging issues that a coalition of Los Angeles government agencies and environmentalists are addressing through the T.R.E.E.S project. T.R.E.E.S., an acronym for Trans-Agency Resources for Environmental and Economic Sustainability, uses an innovative, inexpensive, and integrated approach to address these issues simultaneously. Working together, the groups involved developed a series of Best Management Practices (BMPs) for industrial sites, commercial buildings, schools, and single family homes that create a "blueprint for an ecologically, socially, and economically sustainable Los Angeles." Project managers identified the following BMPs as being most applicable and cost-effective:

- strategic planting
- other tree planting
- tree maintenance
- mulching
- cistern installation
- dry well installation
- graywater system installation
- pavement removal

The T.R.E.E.S. Project began in 1997 with a design charrette that included city planners, landscape architects, engineers, urban foresters, and public agency staff. The goal of the charrette was to identify and design retrofit opportunities for Los Angeles that cost-effectively reduce the environmental effects of urbanization. To promote their efforts, T.R.E.E.S. created a demonstration site at a single-family residence in south Los Angeles. The Hall House site uses several of the selected strategies including a cistern collection system, redirection of roof-top runoff, vegetated/mulched swales, and retention grading to reduce runoff pollution. By design, the BMPs used should capture all runoff from the site, reusing some for irrigation and returning the rest to the groundwater.

Cistern at the Hall House demonstration site.

The design directs rooftop rainwater to a cistern collection system that stores runoff in two 1,800-gallon tanks for irrigating the site during dry months. To further promote sustainability, the cisterns are constructed with recycled polypropylene, a plastic that is plentiful in the Los Angeles waste stream. In addition, the cistern can double as a flood control device when the overflow is connected to the storm drain system. The widespread use of cisterns throughout a community can regulate flow of water into the stormwater drainage system by creating a network of strategically drained and filled reservoirs. By capturing and retaining rooftop runoff close to the source, cisterns help reduce pollution while conserving water for later use.



Retention grading at the Hall House demonstration site.

The swales, composed of recycled yard waste, slow the flow of stormwater allowing for infiltration and pollutant removal. They are an attractive, low-cost, low-maintenance, on-site stormwater treatment system that use limited yard space. In addition, the yard is graded to direct runoff to depressed garden areas that also retain water until it can be absorbed into the ground. These rain gardens can capture and retain a 10-inch flash flood with the probability of occurring once every 100 years. If necessary, excess runoff can be bypassed to the existing drainage system. This strategy works best in highly permeable soils, as is the case with the Hall House site, or if soil is amended with a layer of crushed aggregate rock to achieve higher infiltration rates.

Vegetated/mulched swale at the Hall House demonstration site.

Most of the BMPs are relatively inexpensive, and several are within the ability of the average homeowner to install. The two cistern tanks at the Hall House were prototypes requiring custom manufacturing and installation. With widespread application of the technology, a do-it-yourself design, and mass production, the cost is expected to be an achievable 50-cents per gallon. Other cost estimates are listed below:

Table 12-6a: Cost Comparison of BMPs Used in Hall House Project

BMP	Cost Using Contractor	Cost Do-It-Yourself
Retention Grading of Lawns	$2,500	$1,250
Biofiltration Swales	$250	Minimal
Downspout Extensions	$75 each	$40 each

Note: Costs are estimates and include materials and installation.

The T.R.E.E.S. demonstration site uses natural systems and functions to reduce the effects of urbanization. These site-level techniques have significant potential to reduce pollution if applied throughout a watershed. They are cost effective and successful at capturing, cleaning, and storing runoff, reusing water, preventing floods, improving air quality, reducing energy demand, and creating urban forestry and watershed management

jobs. If applied throughout the city, project managers anticipate reducing water imports by 50 percent, cutting the solid waste stream by 30 percent, decreasing energy dependence, and creating thousands of new jobs.

The T.R.E.E.S. project has developed an implementation plan that uses public policy and financial strategies to encourage widespread use of these BMPs. One example of this effort is a partnership between T.R.E.E.S. and the Los Angeles Department of Water and Power's Cool Schools program. Students help to reduce the heat island effect and lower energy consumption at their campuses by replacing asphalt with grass and trees. At Broadous Elementary, designated a Sustainable School, T.R.E.E.S. coordinated the design and construction of a stormwater separator and infiltration basin to foster groundwater recharge and solve a campus flooding problem. Program participants are developing a monitoring plan and outdoor classroom curriculum.

The Hall House demonstration site is also in the early stages of a comprehensive two-year monitoring study. Researchers from University of California at Davis and USDA Forest Service have selected a control site next door, mapped and tested soils; and installed flow meters and set up a micrometeorological station to measure runoff from roof surfaces, the use of irrigation water, and runoff to the street. At this point, researchers do not have any results to report. However, this study will eventually help determine how much runoff is actually being captured and treated by the BMPs.

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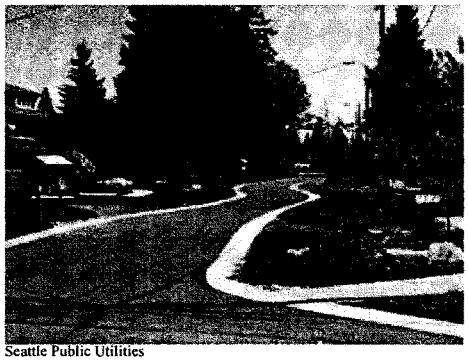
Note: Tree People's sponsors in the T.R.E.E.S Project include the USDA Forest Service, the City of Los Angeles Stormwater Management Division and Department of Water and Power, the City of Santa Monica, the U.S. Environmental Protection Agency, the Los Angeles County Department of Public Works, the Metropolitan Water District of Southern California, the Los Angeles Urban Resources Partnership, the Southern California Association of Governments, and Environment Now.

SEA Streets Leaves Legacy

Seattle. WA[12.34]
Population: 516,259
Area: 84 square miles
Highlight: Street improvements incorporate how impact development practices to reduce runoff and enhance the neighborhood.

Seattle Public Utilities
SEA Streets Site before street improvements and drainage retrofit using LID techniques.



Seattle Public Utilities
SEA Streets Site after improvements and drainage retrofit using LID techniques.

The Seattle Millennium Project is celebrating the light, water, and woodland resources that residents cherish as important quality-of-life features. As part of the Millennium Project, Seattle Public Utilities has initiated the Urban Creeks Legacy program. This program focuses on creek restoration as well as improved drainage and water quality. Goals of the program are to promote public awareness, educate citizens, foster collaboration, involve volunteers, and celebrate Seattle's creek systems.

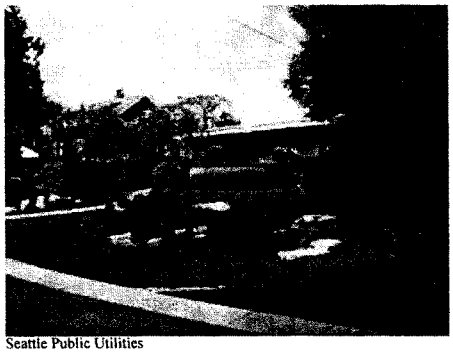
One element of the Urban Creeks Legacy Program is a pilot project call SEA Streets, which aims to reduce the impact that "street-scapes" have on local stream watersheds and salmon habitat. SEA Streets is a comprehensive approach that manages stormwater, minimizes impervious surfaces, and eases traffic. It complements an ongoing effort by Seattle Public Utilities and Seattle Transportation to address street improvements in areas that do not have traditional piped drainage systems. Seattle Public Utilities has found these areas to be significant contributors to runoff quality and quantity problems.

The SEA Streets Project focuses on Broadview, a residential section of ultra-urban northwest Seattle located in the Pipers Creek Watershed. Seattle Public Utilities selected Broadview through a neighborhood petition process after receiving 94 percent approval from the neighborhood for the pilot project. Six neighborhoods had achieved the 60 percent resident support needed to be considered for the pilot site, which the city also evaluated for technical feasibility.

SEA Streets examines street drainage alternatives with the following objectives:

- Decrease runoff peak flow and volume
- Minimize impervious area
- Document effects of alternative design
- Minimize maintenance through design and stewardship
- Design watershed and neighborhood friendly streets
- Change the paradigm that curb gutter/sidewalk is necessary

The key elements of SEA Streets are drainage improvements, street improvements, landscaping, and neighborhood amenities. Landscaping and tree preservation provide rainfall management, runoff treatment, and aesthetic benefits. Sidewalk design focuses on attracting pedestrians and balancing transportation and parking needs with runoff reduction and treatment. Vegetated swales, gardens, and bioretention areas are used in conjunction with traditional drainage infrastructure to collect and treat runoff close to the source.



Seattle Public Utilities

A rain garden at the SEA Streets project site.

The drainage improvements focused on reducing surface runoff by integrating engineering practices commonly used in ultra-urban areas with practices that mimic and use natural processes. System designers combined traditional drainage features (culverts, catch basins, flow control structures, and slotted pipes) with interconnected swales, vegetation, and soil amendments to manage stormwater flow and discharge. The swales contain native wetland and upland plants to treat runoff and beautify the site. The entire site is multifunctional and designed to function like a natural ecosystem. In some areas,

however, infiltration practices cannot be used due to existing groundwater intrusion problems in some homes. In these situations, the emphasis was on biofiltration treatment of stormwater and not infiltration. They also increased the time that water travels through the drainage area by increasing the length of flow paths, using vegetated surfaces for conveyance (and biofiltration), and maximizing use of all areas within the right-of-way without hard surfaces for detention. Any water not infiltrated flows into a temporary pool where it is treated and detained before being conveyed into the downstream stormwater network.

City engineers designed the system to reduce the peak discharge rate and volume from a two-year 24-hour storm event (1.68 inches) to predevelopment conditions. In addition, the system meets City of Seattle requirements to convey runoff from a 25-year, 24-hour storm event. The system is capable of controlling runoff from the entire 2.3-acre drainage area, an important for protecting habitat for threatened and endangered salmon species in the Pipers Creek watershed. To verify these design goals, for a two-year period, the city will monitor effluent during each storm and compare it to data collected prior to the enhancement of SEA Streets.

Seattle Public Utilities

Swale and inlet control structure at the SEA Streets project site.

Street improvements are one of the most important and interesting components of the SEA Streets project. The original street consisted of a straight, 60-foot right-of-way with parking on both sides; there were no sidewalks or drainage controls. To improve stormwater management, designers created a curvilinear roadway with only 14-foot wide paved sections (18 feet at intersections), which remains wide enough for two cars to pass slowly. The longer flow path and reduced impervious cover help limit the volume and speed of runoff. Designers addressed emergency access by eliminating curbs and creating grass shoulders that can accommodate heavy vehicle loading. They further reduced effective imperviousness through efficient parking configurations and the use of alleys. Parking spaces are limited but accommodate the needs of property owners. Sidewalks also follow the curvilinear pattern and are only located on one side of the street.

Strategic landscape elements reduce and help treat runoff while making the street more attractive and pedestrian friendly. As part of SEA Streets, the city planted more than 100 deciduous and coniferous trees and 1,100 shrubs. Prior to this project, there was not a

single tree in the right-of-way. Designers worked with homeowners to create functional transitions between private and public property and informed them about water quality sensitive landscaping practices.

All together, the design features of the site provide numerous neighborhood amenities. In addition to those mentioned above, tree conservation and vegetation help reduce summer heat and absorb air pollutants, curvilinear streets keep traffic volume and speed down, and pedestrian friendly design helps reduce automobile use.

This innovative project cost $850,000, funded completely by Seattle Public Utilities using money collected from drainage fees. The city estimates that conventional drainage methods and street improvements would have cost between $600,000 and $800,000. However, they expect the significant research, design, and communications budgets needed for this pilot project to be lower for future projects, making the SEA Street approach even more economical and competitive.

The success of the Broadview pilot project has already led to the planning of a second SEA Street, which will include additional LID practices such as permeable pavers and pavement and focus more on water quality monitoring. Seattle Public Utilities' long term goal is to retrofit the ditch and culvert drainage system that currently dominates the northern part of the city using SEA Streets and other natural approaches to manage runoff.

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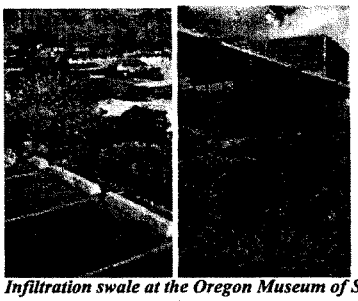
Contact: Denise Andrews, Program Manager, Seattle Public Utilities, Urban Creeks Legacy, 206-684-4601, 710 2nd Ave., Room 640, Seattle, WA 98104, http://www.cityofseattle.net/util/urbancreeks/background.htm.

City Partners with Property Owners to Promote LIDs

Portland, OR[12.35]
Population: 437,329
Area: 125 square miles
Highlight: To help clean up the city's waters, Portland initiated a pilot program that provides money for low impact development retrofits that control runoff in combined sewer areas.



Infiltration swale at the Oregon Museum of Science and Technology and disconnected roof leader system at the city's water pollution control lab; both are examples of the type of projects the Willamette Stormwater Control Program is encouraging to stop CSOs.

Faced with severe pollution in the Willamette River, poor watershed health, and loss of habitat for endangered salmon, Portland decided to take action. The city developed the Clean River Plan-a comprehensive approach to improve water quality in urban streams that promotes low impact development (LID) strategies among property owners and developers.

The Clean River Plan offers solutions to eliminate combined sewer overflows (CSOs) and local basement flooding, including techniques for controlling urban runoff from commercial, industrial, and institutional properties. CSOs are a major source of pollution in the Willamette. Almost every time it rains in Portland, stormwater fills the combined sewers, which carry both sanitary sewage and surface runoff, causing overflows. CSOs discharge raw sewage along with contaminated runoff from streets, lawns, and parking lots directly into the river. The Clean River Plan uses a variety of strategies for removing stormwater from sewers and restoring beneficial natural processes. These strategies are intended to help downsize or displace single-purpose infrastructure such as large pipes, expanded treatment plants and pump stations.

To jump start participation in one facet of the program, Portland's Bureau of Environmental Services initiated the Willamette Stormwater Control Program, providing technical and financial assistance for a limited number of pilot projects that control stormwater runoff. The program focuses on LID techniques that capture runoff close to the source, allowing it to infiltrate into groundwater. These landscape practices also enhance neighborhoods, reduce air pollution, and reduce basement flooding. These projects will demonstrate the technical feasibility, cost, and performance of retrofits that incorporate LID practices and principles.

The Bureau will support 15 demonstration projects to retrofit existing commercial sites, industrial properties, schools, religious institutions, and apartment complexes in targeted areas of Portland. These projects are to focus on strategies such as:

- disconnecting roof downspouts and directing runoff to vegetated swales, planters, or other landscape features

- removing or replacing pavement with porous materials that allow stormwater to soak into the ground

- re-grading some paved areas so they drain into new or existing landscaping installing roof gardens that reduce stormwater flow into the sewers and also improve air quality

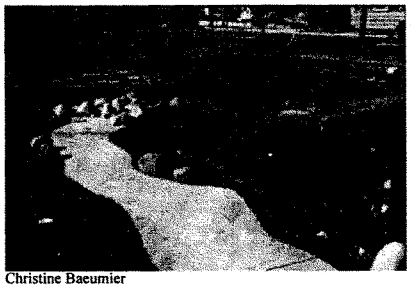
In return, pilot program participants can receive up to $30,000 for design and construction for their projects. In addition, the projects will receive extensive publicity. To be accepted for financial assistance, projects must be part of an existing development, they must be located in the city's combined sewer target area, and that must remove runoff from at least 10,000 square feet of paved or roof area. Projects must be completed by December 31, 2002.

The first project funded is a retrofit of a Boys and Girls Club building using LID to provide complete on-site treatment and disposal of runoff draining from its 21,000 square-foot roof. Runoff from two thirds of the roof will go directly to planters and landscape bioretention areas that provide infiltration and treatment. The other third of the roof area will drain to a traditional soakage trench system with treatment provided by a sand filter. The total project cost is approximately $35,000 and is expected to be completed by the end of 2001. The Willamette Stormwater Control Program continues to evaluate a number of proposals for project to be implemented over the next couple years.

Contact: Henry Stevens, Willamette Stormwater Control Program, Bureau of Environmental Services, 1120 SW 5th Avenue, Room 1000, Portland, OR 97204-1912, 503-823-7867, henrys@bes.ci.portland.or.us, http://www.cleanrivers-pdx.org/.

Stormwater Treatment System is a Work of Art

St. Paul, MN[12.36]
Population: 272, 235
Area: 58 square miles
Highlight: Rain garden captures runoff and attracts residents to improve water quality and promote stewardship in their neighborhood.



Christine Baeumier
Maria Bates Rain Garden under construction.

Christine Baeumier
The completed rain garden creates a multifunctional urban setting that controls runoff and is enjoyed by the neighborhood.

The Maria Bates Rain Garden located in St. Paul's East Side is an excellent example of the multiple opportunities and benefits achievable through creative stormwater management. The Maria Bates Rain Garden is an urban greenspace that uses low impact development (LID) principles and practices to improve water quality and promote environmental stewardship.

The Upper Swede Hollow Neighborhood Association initiated the rain garden as an offshoot of their Lower Phalen Creek Project, which aims to build watershed stewardship through community based initiatives. One objective was to protect a recently restored wetland area along the Mississippi River. Another was to promote urban beautification. The rain garden was a perfect solution, performing multiple functions that include: controlling surface runoff, cleaning the water, and preventing downstream erosion while also creating desirable public open space.

Two vegetated swales are at the core of the garden's design. The design redirects stormwater from a residential street to the rain garden, or bioretention cell, through a specially installed catch basin. It captures runoff from a one-acre drainage that is 75 percent impervious cover, removing oil, grease, heavy metals, nutrients, and sediment.

The 900 square-foot rain garden treats runoff from the 1-inch 24-hour storm. Overflow from larger storms discharges to the storm sewer system.

Once captured by the rain garden, runoff seeps into the ground, preventing polluted runoff from traveling through storm drains to the Mississippi River. The soils and native vegetation that make up the garden should filter and remove pollutants in the runoff. A monitoring program is planned for the near future. Project managers also plan to redirect water from a nearby office building roof into the swales once ongoing renovations are completed.

As with many LID practices, the garden has attractive features that extend beyond water quality management. Designers used it as an opportunity to create needed public open space. Local artists Chris Baeumler and Kevin Johnson created a meandering "rainwater walkway" through the garden that helps convey water and illustrate the garden's function. Additional features include an ornamental railing, benches, and a boulder that is carved-out to capture water and inscribed with text explaining the purpose of the garden.

The garden also serves as an outdoor classroom. Community Design Center of Minnesota organized local students to help plant the garden and learn about pollution prevention. Nearly 200 students from Dayton's Bluff Elementary School learned about native plants, water quality, and erosion control during a workshop at the garden that was sponsored by the Community Design Center along with other organizations and institutions.

The Upper Swede Hollow Neighborhood Association managed the Maria Bates Rain Garden project. Barr Engineering provided the design and engineering services. Construction and design costs totaled approximately $19,000. Financial support from city, state, and federal agencies as well as local and national charitable organizations made this project possible.

Contact: Amy Middleton, Lower Phalen Creek Project, 1182 River Road, Dresser, WI 54009,715-483-1414, amiddle@lakeland.ws.

Contact: Carol Carey, Lower Phalen Creek Project Steering Committee, 651-774-0218.

Additional Examples

Jordan Cove Urban Watershed Study, Waterford, CT[12.37]

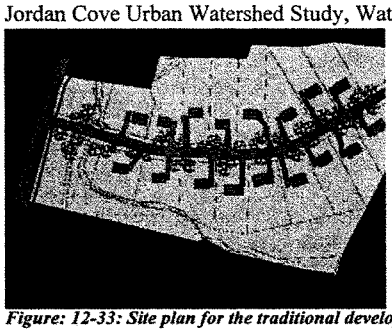


Figure: 12-33: Site plan for the traditional development at Jordan Cove.

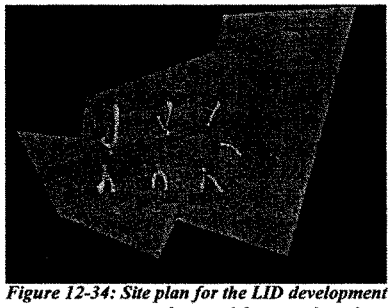


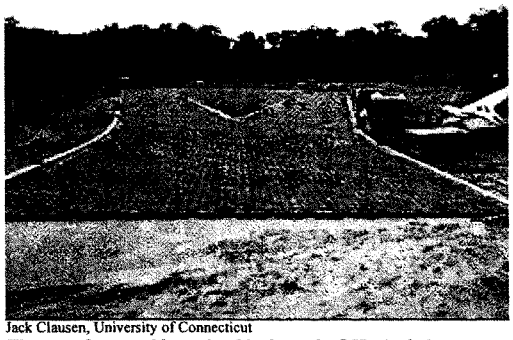
Figure 12-34: Site plan for the LID development at the Jordan Cove study site. The LID plan conserves more open space and natural features than the traditional site and incorporates several integrated management practices to control runoff.

The Jordan Cove Urban Watershed Study is a comprehensive monitoring project that uses a "paired watershed" approach to evaluate water quality from two sections of a new development site. One of the sections is following traditional subdivision requirements to develop 10.6 acres of land while the other 6.9-acre site is taking a low impact development (LID) approach. Researchers are comparing monitoring results to a control site, a 43 lot, 13.9-acre established subdivision across the street that uses conventional stormwater management. They are applying management practices to the LID drainage area only. Currently, researchers are monitoring the construction phase of the low impact development and are beginning to evaluate the post-construction phase of the traditional site, which has 14 of 17 home completed. The developer has five homes under construction in the low impact development and has installed two residential rain gardens. To control erosion and sedimentation, they are applying construction best management practices at this site such as phase grading, pervious pavers on the access roads, sediment detention basins and swales, and rapid reseeding.

Project managers plan to use a wide variety of LID practices in the low impact development including grassed swales, roof runoff rain gardens (bioretention cells), detention areas, pervious pavement, conservation zones, a pervious road with a central bioretention, and state-of-the-art oil/grit separators in conjunction with pollution prevention and good housekeeping practices. Furthermore, the low impact development reduces the overall impervious footprint by clustering houses, narrowing roads, and minimizing paved areas. The LID site has the following objectives:

1. retain sediment on site during construction
2. reduce nitrogen, bacteria, and phosphorus export by 65, 85, and 40 percent respectively and
3. maintain post-development peak rate and volume and total suspended sediment load at predevelopment levels.

On the other hand, the traditional site design grades all runoff to the street using conventional curb, gutter, and pipe drainage without treatment. Furthermore, developers have sited the houses evenly across the subdivision without an attempt to conserve open space or natural drainage features.



Jack Clausen, University of Connecticut

The use of permeable paving blocks at the LID site helps reduce runoff by infiltrating rain water.

The Jordan Cove Urban Watershed Study is currently in the third of a proposed six-to ten-year monitoring period. Project managers for the sites have collected base-line data from all sites and are monitoring the construction phases of the two new developments. Prior to development, the traditional site was used for poultry farming and the BMP site was a closed-out gravel pit. To date, monitoring has revealed the following:

1. Monitoring of the traditional site during the construction phase revealed increases in most parameters when compared to the control.

2. Storm flow increased during construction of the traditional site but decreased significantly during construction of the LID site. Researchers believe that the reduction at the LID site is partially due to basement excavation and berm construction.
3. Researchers hypothesize that change in the landscape features of the traditional watershed have caused the hydrologic response at the site. Researchers hypothesize that it is hydrologic response, rather than erosion and increased sediment, that is the cause of increased pollutant export from the site.

Contact: Jack Clausen, University of Connecticut, Department of Natural Resources, 1376 Storrs Road, U87, Room 228, Storrs, CT 06238, (P) 860-486-2840, (F) 860-486-5408, jclausen@canr.cag.uconn.edu.

Contact: Bruce Morton, Aqua Solutions, Governor's Corner, 991 Main Street, 2B, East Hartford, CT 06108, (P) 860-289-7664, (F) 860-291-9368, aquasoln@aol.com.

Contact: Chet Arnold, University of Connecticut Cooperative Extension Service, P.O. Box 70, Haddam, CT 06438, 860-345-4511, http://www.nemo.uconn.edu/res&ap/resapjordan.htm

Florida Aquarium

Stormwater Research/Demonstration Project, Tampa, FL[12.38]

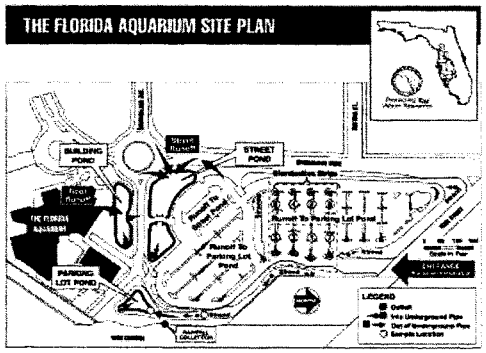


Figure 2. Layout of the Florida Aquarium site with IMPs. The eight basins outlined with dotted lines were evaluated in this part of the study.

Florida Aquarium

Layout of the Florida Aquarium site showing LID management practices. The eight study basins highlighted in this case study are outlined With dotted lines.

The Florida Aquarium Stormwater Research/Demonstration Site project is both an effort to document the benefits of low impact development (LID) strategies and inform the public as part of the process. In 1993, the Southwest Florida Water Management District and the Florida Aquarium partnered to evaluate the effectiveness of alternative parking lot design and materials to reduce runoff and improve water quality.

The study site is an 11.5-acre asphalt and concrete parking area in mid-town Tampa, Florida (about half of the parking lot has been recently converted to a construction area for cruise ship terminals). The original parking lot served approximately 700,000 visitors annually. Researchers modified the parking lot by installing the following integrated LID practices throughout the site:

- End-of-island bioretention cells
- Bioretention swales around the parking perimeter
- Permeable paving
- Bioretention strips between parking stalls
- A small retention pond to supplement storage and pollutant removal

The distributed LID practices can be considered a stormwater treatment train that treats runoff from the building roof, parking lots, and access streets.

Monitoring has demonstrated that the LID practices significantly reduce runoff volume and protect water quality. Researchers collected samples from 30 storm events over a one-year period. They collected data that allowed comparisons between both treatment techniques and paving surfaces (asphalt paving with and without a swale and swale areas with cement, permeable pavement, and asphalt). The LID practices achieved between 60 and 90 percent reduction in runoff volume. Researchers also documented pollutant removal efficiencies with the highest load reduction coming from the basin with permeable pavement and swales (see table below).

Pollutant Removal Efficiencies for Various Treatment Types

Table 12-6b: Percent pollutant reduction compare to the asphalt non-swaled area

Constituent	Asphalt with Swale	Cement with Swale	Permeable with Swale
Ammonia	45	73	85
Nitrate	44	41	66
Total Nitrogen	9	16	42
Ortho Phosphorus*	-180	-180	-74
Total Phosphorus*	-94	-62	3
Suspended Solids	46	78	91
Copper	23	72	81
Iron	52	84	92
Lead	59	78	85
Manganese	40	68	92
Zinc	46	62	75

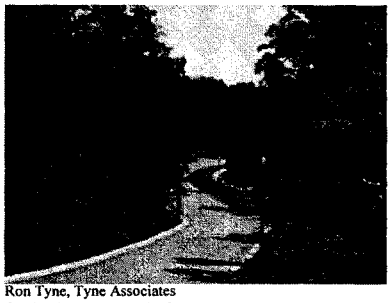
*The efficiencies for phosphorus are negative, indicating an increase in phosphorus loads in the swaled basins. The permeable swale continues to exhibits the best performance. Researchers believe that grass clippings leftover from swale maintenance are the likely source of phosphorus since there is no phosphorus in rainfall or asphalt and very little in automobile products.

Researchers compared loads from this site to other studies done in Florida and found that the loads were much lower than reported at other urban sites using conventional stormwater management.

Throughout this project, public involvement has been an important attribute. Aquarium visitors receive information about the project and the connection between rain, urban development, and water quality. A brochure gives tips on how residents can prevent pollution on a daily basis. Students and general aquarium visitors are encouraged to visit the research station to learn more about the project and stormwater runoff.

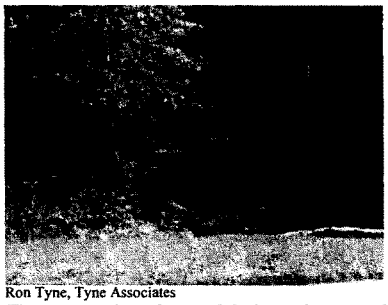
Contact: Betty Rushton, Resource Management Department, Southwest Florida Water Management District, Brooksville, Florida, 34609, 352-796-7211, Betty.Rushton@swfwmd.state.fl.us, http://www.swfwmd.state.fl.us

Gap Creek Subdivision, Sherwood, AR[12.39]



Ron Tyne, Tyne Associates
Reducing street width and retaining trees as retention of rain water.

A low impact development (LID) approach can yield significant benefits to developers as well as the environment and community. Terry Paff, developer of the 130-acre Gap Creek subdivision in Sherwood, Arkansas, looked to create something unique in the marketplace. He decided to take a "green" approach by implementing a variety of practices to reduce the environmental impact of development. The approach he took resulted in significant economic benefits derived from a combination of lower development costs, higher lot yield, and greater lot values. The developer had not counted on any cost savings but has since learned that "that just comes with the territory."



Ron Tyne, Tyne Associates

The preservation of natural drainage features adds the aesthetic appeal of Gap Greek. A walkway through the woods in the place of a traditional sidewalk also attracts homebuyers

Gap Creek is one of the fastest growing neighborhoods in the North Little Rock area. Developers attribute its growth and popularity to the sustainable design that buyers prefer over the traditional, "cookie-cutter" suburban development. Specific features include streets that flow with the existing landscape, minimal site disturbance and preservation of native vegetation, preservation of natural drainage features, and a network of buffers and greenbelts that protect sensitive areas. However, Paff still used some conventional stormwater management practices at this development for conveying and removing street runoff. These LID features allow stormwater to flow naturally and be controlled close to the source, as well as providing passive recreation and aesthetic benefits. The developer took advantage of this conservation approach to maximize the number of lots that abut open space areas, thus enhancing marketability and increasing property values.

The LID approach also yielded substantial savings and financial success for the developer. Its sustainable plan required significantly less site clearing and grading, which cut down on site preparation costs. The use of natural drainage features meant less money spent on drainage infrastructure (i.e. piping, curbs, gutters, etc.). Paff also reduced street width from 36 to 27 feet and retained trees close to the curb, which reduced imperviousness and saved money. All together, these strategies saved the developer nearly $4,800 per lot, a saving higher than originally expected. The greater lot yield and high aesthetic curb appeal also resulted in larger profits. Paff was able to sell lots for $3,000 more than larger lots in competing areas and sold nearly 80 percent of the lots within the first year. He estimates that the economic benefits will exceeding $2 million over projected profits. Additional benefits of the LID design include lower landscaping and maintenance costs and more common open space and recreational areas.

Low Impact Development
A Comparison Of Two Different Land Plans*

Table 12-6c: Projected Results From Total Development

Total Site	**Conventional Plan**	**Sustainable Plan**
Lot Yield	358	375
Linear Feet Street	21,770	21,125
Linear Feet Collector Street	7,360	0
Linear Feet Drainage Pipe	10,098	6,7333
Drainage Structures: Inlets/Boxes/Headwalls	103	79
Estimated Total Cost	$4,620,600	$3,942,100
Estimated Cost Per Lot	$12,907	$10,512

Table 12-6d: Actual Results from First Phase of Development

Phase 1	**Conventional Plan (Engineer's Estimated Figures)**	**Sustainable Plan (Actual Figures)**
Lot Yield	63	72
Total Cost	$1,028,544	$828,523
Total Cost Per Lot	$16,326	$11,507

Table 12-6e: Economic and Other Benefits From Low Impact Development

Higher Lot Yield	17 additional lots
Higher Lot Value	$3,000 more per lot over competition
Lower Cost Per Lot	$4,800 less cost per lot
Enhanced Marketability	80 percent of lots sold in first year
Added Amenities	23.5 acres of green-space/park
Recognition	National, state, and professional groups
Total Economic Benefit	More than $2,200.000 added to profit

** Tyne & Associates, North Little Rock, Arkansas*

Contact: Ron Tyne, Tyne & Associates, 8332 Windsor Valley Drive, North Little Rock, AR 72116, 501-835-2878 rontyne@aol.com.

LID For Optimum Water Quality Protection Of Water Supply Reservoir, Highpoint, NC[12.40]

Due to its proximity to a proposed regional water supply reservoir, the City of High Point, North Carolina is faced with the implementation of very stringent water quality controls related to nutrients control (i.e., phosphorus) and limitations on total impervious area. As part of a watershed wide assessment and development of a comprehensive

stormwater management plan,[12.41] an evaluation of the benefits of using LID technology was conducted.

The evaluation revealed that the use of LID, particularly the incorporation of bioretention techniques, could optimize the removal of phosphorus by approximately 50 percent over conventional pond based BMPs. The bioretention cells can achieve phosphorus removal levels ranging from 75 to 90 percent compared to the reported levels for stormwater management ponds, which range from 40 to 50 percent.

The LID evaluation also reinforced another advantage of the LID technology with respect to the total impervious area limitation requirement. A number of jurisdictions have begun to place total impervious area limitations on a watershed scale as a surrogate for water quality control. This approach is based on the total impervious area threshold concept reported in a number of publications.[12.42] For a specific site, however, the LID concept can provide a win/win strategy, which optimizes water quality objectives while allowing higher impervious cover for a given site. This dual strategy is accomplished in two ways. First the LID design methodology provides procedures and techniques to hydraulically disconnect impervious areas so that, for example, a site with 70 percent impervious cover will be hydrologically equivalent to a site with 40 to 50 percent impervious cover. The second part of this strategy results from the fact that the LID micromanagement practices can be incorporated into elements of the landscape providing a dual function for site features and thus preclude the need to dedicate and disturb (clear, grub, etc.) 8 to 10 percent of the total site for a stormwater management pond.

* This case study was provided by Michael Clar, President, Ecosite, Inc., 2001.

Contact: Michael Clar, President, Ecosite, Inc., 3222 Old Fence Road, Ellicott City, MD 21042, 410-804-8000, mclar@smart.net.

Zero Impact Development Ordinance To Protect Streams, Lacey, WA*[12.43]

Recently, several communities have developed innovative ordinances to eliminate legal and institutional barriers to and facilitate the use of lot level stormwater controls. Lacey, Washington is one such community. Lacey adopted a Zero Impact Development Ordinance in August of 1999— the direct result of a conference called "Salmon in the City." (http://www.wa.gov/lacey/lmc/title_14/chapter_14-31.htm) The conference was sponsored by the American Public Works Association and thirty other local, state, and federal entities. The conference called attention to the impact of development on aquatic life; a message that was of particular relevance due to the fact that the National Marine Fisheries Service had just announced that northwest chinook salmon were "threatened" under the Endangered Species Act. The ordinance facilitates waivers of requirements that conflict with the use of LID practices. The ordinance is still in early stages of implementation and to date, no developers have taken advantage of it.

The primary goal of the Zero Impact Development Ordinance is to retain the hydrologic functions of forests after a site is developed such that there is near "zero effective impervious surface." The ordinance works by providing developers with the opportunity to demonstrate zero effective impervious surfaces and to use watershed-sensitive urban residential design and development techniques. The ordinance makes LID a legal alternative to conventional site design. However, actions are voluntary and to date, no other incentives exist to encourage zero impact developments in Lacey.

The Lacey ordinance is designed to protect receiving waters and aquatic resources. It established criteria that a development project must meet in order to qualify for deviations from certain current development standards. The city used criteria taken directly from the "Salmon in the City" conference research, which describe the fundamental characteristics of a healthy watershed. The Lacey ordinance criteria have since become known as the 60/0 standard. In other words, at least 60 percent forest must remain after development and impervious surface must be made "ineffective" or established as zero effective impervious surface area (also known as the "zero impact" standard). Developers can make impervious surfaces ineffective by disconnecting them from conventional drainage infrastructure and installing LID integrated management practice to capture and treat runoff. The ordinance also requires monitoring and evaluation designed to measure the performance of steps taken to ensure zero impact.

Lacey's innovative low impact development law is based on specific monitoring criteria that documents the negatives effects development has on water resources and aquatic life. The Zero Impact Development Ordinance is specifically intended to provide post-development conditions that stay below the threshold of impacts on aquatic life.

* This case study was modified from original information provided by Tom Holz, SCA Consulting Group, August, 2001.

Contact: Tom Holz, SCA Consulting Group, P.O. Box 3485, Lacey, Washington, 98509, 360-493-6002, tholz@scaconsultinggroup.com.

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STATEMENT OF PAUL D. SCHWARTZ, NATIONAL POLICY COORDINATOR, CLEAN WATER ACTION

Good day, Mr. Chairman and other distinguished members of committee. I am Paul Schwartz, National Policy Coordinator of Clean Water Action, a national environmental organization working for clean, safe and affordable water, prevention of health-threatening pollution; creation of environmentally safe jobs and businesses; and empowerment of people to make democracy work. Clean Water Action has organization in 15 States and has 700,000 members across the nation. Additionally, I serve as cochair of the Clean Water Network's Wet Weather and Funding Workgroup and am on the Steering Committee of the Campaign for Safe and Affordable Drinking Water.

Mr. Chairman, thank you for holding this hearing today on S. 1961, the Water Investment Act of 2002, and other water infrastructure proposals. The committee's sustained focus on water infrastructure funding and the two State clean and safe water revolving funds is timely and of vital importance to the nation's environment, economy and public health. This hearing is a crucial next step toward securing more dollars for critical drinking water and wastewater infrastructure needs. While Ms. Stoner of NRDC focused on the "clean water" issues, I'll be focusing most of my remarks today on drinking water issues.

1. FUNDING NEEDS & DRIVERS

It has been well established by the USEPA, the Water Infrastructure Network (WIN) and others that there is a gap between all available sources of revenue and the financial resources needed by our communities, small and large; rural, suburban and urban; well off and hard-pressed, to meet urgent public health and environmental protections. WIN puts the estimate of the need at $1 trillion and projects that $23 billion must be invested annually over the next 20 years to begin to close the gap. Others have set the number at a somewhat lower level.

- Over the next few years communities across America are facing the need to deal with many pressing drinking water issues including: arsenic, cryptosporidium and other microbial risks, radioactive radon, and the groundwater rule.
- Also, the U.S. national drinking water infrastructure (both pipes and treatment works), once the envy of the world, is old and out of date. There is no other sector of the nation's infrastructure that relies primarily on a physical infrastructure built 50 to 100 years ago, and that mostly utilizes treatment technology that was developed during the Victorian-era before WWI. As municipalities and private operators delay repair, replacement and modernization, the costs escalate exponentially.
- Further, Clean Water Action notes with dismay how few drinking water providers have moved from a purely end-of-the-pipe engineering focus to an integrated watershed approach to dealing with many pressing drinking water issues. There are many reasons for this failure, including: the lack of integration between the Clean Water Act and the Safe Drinking Water Act in both the policy and implementation arena, and at all levels of government; an institutional bias toward big pipe and plumbing projects and against incorporation and integration of green infrastructure, distributive and low impact development pollution prevention approaches; and finally, an almost total freezing out of the tax-paying and rate-paying public from the priority setting and approval process that determines which projects and approaches are funded and move forward.

2. NECESSARY NEXT STEPS

Below are some elements that Clean Water Action wants to be incorporated in any water infrastructure bill that moves forward this year:

- Clean Water Action advocates that any new pot of dollars gets used primarily to deal with core water quality problems by being targeted: (1) to modernize our water distribution system, and (2) to assist the move to modern-broad spectrum water treatment. But drinking water spending cannot be focused just on the traditional modes and methods of end-of-the-pipe engineering solutions. Heretofore, 98 percent of water infrastructure funding has gone to brick and mortar projects. But the committee also needs to support those pollution prevention measures that enhance the performance and cost effectiveness of needed traditional infrastructure investments.

  The committee needs to give the States the flexibility to invest in pollution prevention as part of an integrated core infrastructure package. Traditional "core" infrastructure needs can be mitigated by putting an emphasis on funding a combination of non-structural, preventive projects (green infrastructure), with innovative and alternative appropriate engineering strategies. When joined with

needed modernization of old, decaying and out of date treatment plants, and collection and distribution systems we will finally lay the foundation that will forestall the need for even more costly approaches and investments in the near future.

Clean Water Action and the Clean Water Network and the Campaign for Safe and Affordable Drinking Water all stand behind the proposal to set aside a full 10 percent of the Clean Water SRF to allow for these approaches and hope that subsequent versions of the S. 1961, or other bills, reflect this cost-effective priority.

- While S. 1961 proposes a substantial increase for the two water SRF accounts over the next 5 years, from $3 billion to $7 billion per year, the assumption of the bill is that the Federal role in funding water infrastructure ends after this injection of cash takes place. Clean Water Action appreciates the substantial increased authorizations proposed in S. 1961 but challenges this committee to set in place a permanent Clean Water Trust Fund and "polluter pays" funding mechanisms that will augment the funding burden which falls primarily on the small consumer and taxpaying public.
- Clean Water Action seeks for Congress to inject more accountability along with more dollars into the SRF programs. Any reauthorization of the Clean Water and Safe Drinking Water SRF's must incorporate mechanisms that ensure open information and public involvement. Many communities don't know how to access the SRF accounts; all too often it is the politically connected that are able to take away the dollars not those with the most pressing existing needs. Also, meaningful public participation in the decisionmaking process about which projects get funded is usually absent. S. 1961 makes a rhetorical nod toward fixing this problem but does not back up its rhetoric with meaning steps and measures that will turn this problem around.

In addition environmentally sound principles for project design and siting should be observed. In many cases State NEPA—like procedures are not followed or do not include any real review by the public. With little oversight by USEPA and almost no public involvement in the intended use plans (IUPs) there is very little indication whether or not Federal dollars are supporting real public health, compliance or environmental needs. Effective public participation is the best way to ensure that environmental and fiscally sound choices are made. Ensuring such participation is the best way for Congress to protect and build support for its clean safe water investment.

- One concern that makes the call for increased water infrastructure funding very urgent, and clearly marked as a Federal matter, is the growing permanence of a two-tier water infrastructure picture across the country. Both, big cities that have lost much of their rate base while their infrastructure, beyond its useful life, deteriorates, and small systems that lack the necessary scale to spread out costs to install or maintain new technologies, are threatened to be left behind. Not only are millions of people's health on the line, but the basic economy's of many cities and whole regions of the country are put at risk.

Clean Water Action believes that it should be made mandatory that priority be given to projects that help systems/communities with the greatest need based on affordability criteria. An example of this need can be seen in all the small communities where millions of American's are currently drinking water with significant amounts of arsenic. The conundrum is clear, either we can help these communities with necessary funding and technical innovation support or we can bury our collective heads in the sand and just shift the standard until we ensure that most communities are in compliance. And the fact is that in Fallon, NV and in small communities like Fallon across the country, no matter how un-health protective the final arsenic standard is set, Fallon will still have to get the arsenic out of its water. That is why Clean Water Action supports efforts such as the Reid/Ensign Small Communities Safe Drinking Water Infrastructure Funding Act, S. 503.

The intention of S. 1961 to help small communities, cities with declining and impoverished rate bases, and needy consumers, address affordability concerns is on the face of it evident. Clean Water Action thinks that the committee must revisit these provisions and consider a true grant program that supplements (not replaces) the existing loan program. The loans, which in fact act in part as grants, are a good base to start from, but more direct help is needed. Additionally, Clean Water Action wants clarification as to how the low-income assistance program would work.

- While Clean Water Action supports additional funding to address existing wastewater and drinking water needs we oppose using scarce Federal dollars to subsidize drinking water and waste water systems that support new sprawl

development. Core water infrastructure systems, most of which were built using taxpayer funds, are now in need of rehabilitation, replacement and repair. As we have said before, this is an investment in the future worth making to ensure that our lakes and streams are safe and support revitalization of our waterfronts and to provide safe drinking water throughout America. On the other hand funding should not be used to subsidize new systems (unless it can be shown that the new system would simply serve existing populations—new capacity should not be subsidized).

S. 1961 misses an opportunity to make sure that State SRF funds do not funnel scarce dollars to sprawl development. S. 1961 should clarify the "reasonable growth" loophole in the Safe Drinking Water Act (SDWA). Under the Drinking Water State Revolving Fund (DWSRF) it is left up to each State to determine some standard for defining "reasonable growth." An uneven and all too flexible set of practices has sprung up among the States in some cases allowing for major diversion of funds into sparking sprawl development not for meeting existing environmental and public health needs. On the clean water side the problem is even more egregious. States with a much more elastic definition of "reasonable growth" are rewarded by EPA's drinking water needs survey which is the basis for determining the allocation of the Federal drinking water infrastructure dollars to the States. Thus States that constrain the use of their dollars more narrowly to existing needs instead of growth lose out when it comes time for allocating the scarce DWSRF dollars.

Even though the States must develop a priority list for doling out the Clean Water State Revolving Fund (CWSRF) dollars based on a clear set of public health and environmental criteria, the State has the right to ignore the priority list rankings altogether and fund whatever project it wants. S. 1961 should fix this unfair, dangerous and unaccountable loophole. This loophole, which is used heavily in some States, goes beyond needed flexibility and potentially undermines the integrity of the CWSRF.

- Clean Water Action is heartened by the restructuring and consolidation language contained in S. 1961 and feel that many drinking water problems of small systems could be solved by the taking of such measures. More should be done to insure that States are doing all they can to carry out such cost effective steps.

Additionally, Clean Water Action believes that S. 1961 takes a good stab at extending SDWA capacity development principles over to the world of wastewater. However, S. 1961 does not do enough to limit Federal investment to those facilities that have the financial, technical and managerial capacity to ensure compliance. Facilities which are in significant non-compliance, should only be allowed funding to restructure or consolidate to achieve compliance or where consolidation or restructuring is impossible, if the facility has made a good faith effort to comply and the facility is adhering to an enforceable compliance schedule, and the funding is necessary to avoid making water or sewer unaffordable to a significant portion of the facility's retail customers.

3. CONCLUSION

Clean Water Action applauds the $35 billion 5-year authorization proposed in S. 1961, the Water Investment Act of 2002. We also are heartened by proposed increased authorizations in Senator Reid's "Small Community Drinking Water Funding Act, S. 503; and, S. 252, Senator Voinovich's bill. While there are many refinements and improvements to S. 1961 that Clean Water Action would like to see it is important that the final bill be both fair and clean.

Make the Bill Fair—Keep the Bill Clean

As S. 1961 moves forward from today, the key question for the Congress is how do we act in a way that invokes, to the maximum extent possible, water infrastructure equity, affordability, and sustainability while meeting the triune goals of preserving the environment, enhancing the public's health and helping to lay a new foundation for broad economic prosperity. How Congress disposes of this question is why Clean Water Action is at this table. We do not want this process to devolve into narrow interests fighting over turf. We are concerned about the possibility that this process might be used as a way to revisit important but contentious Clean Water Act and Safe Drinking Water Act reauthorization issues. Our approach, and we hope your approach, is to stick narrowly to the issues before us—to define what the needs are and to figure out how best we can collectively structure a new water infrastructure funding paradigm which meets the criteria and goals enumerated by Nancy Stoner of NRDC earlier. The environmental and consumer movements are united in their demand that any final water infrastructure legislation:

1. Substantially *increases funding* for State clean and safe drinking water funding projects.

2. *Provides significant incentives to States to direct more Clean Water SRF funds to nonpoint pollution and non-structural approaches*, ensuring that (1) today's greatest source of water pollution (nonpoint runoff) is addressed; and (2) that cost-effective "green infrastructure" solutions are used to repair and improve existing wastewater and drinking water systems.

3. *Ensures that SRF funds are not used to subsidize new sprawl development,* but instead are used to repair and improve existing wastewater and drinking water systems.

4. *Funds SRF projects based on the States' priority system ranking after meaningful public input*, by closing the loophole (in the Clean Water SRF) that allows States to fund projects not on their own priority list. Also, tighten-up and make consistent the "reasonable growth" loophole in the Drinking Water SRF.

5. *Removes incentives for noncompliance* with the Clean Water Act, to ensure that CWSRF funding is only going to utilities that are making efforts to come into compliance with the law.

As the committee considers the myriad of policy options and funding levels, know that the American public is fully behind your effort to address this pressing problem. Clean Water Action is heartened by the introduction of the Water Investment Act of 2002, and other serious efforts introduced by Senators Reid and Voinovich. The emergence of the Senate's bills and the hearings today and this Thursday are most encouraging. Let's keep the bipartisan and interest group comity and pursue water infrastructure solutions that lay the foundation for clean and safe water for the next century to come. On the other hand, failure to move a clean and fair funding bill will be a sure sign of Congress having failed the clean and safe water test. The time to act is now.

Thank you for the opportunity to comment. I would be happy to entertain any question or concern.

STATEMENT OF BILL KUKURIN, KUKURIN CONTRACTING, INC. OF EXPORT, PA

Good morning, Mr. Chairman and distinguished members of the committee. My name is Bill Kukurin and I am president of Kukurin Contracting, Inc. located in Export, PA. On behalf of Associated Builders and Contractors (ABC), I would like to thank Chairman Jeffords, Ranking Member Smith and the members of the Senate Committee on Public Works for providing me with this opportunity to discuss the Water Investment Act of 2002 and the important role it could play in improving our nation's water quality and infrastructure. I will be summarizing my comments, but I would request that my full statement be submitted for the official record.

For nearly 30 years, Kukurin Contracting, Inc. has been operating in Western Pennsylvania as a family owned and operated business. Kukurin Contracting, Inc. has 125 employees and focuses primarily on municipal work, specifically the construction and maintenance of water and sewer lines, pumping stations, water tanks, reservoirs and sewage treatment facilities. We have built our reputation through providing quality workmanship for our clients and safe, healthy worksites for our employees. In 1997 and 1999, Kukurin Contracting, Inc., was recognized by ABC National as one of the leaders in the construction industry and presented the annual Excellence in Construction Award for our work on the Long Run Sewage Retention Facility and the Plum Creek Sewage Retention Facility, respectively.

Kukurin Contracting, Inc. has been a member of the Western Pennsylvania Chapter of ABC for 20 years. ABC is a national trade association representing more than 23,000 merit shop contractors, subcontractors, materials suppliers and construction-related firms within a network of 82 chapters throughout the United States and Guam. Our diverse membership is bound by a shared commitment to the merit shop philosophy within the construction industry. This philosophy is based on the principles of full and open competition unfettered by the government, and nondiscrimination based on labor affiliation and the awarding of construction contracts to the lowest responsible bidder, through open and competitive bidding. This process assures that taxpayers and consumers will receive the most for their construction dollar. With 80 percent of the nation's construction workers choosing not to be represented by a union, ABC is proud to be their voice.

I would like to commend Chairman Jeffords and Senators Smith, Graham and Crapo for introducing S. 1961, the Water Investment Act of 2002. I also commend this committee for undertaking a comprehensive look at our nation's water infrastructure needs. The costs of insufficient attention to clean water issues are indisputable. Non-point source pollution, leaking toxics, stormwater run-off and coastal

pollution pose grave risks to water quality. Our nation's water quality and "environmental" infrastructure could not be more vital to our health, safety and overall quality of life.

The Water Investment Act of 2002 would serve to ensure the environmental and financial sustainability of our nation's water programs. The measure would authorize the Clean Water and Safe Drinking Water State Revolving Loan Fund (SRF) Program at $35 billion over 5 years. The SRF program allows States to provide low-cost financing to communities for the construction, repair and rehabilitation of wastewater collection and treatment facilities. While this legislation seeks to provide additional resources to States and localities to aid them in meeting water infrastructure needs and increased State flexibility to States in administering their water programs, the imposition of the Davis-Bacon Act to this vital program would negate many of these efforts.

While ABC members have concerns regarding a number of wastewater needs, I will focus my comments today on funding for construction of wastewater treatment facilities and on the detrimental impact that the discriminatory and antiquated Davis-Bacon Act would have, if included in the legislation, on these vital projects.

BACKGROUND

Congress passed the first Federal Water Pollution Control Act, the Clean Water Act (CWA), in 1972, which linked the Federal Government with States and cities to clean up the country's waters by funding projects for water supply and wastewater treatment. The Clean Water Act of 1987 phased-out the law's construction grant program by the close of fiscal year 1990. It was replaced by a State Revolving-Loan Fund (SRF) to help finance clean water infrastructure projects. The SRF is a low-interest program by which States fund local wastewater treatment facilities and similar infrastructure. From fiscal year 1990 through fiscal year 2001, the EPA made available over $20 billion in grants to States. While this program has seen significant success, it is clear that to accommodate the nation's growing population, meet new water quality standards and repair and upgrade aging facilities, much greater investments must be made. Estimates for future needs for clean water infrastructure are staggering-anywhere from $300 billion to $1 trillion over the next 20 years.

The commitment Congress made with the States beginning in 1972 to clean up the country's waters by funding projects relating to water supply and wastewater treatment is responsible for the significant progress made in restoring the quality of our nation's waters. When Congress decided to turn the program over to the States in the Water Quality Act of 1987, a schedule was set to phaseout direct grants for construction and provide seed money to the States to establish revolving loan funds. These funds would eventually become self-sustaining and fund the States' wastewater treatment construction needs.

All States have established the legal and procedural mechanisms to administer the new loan programs and are now eligible to receive State Revolving Fund (SRF) capitalization funds under title VI.

Some with prior experience using similar financing programs moved quickly, while others had difficulty in making a transition from the previous grants program to the one that requires greater financial management expertise for all concerned. Moreover, many States have complained that the SRF program is unduly complicated by Federal Rules—some contained in the statute, others in EPA guidance-even though the States were intended to have greater flexibility.

Small communities and States with large rural populations are having the largest share of problems with the SRF program. Many small towns did not participate in the previous grants program and consequently are likely to require major projects to achieve compliance with the law. Yet these communities often lack an industrial tax base and thus face the prospect of very high per capita user fees if their citizens are required to repay the full capital cost of sewage treatment projects. According to testimony from the General Accounting Office, SRFs will only meet about one-third of the States' funding needs and will generally be unable to meet the needs of disadvantaged communities. States simply have not been provided enough time or seed money to sufficiently capitalize their revolving funds. There are many small communities that do not have the capital base necessary to support a State revolving loan fund.

ABC believes inadequate and insufficient wastewater facilities represent a large segment of clean water problems facing our nation today. It is imperative that the Federal Government immediately address our country's need for clean water infrastructure investment. ABC is encouraged by the efforts being made by the Senate Environment and Public Works Committee and the House Transportation and Infra-

structure Committee and supports the arrangements being made for small communities, such as modifying the procedural or repayment requirements of the SRF loan program.

Combined sewer overflows (CSO) are an example of a significant problem in over a thousand cities nationwide. Billions of dollars are needed to clean up previously overlooked and outdated systems. Nearly 1,200 municipalities have combined sewers where domestic sanitary sewage, industrial wastes, infiltration from groundwater and stormwater runoff are collected and treated together. These systems serve approximately 40 million persons, mainly in older urban and coastal cities.

Combined sewers are categorized as point sources under the Clean Water Act, yet they have not been considered a high regulatory or permitting priority for EPA or States. There are no express provisions in the Clean Water Act dealing with CSOs, except to the extent that they are subject to permit requirements and deadlines as are other point sources. The cost of controlling CSOs is potentially very high and local governments say that resources are not available for a program of that size. Conceivably, an extended program can also address improved drinking water filtration or solid waste disposal facilities. ABC supports the idea of allowing localities greater flexibility to consider costs and site-specific factors when designing various wastewater-treatment facilitates.

ABC also supports continued Federal funding to further capitalize State revolving funds for the construction of wastewater treatment facilities or environmental infrastructure projects. Clearly, our clean water needs are vast and the Federal Government must maintain a certain level of participation. Shifting resources to State revolving funds to provide a self-sufficient program and stable revenue source is a productive use of Federal funds. Requirements for State revolving funds should be as uncomplicated as possible to facilitate an accessible and efficient program.

Other forms of innovative financing and cooperative efforts will expand the power of Federal resources and should be encouraged. Privatization and public-private partnerships for example, are being used more frequently to augment Federal, State and local activities—and they work. These efforts bring experience, business savvy and financial strength of the private sector to government entities for the benefit of all. ABC supports the provision in S. 1971 that would allow private utilities to access Clean Water and Drinking Water SRFs.

ABC urges Congress to rely on market incentives rather than pursuing taxes to induce environmental conformance. To that end, ABC commends the sponsors of the legislation for including a provision that encourages competitive bidding of all projects to help reduce overall project costs. In addition, any funding plan should consider that States would have to impose user fees to meet their share requirements.

Continued Federal funding is not a panacea. A long-term integrated plan that takes into account new environmental problems and establishes realistic and achievable clean water goals should be adopted. We also believe every State must develop an environmental needs inventory and strategy for the future to ensure efficient management of resources.

DAVIS-BACON ACT

ABC commends the sponsors of this vital legislation for not expanding burdensome Davis-Bacon Act requirements to the Clean Water and Safe Drinking Water State Revolving Funds. The SRF program has operated efficiently without Davis-Bacon since 1995, and ABC encourages the committee to continue to allow States and municipalities the flexibility to operate the SRFs without this expensive and discriminatory requirement.

During this time of economic recession, while fighting a costly war on terrorism and facing a Federal budget deficit, any expansion of the Davis-Bacon Act would be fiscally irresponsible and unjustified. In an era of constrained resources, the promotion of higher Federal construction costs to the benefit of a few and to the detriment of the American taxpayer can no longer be accepted. The Davis-Bacon Act unnecessarily raises the cost of Federal construction by an average of 5–15 percent and an enormous 25–38 percent in rural areas—where clean water infrastructure improvements are most desperately needed. This is a needless waste of taxpayer dollars and thwarts the progress of additional projects that could be built.

Davis-Bacon is a relic of the infamous Jim Crow era. The law, enacted in 1931, was intended to prevent minority workers, mostly from the South, from competing with northern, mostly union construction firms for Federal contracts in the North. Conceived during a time of discrimination, the Act still has much the same effect today. Davis-Bacon disadvantages small, emerging and minority businesses. Davis-Bacon discourages many qualified small and minority-owned contractors from bid-

ding on public projects, because the complex and inefficient wage and work restrictions make it nearly impossible for small businesses to compete with well-capitalized corporations. To seek Davis-Bacon contracts, small and minority owned firms must not only pay the "prevailing wages" and adopt inefficient work practices and rigid union-based job classifications, but also must expose themselves to huge compliance costs and burdensome paperwork regulations. As a result, few small and minority firms win Davis-Bacon contracts, and many others give up trying.

According to the Congressional Budget Office, repealing the Act would save taxpayers $10.5 billion over 10 years. Eliminating Davis-Bacon requirements would reduce unnecessary Federal spending and guarantee more construction for the dollar for important public projects such as water infrastructure needs, schools, roads, bridges, low-income housing, hospitals and prisons. It would also remove barriers that preclude emerging businesses and entry-level workers (helpers) from working on public projects paid for with their own tax dollars. If funds wasted on Davis-Bacon wage rates were utilized in a more efficient manner, they could be put toward meeting our overwhelming national demand for environmental and infrastructure improvements.

The Federal Davis-Bacon law hurts States and localities because its requirements are imposed even if the Federal Government contributes a minimal amount of funds. For example, the Federal Government could offer a small amount of money for a primary State, local or privately funded project, and the artificially inflated Davis-Bacon wage rate would have to be paid to all workers on that job. Often times these increased costs nullify the Federal contribution and States are better off not accepting Federal help. The Federal Government should not impose costly Davis-Bacon requirements on financially strapped State and local governments.

Especially in the case of State revolving funds, where the Federal Government does not directly appropriate money for projects, Davis-Bacon requirements are not applicable. In the Clean Water Act of 1987, Davis-Bacon requirements sunset on all SRF assistance in fiscal year 1995, and has not applied to such funds since. This loan program, whereby the funds are repaid and then revolved, is no place for federally mandated Davis-Bacon.

Davis-Bacon violates States' rights for those 20 States that have chosen not to have a State prevailing wage law because the wage mandates inflate construction costs. These States should not be saddled with the outdated Federal law, which serves as an expensive and burdensome "unfunded mandate" imposed on State and local governments. In fact, even States that have "little Davis-Bacon" laws have voiced their opposition to federally mandated Davis-Bacon on Clean Water Act SRF projects. When the building trades sued to re-impose Davis-Bacon on CWSRFs, 13 States, 6 of which have their own State prevailing wage laws, formally wrote the EPA in opposition to the re-application of Federal Davis-Bacon requirements.

CONCLUSION

In conclusion, Mr. Chairman, ABC strongly supports the efforts being made by the Environment and Public Works Committee to ensure that our nation's water quality is improved. ABC supports the Water Infrastructure Act of 2002 as currently written. We believe that with full funding and without any expansion of the Davis-Bacon Act our water infrastructure needs will begin to diminish and our nation's water quality will dramatically improve. It is imperative to improve the efficiency of the State Revolving Loan Fund program by not imposing outdated and unnecessary prescriptive administrative requirements the Federal Government places on municipalities, namely the Davis-Bacon Act.

On behalf of Associated Builders and Contractors, I again want to thank you and the members of the committee for the opportunity to testify here today, and I will be happy to answer any questions you may have.

RESPONSES OF BILL KUKURIN TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. How does Pennsylvania's Prevailing Wage Law restrict your business' use of semi-skilled laborers or other trainees?

Response. The Pennsylvania Prevailing Wage Law restricts a contractor's use of semi-skilled laborers or other trainees in the following ways:

1. Any contractor without union affiliation (which is more than 80 percent of the construction industry today) must develop and implement a complex and expensive State approved apprentice training program in order to hire individuals as semi-skilled workers or trainees and pay them the reduced rate. The labor unions have historically had strong apprenticeship programs but cannot train enough workers to support the entire construction industry. Most contractors do not have a State ap-

proved training program in place due to a variety of reasons. For example, State approved apprenticeship programs do not allow for task based training, which is more often found in open shop contracting training. Moreover, State approved programs do not recognize "helpers". As a result, the construction industry is losing youth to other technical trades.

2. Separate apprentice programs must be in place for each trade on any given project (i.e. operating engineer, carpenter, skilled laborer). A trainee is not permitted to work on multiple trades at a trainee rate. Many of our skilled employees are multiple trade workers. These skilled workers could mentor a trainee, teaching several trades, if given the flexibility of working in any trade as a trainee. The State approved apprenticeship program does not allow this flexibility.

Question 2. Can you also speak of some of the ways in which Davis Bacon interferes with your company's efficiency and production?

Response. Davis Bacon requires that a new hire learning a trade be paid the same rate as a skilled worker, but the contractor does not get the same labor production from a trainee. Without "helper" or "trainee" rates, it is not cost effective to hire a trainee. Most construction companies can only compete and remain productive by employing the highest skilled individuals. Skilled workers are very difficult to find and trainees are not as efficient and productive. The construction industry needs to continuously train new workers to be skilled workers and encourage more individuals to seek a career in construction.

Davis Bacon does not allow a contractor to hire an unskilled worker at a lower rate and mentor and train that individual to become a skilled worker. Some say that contractors are looking for cheap labor. Contractors need the opportunity to pay an individual (in training) a lower rate while they receive on-the-job training to become a future journeyman.

Under Davis Bacon, the both the contracting firm and the construction worker looking to gain invaluable experience, lose. In the private sector, helpers work under direct supervision of higher skilled, journey—level workers. They gain valuable entrance into the industry, a well paying job and on-the-job training. Despite the fact that helpers is not considered a "prevailing" practice, I can tell you that it is and it would be if not for Davis Bacon. A "helpers" classification would help create lifelong learning opportunities in local communities. Helpers could help address the shortage of skilled workers, provide new jobs and cut government waste.

Moreover, Davis Bacon is extremely rigid and ignores modern construction management and classifies workers on an inflexible basis. These rigid job classifications hinders productivity by not allowing competent craftsmen to work across craft lines.

STATEMENT OF JIM BARRON, RONKIN CONSTRUCTION, NATIONAL UTILITY CONTRACTORS ASSOCIATION

INTRODUCTION

The National Utility Contractors Association (NUCA) is a family of more than 2,000 companies from across the nation that build, repair, and maintain water, wastewater, gas, electric, and telecommunications systems, and manufacture and supply necessary materials and services.

Every day utility contractors witness the atrocious conditions of America's failing wastewater infrastructure facilities that threaten our public health and the environment. These conditions grow worse as Federal funding for clean water projects continues to be woefully inadequate. On the job, utility contractors see firsthand the benefits of the Federal water programs like the Clean Water State Revolving Fund (SRF), an extremely effective financing program that provides the capital resources to build and rehabilitate this infrastructure.

NUCA supports the Water Investment Act of 2002 (S 1961), which would increase resources provided to the Clean Water SRF and Drinking Water SRF programs that would boost State's efforts to address the looming crisis facing America's water and wastewater infrastructure. We applaud the Senate Environment and Public Works Committee for holding today's hearing, and we hope to see quick action on this important legislation.

A VIEW FROM THE TRENCHES

Last year, the American Society of Civil Engineers awarded the nation's wastewater and drinking water categories "D" grades in their annual Report Card on America's Infrastructure. Aging wastewater systems are failing in every State. Each year, 400,000 homeowners find sewage backing up in their basements. Another

40,000 municipal sanitary sewers overflow into the nation's streets, waterways, and beaches, dumping potentially deadly pathogens.

It is difficult to describe the appalling State of clean water infrastructure as utility contractors see it in the trenches, building and repairing America's unglamorous but vital water infrastructure system. What is out of sight and out of mind to most people is clearly visible to utility contractors on a daily basis. In our work, it is not uncommon to find dilapidated pipes with gaping holes spilling raw sewage into the surrounding ground in residential neighborhoods. This leakage can go undetected for months, even years in some cases. To make matters worse, these conditions are often within yards of waterways where we fish, beaches where we swim, and playgrounds where our children play.

The U.S. Environmental Protection Agency's 1996 Clean Water Needs Survey Report to Congress placed a $139.5 billion price tag for 20-year capital investment needs for publicly owned wastewater treatment facilities. By March 1999, an EPA Needs Gap Study found that sanitary sewer overflow needs in the 1996 study were grossly underestimated. Originally estimated at a total $10.3 billion, sanitary sewer overflow needs are today estimated at $81.9 billion, bringing the total national wastewater infrastructure needs to more than $200 billion. Neither the $139.5 billion nor the $200 billion EPA estimate reflects replacement costs. EPA now indicates that the current needs for water and wastewater infrastructure could exceed $500 billion.

Independent studies report a $23 billion gap in Federal investment, and there are groups that claim that the current water and wastewater needs are approaching $1 trillion over the next 20 years. However, NUCA believes that whether the needs are $200 billion or $1 trillion is not the key issue when recognizing the current Federal contribution to remedy this situation is continually less than 1 percent of the lowest needs estimate. The priority should be to provide increased resources immediately to begin closing this spending gap.

CLEAN WATER STATE REVOLVING FUND

The Clean Water State Revolving Fund (SRF) program is a pragmatic and cost-effective program that provides States with vital financial resources to address their wastewater infrastructure needs. It has been hailed as the most successful federally sponsored infrastructure-financing program in history. The SRF program plays a key role in enhancing public health and safety, protecting the environment, and maintaining a strong economic base. It increases labor productivity, creates jobs, rehabilitates old neighborhoods, restores brownfields properties, and ensures the availability of recreational use of our waterways and shorelines.

Congress annually capitalizes each State's revolving fund programs, and loans are made to local communities to be paid back over time, at a low interest rate. The money paid back to the fund "revolves," and is available to loan out to other communities, thus sustaining the money for future projects.

Besides serving as the key mechanism to finance water infrastructure installation and rehabilitation projects, the SRF creates scores of jobs for American workers. Up to 55,000 jobs are created with every $1 billion of Federal capitalization in the Clean Water SRF program. Recent research conducted by the Association of State and Interstate Water Pollution Control Administrators suggests that several billion dollars of Federal resources for Clean Water projects could put hundreds of thousands of Americans to work in the near future. This work will have a ripple effect, multiplying project funding through the economy. Rehabilitation of key infrastructure brings revitalized communities and opportunities for future business and investment. Thus, increasing SRF funding will provide economic stimulus in the short term as well as the long term at a time when America needs all the jobs it can get.

Authorization for the Clean Water SRF lapsed in 1994, but because of its effectiveness, Congress has continued to fund the program every year through the annual appropriations process. The 15-year performance record of the SRF has been spectacular. Federal capitalization grants totaling approximately $18 billion have leveraged capital to more than $34 billion in perpetuity loans that are continually redistributed. When authorization expired, appropriations were just over the $2-billion mark. However, that level has dropped to $1.35 billion, which has been the amount provided in the last few years.

EVOLVING LEGISLATION

For the past several years, NUCA has worked with Senator George Voinovich (R-Ohio) to gain support for the Clean Water Infrastructure Financing Act (S 252), which would reauthorize the Clean Water SRF at $3 billion per year for 5 years. Similar legislation in the House (HR 668) gained the bipartisan support of more

than 100 cosponsors from over 30 States. NUCA is very pleased that the EPW Committee has incorporated all key components of the Voinovich bill into S. 1961, which will authorize $20 billion to the Clean Water SRF program over 5 years and $15 billion to the Drinking Water SRF program over the same period for a total of $35 billion toward refurbishing our water and wastewater infrastructure. NUCA applauds the Senate EPW Committee for incorporating the fundamental elements of S. 252 into the Water Investment Act of 2002.

In addition to the substantial funding increases authorized for water and wastewater infrastructure projects, S. 1961 would modernize the Clean Water SRF to ensure that funds better address State needs, expand the eligibility for SRF projects, streamline State programs to maximize use of Federal funds, and provide for additional assistance to disadvantaged communities.

The committee's comprehensive legislation would increase the SRFs' operational effectiveness by allowing States to operate their Drinking Water and Clean Water SRF programs in a more similar fashion. Water and wastewater infrastructure management is, and should continue to be, a State function. Federal resources should be allocated to assist the States without getting in the way of SRF program managers who know the best ways to operate their unique systems.

CONCERNS

While NUCA fully supports the intent of this legislation, NUCA is concerned with certain parts of the "community development" provision in Sec. 103 of Title I. While coordination and consultation with land use officials is appropriate, we are concerned that requiring substantial coordination may obstruct and delay the progress of many necessary water and wastewater installation and rehabilitation projects.

NUCA is in full support of the concept of quality growth. NUCA is a member of the Quality Growth Coalition, and participated in the development of "Building Better Communities: Quality Growth Toolkit," a document designed to help citizens, civic leaders, and elected officials identify effective, common-sense solutions to traffic congestion, overcrowding in schools, and management issues regarding future development. NUCA believes that maintaining communications with State and local land use officials is beneficial in any infrastructure rehabilitation program to ensure consideration of the concerns and perspectives of local communities. However, contrary to the opinions of certain environmental organizations, water and wastewater treatment work is not a catalyst for what is known as "sprawl." These projects are fundamental to ensure the safety and viability of these communities. NUCA suggests the committee clarify the "community development" provision in Sec. 103 to require "coordination and consultation" and not approval of water projects by land use officials.

Another concern NUCA has pertains to the assumption that only five more years of Federal investment will eliminate the need for future funding. The SRF originated as a way of moving away from costly and politicized construction grants. The objective was to build the SRF over time until it reached self-sustainability. The plan for this investment was to help service providers to gain solid financial footing, after which fees would be sufficient to cover costs. However, this has not come to pass, and current conditions indicate that the objective of financial self-sufficiency is far from a reality. This is especially true when recognizing that needs estimates nationwide are skyrocketing. NUCA commends the EPW Committee for it's commitment to increasing funding to address this environmental problem, but we believe some form of Federal financial support will be essential in the future to ensure the availability of safe and clean water.

THE DAVIS-BACON ISSUE

For the past several years, the main issue that has prevented some Members of Congress from co-sponsoring SRF reauthorization legislation was the application of prevailing wage requirements under the Davis-Bacon Act, which requires that local prevailing wages be paid on all Federal construction projects valued over $2,000. While collective bargaining and wage determination are important aspects of the construction bidding process, the issue of Davis-Bacon coverage should not delay or block legislation that will increase the resources that fund clean water projects.

NUCA supported the Voinovich legislation (S. 252), which would have restored Davis-Bacon coverage for the first round of Clean Water SRF funding, leaving coverage of subsequent rounds to the discretion of the States. This was the way Davis-Bacon applied to the SRF before authorization expired in 1994. S. 252 would have restored Davis-Bacon provisions, but would have limited them to the first round of funding. NUCA believes that this was a middle of the road solution that many mem-

bers on both sides could agree on, and it seemed like the only compromise that could move the bill forward.

Opponents of the Davis-Bacon Act argue that the Depression-era law is no longer relevant in today's construction market. They say Davis-Bacon requirements force employers to pay higher wages for specific crafts, regardless of the workers' skill level in that craft, which can lead to reductions in productivity and inflated costs. Some say the requirements can also hurt small businesses that can't keep up with the complex work rules on Federal projects. Opponents generally believe the free market and competition should determine wages, not the Federal Government.

Advocates of Davis-Bacon believe the requirements provide a level playing field, and ensures fairness to workers on Federal construction projects. They maintain that Davis-Bacon requirements provide for community standards for workers, and avoid pay discrimination based on religion, sex, race, etc.

Since Clean Water SRF authorization lapsed in 1994, Federal Davis-Bacon requirements have not accompanied appropriations to the SRF program. In June of 2000, EPA issued a settlement agreement with the AFL–CIO's Building and Construction Trades Division (Building Trades), agreeing to restore Davis-Bacon requirements in the same manner as they were applied to SRF projects before the program's authorization expired in 1994. This would apply Davis-Bacon to the first round of Federal funding, leaving subsequent rounds to States' discretion. The Building Trades argued that Davis-Bacon requirements should have applied to SRF projects as Federal money was appropriated to the SRF program. Although EPA previously ruled that Davis-Bacon requirements did not apply to SRF projects after reauthorization expired, EPA later announced that prevailing wage rate requirements should continue to apply regardless of reauthorization. The agreement was to begin in January 2001, but the Bush Administration has suspended the implementation of the settlement's provisions, which have been under review ever since.

Thirty-one States have Davis-Bacon coverage at the State level. It seems to us that Federal Davis-Bacon coverage should only be an issue for the 19 "right-to-work" States that do not cover Davis-Bacon at the State level. Many of NUCA's construction company members, union and open shop, will tell you that the current construction industry labor shortage, across-the-board drug testing, and technical know-how warrant employers to pay higher wages regardless of Davis-Bacon requirements. If construction companies want the workers, they must pay prevailing wages, or more in some cases. This is dictated by the free-market, not by Federal or State requirements. Others will tell you that Davis-Bacon stabilizes the construction market by making wage determination easier during the bidding process. Rather than haggle over wage rates for different job functions, employers simply pay the prevailing wage.

The bottom line is that only time and extensive debate will resolve the Davis-Bacon issue, and time is something that we cannot afford when it comes to the problem with our wastewater and drinking water infrastructure. While our nation's elected officials argue about wage determination, our nations infrastructure deteriorates and the infrastructure crisis continues to grow.

CONCLUSION

Over the years, the annual Federal investment in the Clean Water SRF Program has been cut in half, yet there remain thousands of miles of barely functioning sewer pipelines that are leaking raw sewage into underground aquifers daily.

A few years ago, Congress passed the Transportation Equity Act for the 21st Century, or TEA–21. The legislation provided a blueprint for development and maintenance of America's highways and roads. TEA–21 has paid off, and Congress is to be commended for its investment in the nation's roadways. Now it's time to focus on what is underneath the roads. The underground water infrastructure is literally falling apart as we speak.

The math is simple. The past several years have shown a decline in Federal investment in ensuring the resources to maintain our wastewater and drinking water infrastructure. At the same time, while the existing infrastructure continues to age, failure rates continue to grow, as the declining investment is not able to keep up with the aging pipes. This has created a major financial gap that will only get worse if a firm commitment is not made and continual Federal resources are not provided to needy communities.

People understand that their quality of life is linked to water quality and the collection and treatment of wastewater. The SRFs have become increasingly efficient and effective, but need more resources. Sufficient Federal seed money must be invested to ensure that human and environmental costs of the multi-billion dollar

funding gap are prevented. The provisions in S. 1961 would be a huge step in that direction.

STATEMENT OF TERRY R. YELLIG ON BEHALF OF THE BUILDING AND CONSTRUCTION TRADES DEPARTMENT, AFL–CIO

My name is Terry R. Yellig, and I am testifying on behalf of the 14 affiliated unions that comprise the Building & Construction Trades Department of the AFL–CIO and the millions of skilled construction workers who they represent. We commend Chairmen Graham and Jeffords, as well as Senators Crapo and Smith, for introducing S. 1961, the Water Investment Act of 2002, which would authorize $36 billion over five (5) years for investment in America's clean water and safe drinking water infrastructure.

Authorization of funds of this magnitude is a critically important first-step in meeting the well-documented water infrastructure needs throughout this country. Various governmental entities, as well as private groups, have documented the hundreds of billions of dollars of water infrastructure needs facing our nation. EPA Administrator Christine Todd Whitman testified before this committee that estimated water infrastructure needs could total as much as a "trillion dollars." As we all know, recent appropriations have only provided approximately $2 billion per year worth of the nation's clean water and safe drinking water infrastructure needs. These are woefully inadequate amounts given the acknowledged needs assessments. That is why we are encouraged by the introduction of S. 1961, the Water Investment Act, and view it as an important congressional statement that begins seriously to address the water needs of America.

Notwithstanding, the building and construction trade unions strongly feel that more should be done at the Federal level to address our massive water infrastructure needs. We recognize the constraints that looming Federal budget deficits impose on Federal infrastructure programs, especially on those without dedicated revenue streams such as those that fund the Highway and Aviation Trust Funds. Nevertheless, our nation's water needs demand a broader based Federal commitment.

Investment in critical water infrastructure by the Federal Government is as important to our country's economic well being as investment in our highways, transit systems and airports. From our perspective, significant Federal infrastructure investment is the predicate to, and the catalyst for, long-term economic growth and vitality. Robust economic growth will be stymied without sufficient investment in new and improved wastewater treatment facilities, as well as an abundant supply of safe drinking water and the systems to deliver it.

Given enactment in recent years of legislation addressing significant surface transportation and aviation infrastructure issues facing this country, we strongly urge the committee to take a long hard look at authorizing even higher levels of spending in S. 1961 in order to bring investment levels up to the $50 billion to $60 billion level over the next 5-year authorization period.

Clearly the needs are there. We call to the committee's attention the persuasive needs assessment report, "Water Infrastructure Now," prepared by the Water Infrastructure Network ("WIN"), a broad-based coalition of locally elected officials, drinking water and waste water service providers, contractors and engineers, environmentalists and key building trade unions. This report makes a compelling case for a $57 billion investment program over a typical 5-year authorization cycle.

Many of the witnesses at this and other hearings this committee has scheduled will discuss a variety of discreet policy issues pertaining to various aspects of S. 1961, and other important pieces of water legislation such as Senator Voinovich's bill to reauthorize the Clean Water Act State revolving loan fund program, S. 252. As building and construction trades unions, we pledge our support to moving water infrastructure legislation through Congress that authorizes as much funding for clean water and safe drinking water as possible.

One of our primary responsibilities as building and construction trades unions is to provide the skilled manpower necessary to address this country's water infrastructure needs under whichever legislative framework Congress enacts into law.

From heavy equipment operators to laborers, from ironworkers to carpenters, bricklayers and cement masons, we are prepared to provide the skilled craft workers who will build the water infrastructure projects authorized by S. 1961 in a timely, efficient and safe manner.

As we stated earlier, the magnitude of this country's water infrastructure needs is such that Congress needs to authorize higher funding levels that will enable State and local water authorities seriously to begin addressing this problem within a reasonable timeframe. In addition to the various other policy considerations in this leg-

islation, it obviously would create tens of thousands of jobs and provide real economic stimulus to this country's economy. In our judgment, there is no better economic stimulus than to put paychecks into the hands of the American workers, contractors and suppliers who will build this country's water infrastructure.

We are also concerned about the labor standards that will be applicable to construction workers employed on federally assisted water infrastructure projects. Specifically, we respectfully urge this committee to take steps necessary to insure that Davis-Bacon prevailing wages are paid on all such projects assisted under the Clean Water and Safe Drinking Water Acts.

As many members of this committee are well aware, for 71 years Congress has consistently applied the Davis-Bacon prevailing wage requirements to Federal infrastructure programs regardless of whether it was under Democratic or Republican control, or whether there was a Democratic or Republican Administration in the White House.

The original policy of the Davis-Bacon Act was to acknowledge the potentially disruptive impact of Federal construction programs on local construction markets. Accordingly, the public policy interest set forth repeatedly by Congress in more than 60 Federal statutes over the past 71 years has been to require contractors working on federally assisted construction programs to pay locally prevailing wages as determined by the U.S. Department of labor.

In recent years, as Congress has considered using a variety of so-called innovative financing mechanisms such as revolving loan fund programs, credit enhancement programs, and loan guarantee programs, all of which are intended to leverage limited Federal capital for maximum public benefit, as well as more traditional Federal grant programs, it has steadfastly continued to apply complete and comprehensive Davis-Bacon prevailing wage coverage to these programs.

In fact, Congress included comprehensive Davis-Bacon prevailing wage requirements in the Clean Water Act in 1972 and in the original Safe Drinking Water Act in 1974. However, the 1987 Water Quality Act shifted Federal support for water treatment projects under the Clean Water Act from a program of direct Federal grants to a program of Federal capitalization grants to support State Revolving Loan Funds ("SRF") with the intention of phasing out the Federal capitalization grant program by the end of fiscal year 1994.

Notwithstanding Congress' expectation that State Revolving Funds would become completely self sufficient by fiscal year 1995, they were not. On the contrary, Congress has continued to appropriate funds for new Federal capitalization grants to the States every year since fiscal year 1995. Moreover, after enactment of the 1987 Water Quality Act, the Administrator of the Department of Labor's Wage and Hour Division concluded that, under newly enacted § 602(b)(6) of the Clean Water Act, the Davis-Bacon prevailing wage requirement did not apply to "state matching funds required to be contributed into the SRF, moneys repaid to the SRF, or other moneys."

Under this interpretation, the first time State Revolving Funds provided assistance that is supported by Federal capitalization grant funds to help finance construction of a water treatment project, the Davis-Bacon requirement was applied; however, when the assistance was repaid to the State Revolving Fund and then "recycled" to assist construction of another water treatment project, according to DOL and EPA, Davis-Bacon prevailing wage requirements would not apply.

This interpretation would, in the long-term, undermine the longstanding policy of assuring that all workers on projects supported by Clean Water Act grants are paid not less than the prevailing wage. This committee attempted to set EPA and DOL straight on this issue in 1994 when it reported S. 2093, the Water Pollution Prevention and Control Act, which stated, among other things, that the Davis-Bacon prevailing wage requirement in the Clean Water Act applies to any project assisted by a loan or other type of assistance given by a State Revolving Fund, including projects assisted by recycled funds.

Unfortunately, the full Senate failed to take action on S. 2093.

In addition, § 602(b)(6) of the CWA currently provides that the Davis-Bacon prevailing wage requirement only applies to construction of water treatment works projects financed by Federal funds made directly available to State Revolving Funds that began before the end of fiscal year 1994. Notwithstanding continuation of Federal financial assistance to the State Revolving Funds, EPA says that the Davis-Bacon prevailing wage requirement no longer applies even to construction of water treatment projects financed in whole or in part with funds directly made available through Federal capitalization grants, because of the language in § 602(b)(6) of the Clean Water Act.

Accordingly, it is necessary to amend § 602(b)(6) of the CWA so that the Davis-Bacon prevailing wage requirement applies to construction of all water treatment projects assisted in whole or in part by SRFs with Federal funds, including those

supported by funds directly made available through Federal capitalization grants and those supported by "recycled" Federal funds.

Similarly, the Safe Drinking Water Act includes a broadly worded provision that directs the EPA Administrator to "take such action as may be necessary to assure compliance with provisions of the [Davis-Bacon Act]." In 1994, the Senate passed, but the House failed to act on the Safe Drinking Water Act amendments that, among other things, would have encouraged States to create revolving loan funds for drinking water projects funded by Federal capitalization grants to finance loans and other types of financial assistance to public water systems.

The proposed 1994 Act anticipated that, like the SRF program created in the Clean Water Act, as the loans and other types of financial assistance were repaid, the revolving loan fund would be replenished, and new loans and other types of financial assistance could be made for other eligible drinking water projects. The proposed 1994 Act included an additional Davis-Bacon labor standards provision that clearly applied Federal prevailing wage requirements to laborers and mechanics employed on projects assisted by State Revolving Loan Funds, including any assistance financed by repayments to the SRF.

Subsequently, Congress enacted the Safe Drinking Water Act Amendments of 1996, which finally created a State Revolving Fund program that provides annual capitalization grants to each State in order to fund a State Revolving Fund that provides financial assistance to local agencies to facilitate compliance with EPA's National primary drinking water standards. The Safe Drinking Water Act Amendments of 1996 did not, like the 1994 bill that passed the Senate but was not acted upon by the House, include a separate Davis-Bacon provision.

There was no attempt to add a Davis-Bacon provision to the 1996 Act, because it was my opinion as Counsel to the Building and Construction Trades Department that the Davis-Bacon provision already in the Safe Drinking Water Act was sufficiently broad to cover all construction projects supported by State Revolving Funds with funds directly made available from Federal capitalization grants or with "recycled" funds made available by repayment of Federal capitalization grant funds.

However, contrary to the EPA Administrator's obligation under the Act to "take such action as may be necessary to assure compliance with provisions of the [Davis-Bacon Act]," she now claims that the Davis-Bacon prevailing wage requirement in the Safe Drinking Water Act does not apply to any construction projects supported by State Revolving Funds. Accordingly, the Davis-Bacon prevailing wage requirement in the Safe Drinking Water Act must be amended to make it clear that Davis-Bacon requirements apply to all construction projects supported by SRFs whether with funds directly made available from Federal capitalization grants or with "recycled" funds made available by repayment of Federal capitalization grant funds.

To fail to provide full Davis-Bacon coverage of water infrastructure projects assisted by State Revolving Funds under both the Clean Water Act and the Safe Drinking Water Act would, in our opinion, result in the piecemeal repeal of Davis-Bacon prevailing wages on a major Federal construction program contrary to congressional intent in the original Clean Water and Safe Drinking Water Acts, not to mention the other 60 or so Federal statutes that have extended Federal prevailing wage requirements to a myriad of other federally assisted construction programs.

We again commend the committee for coming to grips with our significant clean water and safe drinking water infrastructure needs, and we look forward to working with Senators on both sides of the aisle as the process moves forward.

STATEMENT OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

Mr. Chairman and members of the committee:

The American Society of Civil Engineers (ASCE) is pleased to provide this statement for the record on the drinking-water and wastewater infrastructure needs in the United States today and on the bill S. 1961, the Wastewater Investment Act of 2002.

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.

EXECUTIVE SUMMARY

ASCE is pleased to support passage of S. 1961, the Water Investment Act of 2002. The proposed funding levels in the bill are a far-sighted, responsible attempt to rebuild the nation's aging and corroded wastewater and drinking-water facilities and

to upgrade their performance to meet the nation's health and security needs in the 21st century.

I. THE ISSUE

In March 2001, ASCE released its 2001 Report Card for America's Infrastructure in which the nation's life-sustaining foundation received a cumulative grade of "D+" in 12 critical areas. The reasons for such a dismal grade include the growing obsolescence of an aging system; local political opposition and red tape that stymie the development of effective solutions; and an explosive population growth in the past decade that has outpaced the rate and impact of current investment and maintenance efforts.[1]

The 2001 Report Card follows one released in 1998, at which time the 10 infrastructure categories rated were given an average grade of "D." This year wastewater declined from a "D+" to a D," while drinking water remained a "D." Wastewater and drinking-water systems are both quintessential examples of aged systems that need to be updated.

We know, of course, that the Federal budget condition is less healthy now than it was in early 2001. When the Report Card was issued, the nation anticipated budget surpluses well into the future. The Congressional Budget Office (CBO) projected in January 2001 that, if the tax and spending policies then in effect remained the same, the government would run surpluses totaling more than $5.6 trillion over the 10-year period from 2002 through 2011. CBO revised those projections in August, reducing the 10-year surplus to $3.4 trillion.

But in January 2002 CBO estimated that the cumulative surplus for 2002 through 2011 under current policies would total $1.6 trillion—a drop of $4 trillion from last January's figure. More significantly, if current tax and spending policies remain in place, the total budget will show a deficit of $21 billion in 2002 and $14 billion in 2003, according to CBO. Indeed, total Federal receipts in the first 4 months of fiscal year 2002 were down by $11 billion (1.6 percent) compared with the same period a year ago.

ASCE is well aware of the fiscal quandary that Congress must resolve. These short-term budget realities, however, should not blind Congress to the enduring need for a strong Federal investment in public health and in the security and stability of the nation's wastewater and drinking-water infrastructure. Naturally the Federal Government cannot overcome these problems without help. To remedy the current nationwide infrastructure problem, ASCE estimates we will need to invest $ 1.3 trillion in all U.S. infrastructure over the next 5 years. This unprecedented need must be met by all levels of government—Federal, State and local—as well as the private sector.

II. DRINKING-WATER INFRASTRUCTURE NEEDS

The nation's 54,000 drinking water systems face staggering infrastructure funding needs over the next 20 years. Although America spends billions on infrastructure each year, we estimate that drinking-water systems face an annual shortfall of at least $11 billion to replace aging facilities that are near the end of their useful life and to comply with existing and future Federal water regulations. The shortfall does not account for any growth in the demand for drinking-water over the next 20 years.

Although the Safe Drinking Water Act Amendments of 1996 (SDWA) authorized the Environmental Protection Agency (EPA) to spend $1 billion annually to construct and repair drinking water facilities, Congress has failed to appropriate the full amount. In fiscal year 2002, the appropriated amount is $825 million. The total appropriated, which represents 82.5 percent of the $1 billion authorized level, is at the same level as the fiscal year 2001 appropriation and equals less than 10 percent of the total amount needed this year.

In January 1997, EPA presented to Congress the first drinking-water needs survey that indicated the nation's 54,000 community water systems will need to invest $138.4 billion over the next 20 years to install, upgrade, or replace infrastructure to ensure the provision of safe drinking-water to these systems' 243 million customers.

But the most recent study by the EPA reveals that the need is even greater. In 1999, the Agency conducted the second Drinking Water Infrastructure Needs Survey. The purpose of the survey is to document the 20-year capital investment needs of public water systems that are eligible to receive Drinking Water State Revolving Fund (SRF) moneys.

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[1] American Society of Civil engineers, the 2001 Report Card for America's Infrastructure (2001), *http://www.asce.org/reportcard.*

The survey found that the total drinking-water infrastructure need nationwide is $150.9 billion for the 20-year period from January 1999 through December 2018.

Of course, notwithstanding the great need for further investment in replacement pipes and related infrastructure, we as a nation are making great strides in improving the quality of our drinking-water.

Health-based violations of Federal drinking-water standards are declining steadily, according to data from the EPA. In 1993, 79 percent of Americans were served by water systems that did not experience health-based violations. By 2000, that number rose to 91 percent.

Nevertheless, without a significantly enhanced Federal role in providing assistance to drinking water infrastructure, critical investments will not occur. Possible solutions include grants, trust funds, loans, and incentives for private investment. The question is not whether the Federal Government should take more responsibility for drinking-water improvements, but how.

III. WASTEWATER INFRASTRUCTURE NEEDS

Although the Federal Government has spent more than $71 billion on wastewater treatment programs since 1973, the nation's 16,000 wastewater systems still face enormous infrastructure funding needs in the next 20 years to replace pipes and other constructed facilities that have exceeded their design life. Congress, however, has not authorized new funding for wastewater treatment plants since 1987, and the current benchmark authorization of $600 million (established for fiscal year 1994 in 1987) is far too low to meet current needs.

With billions being spent yearly for wastewater infrastructure, the systems face a shortfall of at least $12 billion annually to replace aging facilities and comply with existing and future Federal water regulations. As with drinking-water needs, this total does not account for any growth in demand from new systems.

Funding for wastewater infrastructure has remained essentially flat for a decade. In Fiscal Year 2002, Congress appropriated $1.35 billion for wastewater infrastructure, the same appropriation as fiscal year 2001. The amount represents about 11 percent of the annual need nationally. Requirements for communities that have not yet achieved secondary treatment or must upgrade existing facilities remain very high: $126 billion nationwide is required by 2016, according to the most recent estimate by the EPA.

The largest need, $45 billion, is for projects to control combined sewer overflows. The second largest category of needs, at $27 billion, is for new or improved secondary treatment (the basic statutory requirement of the Clean Water Act). In addition to costs documented by EPA, States estimate an additional $34 billion in wastewater treatment needs for projects that do not meet EPA documentation criteria but, nevertheless, represent a potential demand on State resources.

Between 35 percent and 45 percent of U.S. surface waters do not meet current water-quality standards. According to the EPA, sewer overflows are a chronic and growing problem. Many of the nation's urban sewage collection systems are aging; some sewers are 100 years old. Many systems have not received the essential maintenance and repairs necessary to keep them working properly.

IV. THE WATER INVESTMENT ACT OF 2002 (S. 1961)

The Water Investment Act of 2002 (S. 1961) would amend and reauthorize the Clean Water Act and the Safe Drinking Water Act to provide substantially greater funding for wastewater and drinking-water facilities.

The bill is intended to modernize State water pollution control revolving funds and the allocation for those funds to ensure that the funds distributed reflect water quality need; to streamline State water pollution control assistance programs and State drinking-water treatment assistance programs to maximize the use of Federal funds and encourage maximum efficiency for States and localities; to provide additional structure to the water supply research conducted in the United States; and to ensure that the Federal Government is performing the appropriate role in analyzing regional and national water supply trends.

The bill would authorize funding of $35 billion over 5 years. It would authorize more than $20 billion for clean water and $15 billion for safe drinking water projects, respectively. There are provisions for the Clean Water Act and the Safe Drinking Water Act that are designed to help water utilities better manage their capital investments using asset management plans, rate structures that account for capital replacement costs, and other financial management techniques.

In addition, there are provisions that seek to ensure that the "next generation" of water-quality issues receives a major focus. The bill includes incentives for use of non-structural technologies. The bill would make these approaches eligible to re-

ceive funding under the Clean Water Act State Revolving Fund and require that recipients of funds consider the use of low-impact technologies. Moreover, it would authorize a demonstration program at $20 million per year over 5 years to promote innovations in technology and alternative approaches to water quality management and water supply. This program requires that a portion of the projects use low-impact development technologies.

V. RECOMMENDED IMPROVEMENTS TO S. 1961

The Water Investment Act of 2002 could be amended to enhance its effectiveness and improve on its ability to build modern wastewater and drinking-water facilities and protect national security. ASCE strongly encourages the committee to adopt the following provisions to S. 1961 as it deliberates the legislation:

- The bill should give a State the discretion to use the design-build project delivery method for each facility financed under the SRFs. The use of this method should be consistent with State law. Once a State decides that the design-build project delivery system is appropriate for a given project, the recipient should be required to the use of the two-phase competitive source-selection procedures authorized under section 303M of the Federal Property and Administrative Services Act of 1949.
- The bill should require that each contract and subcontract for architectural and engineering design services, program and construction management and other professional services should be awarded in the same manner as contracts that are awarded under title IX of the Federal Property and Administrative Services Act of 1949.
- The bill should expressly authorize the Environmental Protection Agency to use the Clean Water Act State Revolving Loan Fund (SRF) and the Safe Drinking Water Act SRF to provide financial assistance for the construction of physical security measures at wastewater and drinking-water plants. Certain terrorist groups have made it clear that the destruction of U.S. water-treatment facilities is one of their aims. Federal funds should be made available through the SRFs to deal with specific security needs, including improved building design and construction requirements, fencing and other physical security measures. No funds should be made available to hire security guards, establish private police forces or implement other non-structural protections, which should be addressed through operating funds.
- Some have argued that Federal regulatory programs establishing water-quality standards under the Clean Water Act and drinking-water standards under the Safe Drinking Water Act are too restrictive; others argue that the current regulations may not be protective enough of human health and the environment. Without taking a position either way at the present time, ASCE does not believe that legislation designed to provide indispensable financing for our aging infrastructure should be the forum to address controversial regulatory changes about which there is little consensus at the moment.

VI. FUTURE POLICY OPTIONS

ASCE recommends that funding for water infrastructure system improvements and associated operations ultimately be provided through a comprehensive program that addresses the infrastructure needs of drinking-water and wastewater systems. At some point, Congress needs to create a Federal water trust fund to finance the national shortfall in funding for water and wastewater infrastructure. Money in the trust fund should not be diverted for non-water purposes.

Moreover, we support the use of Federal appropriations from general treasury funds and the issuance of revenue bonds and tax-exempt financing mechanisms at the State and local levels, as well as public-private partnerships, State infrastructure banks, and other innovative financing procedures.

Congress also should consider the use of Federal capitalization grants to purchase or refinance outstanding debt obligations of water or wastewater service providers; guarantee, or purchase of insurance for, an obligation of a water or wastewater system; and secure the payment or directly repay principal or interest on general obligation bonds issued by the State if proceeds of the bonds will be deposited into the SRF.

As part of the Federal funding package designed to lower the cost of capital for recipients that choose to leverage their Federal capitalization grants and for individual issuers seeking to borrow in the public capital markets, Congress should exempt from State private activity bond volume caps State and local private activity bonds for water and wastewater infrastructure, where such bonds (1) are used to finance core water or wastewater infrastructure, as defined below, and (2) produce

public health or environmental protection benefits that are generally available to the public.

STATEMENT OF THE ASSOCIATION OF CALIFORNIA WATER AGENCIES

The Association of California Water Agencies (ACWA) is pleased to submit comments for the record to the Senate Environment and Public Works Committee on S. 1961, which seeks to address water infrastructure funding needs. ACWA is the largest and oldest collection of public water agencies in the country, and the association's members are responsible for 90 percent of the water delivered in California for municipal, agricultural and industrial use.

Unless Congress acts now to invest in and repair our nation's water infrastructure, ACWA believes that a looming water crisis in California and the west is inevitable. In general, ACWA supports the increase in funding levels within S. 1961, recommends some changes to the bill, and believes the bill can work in concert with other innovative resource approaches like the CALFED Bay-Delta Program.

Western States in general, and particularly California, face a dizzying array of resource demands that compete for finite supplies of water. Heavily urbanized areas depend on reliable supplies of high quality water to meet drinking water needs. Burgeoning high tech industries expect even higher quality water to develop the products that have transformed California's and the nation's economy. Agricultural communities today must vigorously safeguard water supplies, growing more food with less water, on ever-smaller tracts of usable land. And new environmental mandates have reduced flexibility of operations within California's water system.

At the same time, the administration of the Clean Water Act and the Safe Drinking Water Act has imposed increasingly expensive requirements on water suppliers. New treatment technologies for arsenic, MTBE, cryptosporidium, disinfection biproducts and other agents have been developed and are working to meet these mandates. Local agencies have helped pioneer many of these innovations, and while the benefits to public health have been great, they have not come without a cost.

The "infrastructure funding gap" cited by EPA Administrator Christie Todd Whitman, the Water Infrastructure Network (WIN) and others this year is very real. Estimates vary, but according to the General Accounting Office the figure is between $300 billion and $1 trillion over the next 20 years[1]—a widening shortfall between Federal funds appropriated and those needed to keep up with needs in cities, counties and rural communities. This funding gap becomes especially glaring in the face of new Federal water quality standards, environmental mandates and population shifts, factors which can wring the last ounce of flexibility from water networks, and make it difficult for States to contemplate necessary regional environmental water resource plans.

CALFED-S. 1961 IS COMPLIMENTARY

California's CALFED Bay-Delta Program is one example of innovative environmental and water resource planning whose future will be acutely impacted by water infrastructure investment. CALFED is the largest ecosystem restoration project in California's history, tasked with the commensurate goals of improving water quality and water supply reliability for farms and 20 million urban residents. Legislation like S. 1961 will complement CALFED by repairing the water networks in cities that rely on water from the Bay Delta ecosystem. The bill will enable urban water conservation, drinking water quality improvements, pipeline and canal upgrades, and the expansion of water recycling, all of which will relieve pressure on the fragile Bay-Delta and allow its multi-faceted restoration work to proceed.

The two major arteries for delivered water in California, the Federal Central Valley Project (CVP) and the State Water Project (SWP) are both more than 40 years old. Each is managed by agencies participating in CALFED. Neither one, however, has been completed to the extent its planners envisioned, and while both are feats of engineering, they were built when the State's population was less than one third of where it stands today, with a vastly different economy, and virtually no Federal environmental laws to enforce.

The investment of S. 1961, as well as the restoration promised by CALFED, are both direly needed for California and its western neighbors to meet water demand into the 21st Century. Just as the restoration of the Everglades, the Chesapeake and the Great Lakes have proceeded in concert with ongoing Federal water manage-

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[1] Water Infrastructure: Information on Federal and State Financial Assistance, GAO November 2001/GAO–02–134

ment initiatives, CALFED requires that infrastructure funding move forward with the Program's long-term resource goals.

RED TAPE CONCERNS

As demonstrated by the debate surrounding 1996 amendments to the Safe Drinking Water Act, a delicate balance must be struck between the benefits of water investment and the costs of new regulations that often accompany it. S. 1961 dedicates substantial resources to water systems, but some sections of the bill impose broad new requirements, which may be unnecessary. The bill needs to focus on funding for repair and investment in water infrastructure.

Section 103(e)(3) would mandate a new coordination process between local land use, transportation, and watershed plans in order for States to take advantage of water pollution revolving loan funds. Under ACWA-supported State legislation enacted in 1995 and revised in 2001, California already makes approval for new developments contingent upon adequate water supplies, giving hydrologic forecasts a loud voice in land use decisions. Section 103(g) of the bill creates new expectations of "Technical, managerial, and financial capacity for optimal performance," but States and local districts in California already employ best management practices to seek every possible efficiency from their systems.

ACWA recommends that the specific language of S. 1961 be changed in the committee process to achieve both operational and public policy improvements. One example is the section singling out "Disadvantaged Communities" for extended loan terms. While many of ACWA's members would undoubtedly fall into this category, the bill now provides a limited loan allotment for each district. While attempts to help disadvantaged entities are always valued, it is unclear how the presence of several separate 'disadvantaged communities' inside many of California's large, demographically mixed water districts could meet this test without competing with one another for a single districts' loan allotment. The disadvantaged community designation could also distort the use of funds meant for district operation and maintenance under language on page 9 of the introduced version.

REGIONAL PARTNERSHIPS

California's water districts have met with considerable success in the development of regional partnerships. These arrangements consist of two or more drinking water providers pooling resources together so that expertise and equipment can be shared, or so that strengths in one agency can be used to offset limitations in another. Across the country, water districts have begun to stratify into two groups of water systems, the small (<10,000) and the large (>100,000). Because regional partnerships are used by many of the small districts that S. 1961 seeks to assist, ACWA believes the bill should enable small districts to more easily access the financial, technical, and managerial resources available through regional partnerships. Regional partnerships could be made eligible to apply for grants and loans, and could take the form of water supply agreements, operating agreements, construction contracts, joint powers authorities or other approved arrangements.

WATER REUSE

Every day, water managers in California and the west are confronted with a unique set of resource constraints not found in other parts of the country. Naturally arid climates where water is scarce, along with a much greater incidence of endangered species (California leads the nation with over 260 designations), bring constant uncertainty to water deliveries. For that reason, every effort must be made to reclaim and reuse all available water supplies. ACWA supports the funding for these programs found in S. 1961 as progressive and needed investment for chronically water-short communities of the western United States.

Finally, it is unclear how language in Section 403 of the bill would influence Federal water management. This section calls for "an assessment of the state of water resources in the United States," and requires that this report "be used by Federal agencies as a guide in making decisions on the allocation of water research funding." While more information is always better than less when making water management decisions, it may be useful to clarify whether the assessment will create priority lists or influence the disbursement of Federal funding.

Thank you for the opportunity to provide comments to the committee. ACWA stands ready to provide any information or assistance in the furtherance of water infrastructure investment and the enactment of improvements to S. 1961.

II

107TH CONGRESS
2D SESSION

S. 1961

To improve the financial and environmental sustainability of the water programs of the United States.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 15, 2002

Mr. GRAHAM (for himself, Mr. CRAPO, Mr. JEFFORDS, and Mr. SMITH of New Hampshire) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To improve the financial and environmental sustainability of the water programs of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Water Investment Act of 2002".

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

SEC. 2. PURPOSES.

The purposes of this Act are—

(1) to modernize State water pollution control revolving funds and the allocation for those funds to ensure that the funds distributed reflect water quality needs;

(2) to streamline State water pollution control assistance programs and State drinking water treatment assistance programs to maximize use of Federal funds and encourage maximum efficiency for States and localities;

(3) to provide additional structure to the water supply research conducted in the United States; and

(4) to ensure that the Federal Government is performing the appropriate role in analyzing regional and national water supply trends.

TITLE I—FEDERAL WATER POLLUTION CONTROL ACT MODIFICATIONS

SEC. 101. DEFINITIONS.

Section 502 of the Federal Water Pollution Control Act (33 U.S.C. 1362) is amended by adding at the end the following:

"(24) DISADVANTAGED COMMUNITY.—The term 'disadvantaged community' means a community or entity that meets affordability criteria established, after public review and comment, by the State in which the community or entity is located.

"(25) SMALL TREATMENT WORKS.—The term 'small treatment works' means a treatment works (as defined in section 212) serving a population of 10,000 or less.".

SEC. 102. FUNDING FOR INDIAN PROGRAMS.

Section 518 of the Federal Water Pollution Control Act (33 U.S.C. 1377) is amended by striking subsection (c) and inserting the following:

"(c) RESERVATION OF FUNDS.—

"(1) IN GENERAL.—For fiscal year 1987 and each fiscal year thereafter, the Administrator shall reserve, before allotments to the States under section 604(a), not less than 0.5 percent nor more than 1.5 percent of the funds made available under section 207.

"(2) USE OF FUNDS.—Funds reserved under this subsection shall be available only for grants for the development of waste treatment management plans and for the construction of sewage treatment works to serve—

"(A) Indian tribes;

"(B) former Indian reservations in Oklahoma (as determined by the Secretary of the Interior); and

"(C) Native villages (as defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602)).".

SEC. 103. REQUIREMENTS FOR RECEIPT OF FUNDS.

(a) GRANTS TO STATES FOR ESTABLISHMENT OF REVOLVING FUNDS.—Section 601(a) of the Federal Water Pollution Control Act (33 U.S.C. 1381(a)) is amended by striking "for providing assistance (1)" and all that follows and inserting the following: "for providing

assistance for eligible projects in accordance with section 603(c).".

(b) PROJECTS ELIGIBLE FOR ASSISTANCE.—Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended by striking subsection (c) and inserting the following:

"(c) PROJECTS ELIGIBLE FOR ASSISTANCE.—

"(1) IN GENERAL.—Funds available to each State water pollution control revolving fund shall be used only for—

"(A) providing financial assistance to a municipality, intermunicipal, interstate, or State agency, or private utility, for construction (including costs for planning, design, associated preconstruction, and necessary activities for siting the facility and related elements) of treatment works (as defined in section 212);

"(B) implementation of a management program established under section 319;

"(C) development and implementation of a conservation and management plan under section 320;

"(D) water conservation projects or activities that provide 1 or more water quality benefits; or

"(E) reuse, reclamation, or recycling projects that provide 1 or more water quality benefits.

"(2) MAINTENANCE OF FUND.—

"(A) IN GENERAL.—The fund shall be established, maintained, and credited with repayments.

"(B) AVAILABILITY.—Any balances in the fund shall be available in perpetuity for providing financial assistance described in paragraph (1).

"(3) APPROACHES.—Projects eligible to receive assistance from a State water pollution control revolving fund under this title may include projects that use 1 or more nontraditional approaches (such as land conservation, low-impact development technologies, redevelopment of waterfront brownfields, watershed management actions, decentralized wastewater treatment innovations, and other nonpoint best management practices).".

(c) EXTENSION OF LOANS; TYPES OF ASSISTANCE.—Section 603(d) of the Federal Water Pollution Control Act (33 U.S.C. 1383(d)) is amended—

(1) in paragraph (1)—

(A) in subparagraph (A), by striking ", at terms not to exceed 20 years";

(B) by striking subparagraph (B) and inserting the following:

"(B)(i) annual principal and interest payments shall commence not later than 1 year after the date of completion of any project for which the loan was made; and

"(ii) except as provided in subparagraph (C), each loan shall be fully amortized not later than 20 years after the date of completion of the project for which the loan is made;";

(C) by redesignating subparagraphs (C) and (D) as subparagraphs (D) and (E), respectively;

(D) by inserting after subparagraph (B) the following:

"(C) in the case of a disadvantaged community, a State may provide an extended term for a loan if the extended term—

"(i) terminates not later than the date that is 30 years after the date of completion of the project; and

"(ii) does not exceed the expected design life of the project.";

(E) in subparagraph (D) (as redesignated by subparagraph (C)), by inserting ", or, in the case of a privately owned system, demonstrate that adequate security exists," after "revenue"; and

(F) in subparagraph (E) (as redesignated by subparagraph (C)), by inserting "State loan" before "fund";

(2) in paragraph (6), by striking "and" at the end;

(3) by redesignating paragraph (7) as paragraph (10);

(4) by inserting after paragraph (6) the following:

"(7) subject to subsection (e)(2), by a State to provide additional subsidization (including forgiveness of principal) to 1 or more treatment works for use in developing technical, managerial, and financial capacity in accordance with subsection (i);

"(8) by a State to provide additional subsidization (including forgiveness of principal) to 1 or more treatment works for a purpose other than a purpose specified in paragraph (7) or (9), except that—

"(A) for the first fiscal year that begins after the date of enactment of this paragraph

and each fiscal year thereafter, the total amount of subsidization provided by a State under this paragraph shall not exceed 15 percent of the amount of all capitalization grants received by the State for the fiscal year;

"(B) notwithstanding section 204(b)(1), the State, as part of an assistance agreement between the State and each applicable treatment works, shall ensure, to the maximum extent practicable, that additional subsidization provided under this paragraph is directed through the user charge rate system to disadvantaged users within the residential user class of the community (as defined by the State based on affordability criteria and after an opportunity for public review and comment) in which the treatment works is located; and

"(C) a community that receives assistance as a disadvantaged community under paragraph (9) shall not be eligible for assistance under this paragraph;

"(9) subject to subsection (e)(2), by the State to provide additional subsidization (including forgiveness of principal) to a disadvantaged community, or to a community or entity that the State expects

to become a disadvantaged community as the result of a proposed project, that receives a loan from the State under this title; and"; and

(5) in paragraph (10) (as redesignated by paragraph (3)), by striking "that such amounts shall not exceed 4" and inserting "that, beginning in fiscal year 2003, those amounts shall not exceed 5".

(d) LIMITATIONS.—Section 603(e) of the Federal Water Pollution Control Act (33 U.S.C. 1383(e)) is amended—

(1) by striking "(e)" and all that follows through "If a State" and inserting the following:

"(e) LIMITATIONS.—

"(1) PREVENTION OF DOUBLE BENEFITS.—If a State"; and

(2) by adding at the end the following:

"(2) TOTAL AMOUNT OF SUBSIDIES.—For each fiscal year, the total amount of loan subsidies made by a State under paragraphs (7) and (9) of subsection (d) may not exceed 30 percent of the amount of all capitalization grants received by the State for the fiscal year.".

(e) CONSISTENCY WITH PLANNING REQUIREMENTS.—Section 603(f) of the Federal Water Pollution Control Act (33 U.S.C. 1383(f)) is amended—

(1) by striking "A State may" and inserting the following:

"(1) IN GENERAL.—A State may";

(2) by striking "320 of this Act." and inserting "320."; and

(3) by adding at the end the following:

"(2) COMMUNITY DEVELOPMENT.—A State that provides financial assistance from the water pollution control revolving fund of the State shall ensure that applicants for the assistance consult and coordinate with, as appropriate, agencies responsible for developing any—

"(A) local land use plans;

"(B) regional transportation improvement and long-range transportation plans; and

"(C) State, regional, and municipal watershed plans.".

(f) PRIORITY SYSTEM REQUIREMENT.—Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended by striking subsection (g) and inserting the following:

"(g) PRIORITY SYSTEM REQUIREMENT.—

"(1) DEFINITION OF STATE AGENCY.—In this subsection, the term 'State agency' means the agency of a State having jurisdiction over water quality

management (including the establishment of water quality standards).

"(2) DEVELOPMENT.—

"(A) IN GENERAL.—Notwithstanding section 216, each State agency shall develop and periodically update a project priority system for use in prioritizing projects that are eligible to receive funding from the water pollution control revolving fund of the State in accordance with subsection (c).

"(B) REQUIREMENTS.—In developing the project priority system, a State agency shall—

"(i) take into consideration all available water quality data for the State; and

"(ii) provide for public notice and opportunity for comment, including significant public outreach.

"(3) SUMMARY OF PROJECTS.—

"(A) IN GENERAL.—Each State agency, after public notice and opportunity for comment, shall biennially publish a summary of projects in the State that are eligible for assistance under this title.

"(B) INCLUSIONS.—The summary under subparagraph (A) shall include—

"(i) the priority assigned to each project under the priority system of the State developed under paragraph (2); and

"(ii) the funding schedule for each project, to the extent that such information is available.

"(4) STATEMENT OF POLICY.—It is the policy of Congress that projects in a State that are carried out using assistance provided under this title shall be funded, to the maximum extent practicable, through a project priority system of the State that, in the estimation of the State, is designed to achieve optimum water quality management, consistent with the public health and water quality goals and requirements of this Act.".

(g) ADDITIONAL REQUIREMENTS FOR WATER POLLUTION CONTROL REVOLVING FUNDS.—Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended by adding at the end the following:

"(i) TECHNICAL, MANAGERIAL, AND FINANCIAL CAPACITY FOR OPTIMAL PERFORMANCE.—

"(1) DEFINITION OF STATE AGENCY.—In this subsection, the term 'State agency' has the meaning given the term in subsection (g)(1).

"(2) STRATEGY.—

"(A) IN GENERAL.—Not later than 3 years after the date of enactment of this subsection, each State agency shall implement a strategy to assist treatment works in the State receiving assistance under this title in—

"(i) attaining and maintaining technical, managerial, operations, maintenance, and capital investments; and

"(ii) meeting and sustaining compliance with applicable Federal and State laws.

"(B) REQUIREMENTS.—In preparing the strategy described in subparagraph (A), the State shall consider, solicit public comment on, and include in the strategy—

"(i) a description of the institutional, regulatory, financial, tax, or legal factors at the Federal, State, and local levels that encourage or impair the development of technical, managerial, and financial capacity; and

"(ii) a description of the manner in which the State intends to use the authorities and resources of the State to assist treatment works in attaining and main-

taining technical, managerial, and financial capacity.

"(3) DETERMINATION BY ADMINISTRATOR.—Except as provided in subsection (k), if the Administrator determines that a State agency has not developed or implemented a strategy in accordance with paragraph (2), the Administrator shall—

"(A) withhold 20 percent of each capitalization grant made to the State under this title after the date of the determination; and

"(B) permit the State a 1-year period, beginning on the date on which funds are withheld under subparagraph (A), during which the State may implement a strategy in accordance with paragraph (2).

"(4) REALLOTMENT OF FUNDS.—

"(A) IN GENERAL.—If, after the 1-year period described in paragraph (3)(B), the Administrator is not satisfied that a State has carried out adequate corrective action relating to the development and implementation of a strategy required under paragraph (2), the Administrator shall reallot all funds of the State withheld by the Administrator as of that date in accordance with subparagraph (B).

"(B) REQUIREMENTS FOR REALLOTMENT.—The Administrator shall reallot funds under subparagraph (A)—

"(i) only to States that the Administrator determines to be in compliance with this subsection; and

"(ii) in the same ratio provided under the most recent formula for the allotment of funds under this title.

"(5) CONDITION FOR RECEIPT OF ASSISTANCE.—

"(A) IN GENERAL.—Except as provided in subparagraph (B) and subsection (k), beginning on the date that is 3 years after the date of enactment of this subsection, the State shall require each treatment works that receives significant assistance under this title to demonstrate adequate technical, managerial, and financial capacity, including the establishment and implementation by the treatment works of an asset management plan (for which the Administrator may publish information to assist States in determining required content) that—

"(i) conforms to generally accepted industry practices; and

"(ii) includes—

"(I) an inventory of existing assets (including an estimate of the useful life of those assets); and

"(II) an optimal schedule of operations, maintenance, and capital investment required to meet and sustain performance objectives for the treatment works established in accordance with applicable Federal and State laws over the useful life of the treatment works.

"(B) EXCEPTION.—Notwithstanding subparagraph (A), a treatment works may receive assistance under this title if the State determines that the assistance would enable the treatment works to attain adequate technical, managerial, and financial capacity.

"(j) RESTRUCTURING.—Notwithstanding section 204(b)(1), except as provided in subsection (k), a State may provide assistance from the water pollution control revolving fund of the State for a project only if the recipient of the assistance—

"(1) has considered—

"(A) consolidating management functions or ownership with another facility;

"(B) forming public-private partnerships or other cooperative partnerships; and

"(C) using nonstructural alternatives or technologies that may be more environmentally sensitive; and

"(2) has in effect a plan to achieve, within a reasonable period of time, a rate structure that, to the maximum extent practicable—

"(A) reflects the actual cost of service provided by the recipient; and

"(B) addresses capital replacement funds; and

"(3) has in effect, or will have in effect on completion of the project, an asset management plan described in subsection (i)(5).

"(k) EXEMPTION FOR ASSISTANCE SOLELY FOR PLANNING, DESIGN, AND PRECONSTRUCTION ACTIVITIES.—Subsection (j) and paragraphs (3) and (5) of subsection (i) shall not apply to assistance provided under this title that is to be used by a treatment works solely for planning, design, or preconstruction activities.

"(l) TECHNICAL ASSISTANCE.—

"(1) DEFINITION OF QUALIFIED NONPROFIT TECHNICAL ASSISTANCE PROVIDER.—In this subsection, the term 'qualified nonprofit technical assistance provider' means a nonprofit entity that provides technical assistance (such as circuit-rider programs, training, and preliminary engineering evaluations) to small treatment works that—

"(A) serve not more than 3,300 users; and

"(B) are located in a rural area.

"(2) GRANT PROGRAM.—

"(A) IN GENERAL.—The Administrator may make grants to a qualified nonprofit technical assistance provider for use in assisting small treatment works in planning, developing, and obtaining financing for eligible projects described in subsection (c).

"(B) DISTRIBUTION OF GRANTS.—In carrying out this subsection, the Administrator shall ensure, to the maximum extent practicable, that technical assistance provided using funds from a grant under subparagraph (A) is made available in each State.

"(C) CONSULTATION.—As a condition of receiving a grant under this subsection, a qualified nonprofit technical assistance provider shall

consult with each State in which grant funds are to be expended or otherwise made available before the grant funds are expended or made available in the State.

"(3) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this subsection $7,000,000 for each of fiscal years 2003 through 2007.

"(m) COMPETITION REQUIREMENTS.—

"(1) IN GENERAL.—The requirements described in section 204(a)(6) shall apply to each specification for bids for projects receiving assistance under this title.

"(2) SINGLE BIDS.—Nothing in this subsection prohibits a recipient of assistance under this title that receives only 1 bid for a project described in paragraph (1) from accepting the bid and carrying out the project.

"(n) NO JUDICIAL REVIEW.—A determination by a State to provide financial assistance under this title shall not be subject to judicial review.".

(h) ALLOTMENT OF FUNDS.—Section 604(a) of the Federal Water Pollution Control Act (33 U.S.C. 1384(a)) is amended by striking subsection (a) and inserting the following:

"(a) FORMULA.—

"(1) ALLOCATION.—

"(A) IN GENERAL.—Except as provided in paragraph (2) and subject to subsection (b), funds made available to carry out this title for each of fiscal years 2003 through 2006 shall be allocated by the Administrator as follows:

"(i) AMOUNTS OF $1,350,000,000 OR LESS.—$1,350,000,000 (or, if the total amount made available for the fiscal year is less than that amount, the total amount made available) shall be allocated in accordance with a formula that allocates to each State the proportional share of the State needs identified in the most recent survey conducted under section 516(2), except that the minimum proportionate share provided to each State shall be 1.1 percent of available funds.

"(ii) AMOUNTS BETWEEN $1,350,000,000 AND $1,550,000,000.—Amounts greater than $1,350,000,000 but less than $1,550,000,000 made available for the fiscal year shall be allocated by the Administrator in accordance with a formula that

allocates to each State a proportionate share equal to the difference between—

"(I) the amount received under clause (i); and

"(II) the amount that the State would have received under section 205(c);

in cases in which an amount received by the State under clause (i) is less than the amount that would have been received by the State under section 205(c).

"(iii) AMOUNTS GREATER THAN $1,550,000,000.—Any amounts equal to or greater than $1,550,000,000 that are made available for the fiscal year shall be allocated in accordance with a formula that allocates to each State the proportional share of the State needs identified in the most recent survey conducted under section 516(2), except that the minimum proportionate share provided to each State shall be 1.1 percent of available funds.

"(B) SUBSEQUENT FISCAL YEARS.—For fiscal year 2007 and each fiscal year thereafter, funds shall be allocated in accordance with a

formula that allocates to each State the proportional share of the State needs identified in the most recent survey conducted pursuant to section 516(2), except that the minimum proportionate share provided to each State shall be 1 percent of available funds.

"(2) PRIVATE UTILITIES.—If a State elects to include the needs of private utilities in the needs survey used to develop the allocation formula described in paragraph (1), the State shall ensure that the private utilities are eligible to receive funds under this title.".

(i) AUDITS, REPORTS, AND FISCAL CONTROLS; INTENDED USE PLAN.—Section 606 of the Federal Water Pollution Control Act (33 U.S.C. 1386) is amended—

(1) in subsection (c)—

(A) by inserting "(including significant public outreach)" after "review"; and

(B) by striking paragraph (1) and inserting the following:

"(1) a summary of the priority projects developed under section 603(g) for which the State intends to provide assistance from the water pollution control revolving fund of the State for the year covered by the plan;"; and

(2) in subsection (d)—

(A) in the subsection heading, by striking "REPORT" and inserting "REPORTS";

(B) by striking "Beginning the" and inserting the following:

"(1) IN GENERAL.—Beginning in the"; and

(C) by adding at the end the following:

"(2) REPORT ON TECHNICAL, MANAGERIAL, AND FINANCIAL CAPACITY.—Not later than 2 years after the date on which a State first adopts a strategy in accordance with section 603(j)(2), and annually thereafter, the State shall submit to the Administrator a report on the progress made in improving the technical, managerial, and financial capacity of treatment works in the State (including the progress of the State in complying with the amendments to section 603 made by the Water Investment Act of 2002).

"(3) AVAILABILITY.—A State that submits a report under this subsection shall make the report available to the public.".

(j) AUTHORIZATION OF APPROPRIATIONS.—The Federal Water Pollution Control Act is amended by striking section 607 (33 U.S.C. 1387) and inserting the following:

"SEC. 607. AUTHORIZATION OF APPROPRIATIONS.

"(a) IN GENERAL.—There are authorized to be appropriated to carry out this title—

"(1) $3,200,000 for each of fiscal years 2003 and 2004;

"(2) $3,600,000 for fiscal year 2005;

"(3) $4,000,000 for fiscal year 2006; and

"(4) $6,000,000 for fiscal year 2007.

"(b) AVAILABILITY.—Amounts made available under this section shall remain available until expended.

"(c) RESERVATION FOR NEEDS SURVEYS.—Of the amount made available under subsection (a) to carry out this title for a fiscal year, the Administrator may reserve not more than $1,000,000 per year to pay the costs of conducting needs surveys under section 516(2).".

(k) CONFORMING AMENDMENT.—Section 216 of the Federal Water Pollution Control Act (33 U.S.C. 1296) is amended—

(1) in the first sentence, by inserting "in accordance with section 603(g)" before "the determination"; and

(2) by striking the "Not less than 25 per centum" and all that follows.

TITLE II—SAFE DRINKING WATER ACT MODIFICATIONS

SEC. 201. PLANNING, DESIGN, AND PRECONSTRUCTION COSTS.

Section 1452(a)(2) of the Safe Drinking Water Act (42 U.S.C. 300j–12(a)(2)) is amended in the second sentence by striking "(not" and inserting "(including planning, design, and associated preconstruction expenditures but not".

SEC. 202. STATE REVOLVING LOAN FUND.

(a) IN GENERAL.—Section 1452(a)(3)(B)(ii) of the Safe Drinking Water Act (42 U.S.C. 300j–12(a)(3)(B)(ii)) is amended by inserting "and the formation of regional partnerships" after "procedures".

(b) PUBLIC OUTREACH.—Section 1452(b) of the Safe Drinking Water Act (42 U.S.C. 300j–12(b)) is amended in paragraphs (1) and (3)(B) by inserting "(including significant public outreach)" after "comment" each place it appears.

(c) TYPES OF ASSISTANCE.—Section 1452(f) of the Safe Drinking Water Act (42 U.S.C. 300j–12(f)) is amended—

(1) in paragraph (1)—

(A) in subparagraph (C), by striking "and" at the end; and

(B) by adding at the end the following:

"(E) the recipient of the loan funds considers, during the planning and engineering phase of each project for which the loan funds are received—

"(i) consolidating management functions or ownership with another facility;

"(ii) forming public-private partnerships or other cooperative partnerships; and

"(iii) using nonstructural alternatives or technologies that may be more environmentally sensitive;

"(F) the recipient of the loan funds has in effect a plan to achieve, within a reasonable period of time, a rate structure that, to the maximum extent practicable—

"(i) reflects the actual cost of service provided by the recipient; and

"(ii) addresses capital replacement funds; and

"(G) the recipient of each loan that reflects a significant capital investment has in effect, or will have in effect on completion of the project, an asset management plan (for which

the Administrator may publish information to assist States in determining required content) that—

"(i) conforms to generally accepted industry practices; and

"(ii) includes—

"(I) an inventory of existing assets (including an estimate of the useful life of the assets); and

"(II) an optimal schedule of operations, maintenance, and capital investment required to meet and sustain performance objectives;";

(2) in paragraph (4), by striking "and" at the end;

(3) in paragraph (5), by striking the period at the end and inserting "; and"; and

(4) by adding at the end the following:

"(6) to reduce costs incurred by a municipality in issuing bonds.".

(d) CONSULTATION AND COORDINATION WITH STATE AGENCIES; JUDICIAL REVIEW.—Section 1452(g) of the Safe Drinking Water Act (42 U.S.C. 300j–12(g)) is amended by adding at the end the following:

"(5) CONSULTATION AND COORDINATION WITH STATE AGENCIES.—A State that provides financial assistance from the drinking water revolving fund of the State shall ensure that applicants for the assistance consult and coordinate with, as appropriate, agencies responsible for developing any—

"(A) local land use plans;

"(B) regional transportation improvement and long-range transportation plans; and

"(C) State, regional, and municipal watershed plans.

"(6) NO JUDICIAL REVIEW.—A determination by a State to provide financial assistance under this section shall not be subject to judicial review.".

(e) OTHER AUTHORIZED ACTIVITIES.—Section 1452(k)(1) of the Safe Drinking Water Act (42 U.S.C. 300j–12(k)(1)) is amended by striking subparagraph (D) and inserting the following:

"(D) Make expenditures for the development and implementation of source water protection programs.

"(E) Provide assistance for consolidation among community water systems for the purpose of—

"(i) meeting national primary drinking water standards; or

"(ii) making more efficient use of funds made available under subsection (a)(2).".

SEC. 203. ADDITIONAL SUBSIDIZATION.

Section 1452(d)(1) of the Safe Drinking Water Act (42 U.S.C. 300j–12(d)(1)) is amended—

(1) by striking "Notwithstanding any other provision" and inserting the following:

"(A) IN GENERAL.—Notwithstanding any other provision"; and

(2) by adding at the end the following:

"(B) SUBSIDIZATION FOR DISADVANTAGED USERS.—

"(i) IN GENERAL.—Subject to clause (ii), a State may provide additional subsidization under subparagraph (A) for a fiscal year for a community that does not meet the definition of a disadvantaged community if the State, as part of the assistance agreement between the State and the recipient of the assistance, ensures that the additional subsidization provided under this paragraph is directed through

the user charge rate system to disadvantaged users within the residential user class of the community (as defined by the State based on affordability criteria).

"(ii) MAXIMUM AMOUNT.—Assistance provided by a State under clause (i) shall not exceed 15 percent of the amount of the capitalization grant received by the State for the fiscal year.

"(iii) GUIDANCE.—The Administrator may publish guidance to assist States in identifying disadvantaged users described in clause (i).".

SEC. 204. PRIVATE UTILITIES.

Section 1452(h) of the Safe Drinking Water Act (42 U.S.C. 300j–12(h)) is amended—

(1) by striking "The Administrator" and inserting the following:

"(1) IN GENERAL.—The Administrator"; and

(2) by adding at the end the following:

"(2) PRIVATE UTILITIES.—If a State elects to include the needs of private utilities in the needs survey under paragraph (1), the State shall ensure that the private utilities are eligible to receive funds under this title.".

SEC. 205. COMPETITION REQUIREMENTS.

Section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12) is amended by adding at the end the following:

"(s) COMPETITION REQUIREMENTS.—

"(1) IN GENERAL.—Except as provided in paragraph (2), as a condition of receipt of funds under this section, no specification for bids prepared for projects to be carried out using the funds shall be written in such a manner as to contain any proprietary, exclusionary, or discriminatory requirement, other than requirements based on performance, unless such requirements are necessary to test or demonstrate a specific thing or to provide for necessary interchangeability of parts and equipment. If, in the judgment of a recipient of funds, it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a 'brand name or equal' description may be used as a means to define the performance or other salient requirements of a procurement, and in doing so the recipient need not establish the existence of any source other than the brand or source so named.

"(2) SINGLE BIDS.—Nothing in this subsection prohibits a recipient of assistance under this title that receives only 1 bid for a project described in

paragraph (1) from accepting the bid and carrying out the project.".

SEC. 206. TECHNICAL ASSISTANCE FOR SMALL SYSTEMS.

(a) SMALL PUBLIC WATER SYSTEMS TECHNOLOGY ASSISTANCE CENTERS.—Section 1420(f) of the Safe Drinking Water Act (42 U.S.C. 300g–9(f)) is amended—

(1) in paragraph (2), by inserting "technology verification, pilot and field testing of innovative technologies, and" after "shall include"; and

(2) by striking paragraph (6) and inserting the following:

"(6) REVIEW AND EVALUATION.—

"(A) IN GENERAL.—Not less often than every 2 years, the Administrator shall review and evaluate the program carried out under this subsection.

"(B) DISQUALIFICATION.—If, in carrying out this subsection, the Administrator determines that a small public water system technology assistance center is not carrying out the duties of the center, the Administrator—

"(i) shall notify the center of the determination of the Administrator; and

"(ii) not later than 180 days after the date of the notification, may terminate the provision of funds to the center.

"(7) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this subsection $5,000,000 for each of fiscal years 2003 through 2007, to be distributed to the centers in accordance with this subsection.".

(b) ENVIRONMENTAL FINANCE CENTERS.—Section 1420(g) of the Safe Drinking Water Act (42 U.S.C. 300g–9(g)) is amended by striking paragraph (4) and inserting the following:

"(4) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this subsection $1,500,000 for each of fiscal years 2003 through 2007.".

SEC. 207. AUTHORIZATION OF APPROPRIATIONS.

Section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12) is amended by striking subsection (m) and inserting the following:

"(m) AUTHORIZATION OF APPROPRIATIONS.—

"(1) IN GENERAL.—There are authorized to be appropriated to carry out this section—

"(A) $1,500,000 for fiscal year 2003;

"(B) $2,000,000 for each of fiscal years 2004 and 2005;

"(C) $3,500,000 for fiscal year 2006; and

"(D) $6,000,000 for fiscal year 2007.

"(2) AVAILABILITY.—Amounts made available under this subsection shall remain available until expended.

"(3) RESERVATION FOR NEEDS SURVEYS.—Of the amount made available under paragraph (1) to carry out this section for a fiscal year, the Administrator may reserve not more than $1,000,000 per year to pay the costs of conducting needs surveys under subsection (h).".

TITLE III—INNOVATIONS IN FUND AND WATER QUALITY MANAGEMENT

SEC. 301. TRANSFER OF FUNDS.

(a) WATER POLLUTION CONTROL FUND.—Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended by adding at the end the following:

"(i) TRANSFER OF FUNDS.—

"(1) IN GENERAL.—A Governor of the State may—

"(A) reserve up to 33 percent of a capitalization grant made under this title and add the funds reserved to any funds provided to the State under section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12); and

"(B) reserve in any year an amount up to the amount that may be reserved under subparagraph (A) for that year from capitalization grants made under section 1452 of that Act (42 U.S.C. 300j–12) and add the reserved funds to any funds provided to the State under this title.

"(2) STATE MATCH.—Funds reserved under this subsection shall not be considered to be a State contribution for a capitalization grant required under this title or section 1452(b) of the Safe Drinking Water Act (42 U.S.C. 300j–12(b)).".

(b) SAFE DRINKING WATER FUND.—Section 1452(g) of the Safe Drinking Water Act (42 U.S.C. 300j–12(g)) is amended—

(1) in paragraph (2), by striking "4" and inserting "5"; and

(2) by adding at the end the following:

"(5) TRANSFER OF FUNDS.—

"(A) IN GENERAL.—A Governor of the State may—

"(i) reserve up to 33 percent of a capitalization grant made under this section and add the funds reserved to any funds provided to the State under section 601 of the Federal Water Pollution Control Act (33 U.S.C. 1381); and

"(ii) reserve in any year an amount up to the amount that may be reserved under clause (i) for that year from capitalization grants made under section 601 of that Act (33 U.S.C. 1381) and add the reserved funds to any funds provided to the State under this section.

"(B) STATE MATCH.—Funds reserved under this paragraph shall not be considered to be a State match of a capitalization grant required under this section or section 602(b) of the Federal Water Pollution Control Act (33 U.S.C. 1382(b)).".

SEC. 302. DEMONSTRATION PROGRAM FOR WATER QUALITY ENHANCEMENT AND MANAGEMENT.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—As soon as practicable after the date of enactment of this Act, the Administrator of the Environmental Protection Agency (referred to

in this section as the "Administrator") shall establish a nationwide demonstration program to—

(A) promote innovations in technology and alternative approaches to water quality management or water supply; and

(B) reduce costs to municipalities incurred in complying with—

(i) the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.); and

(ii) the Safe Drinking Water Act (42 U.S.C. 300f et seq.).

(2) SCOPE.—The demonstration program shall consist of 10 projects per year, to be carried out in municipalities selected by the Administrator under subsection (b).

(b) SELECTION OF MUNICIPALITIES.—

(1) APPLICATION.—A municipality that seeks to be selected to participate in the demonstration program shall submit to the Administrator a plan that—

(A) is developed in coordination with—

(i) the agency of the State having jurisdiction over water quality or water supply matters; and

(ii) interested stakeholders;

(B) describes water impacts specific to urban and rural areas;

(C) includes a strategy under which the municipality, through participation in the demonstration program, could effectively—

(i) address those problems; and

(ii) achieve the same water quality goals as those goals that—

(I) could be achieved using more traditional methods; or

(II) are mandated under—

(aa) the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.); and

(bb) the Safe Drinking Water Act (42 U.S.C. 300f et seq.); and

(D) includes a schedule for achieving the goals of the municipality.

(2) TYPES OF PROJECTS.—In carrying out the demonstration program, the Administrator may select projects relating to such matters as—

(A) excessive nutrient growth;

(B) urban or rural pressure;

(C) a lack of an alternative water supply;

(D) difficulties in water conservation and efficiency;

(E) a lack of support tools and technologies to rehabilitate and replace water supplies;

(F) a lack of monitoring and data analysis for distribution systems;

(G) nonpoint source water pollution;

(H) sanitary overflows;

(I) combined sewer overflows;

(J) problems with naturally-occurring constituents of concern; or

(K) problems with erosion and excess sediment.

(3) RESPONSIBILITIES OF ADMINISTRATOR.—In selecting municipalities under this subsection, the Administrator shall—

(A) ensure, to the maximum extent practicable—

(i) the inclusion in the demonstration program of a variety of projects with respect to—

(I) geographic distribution;

(II) innovative technologies used for the projects; and

(III) nontraditional approaches (including low-impact development technologies) used for the projects; and

(ii) that each category of project described in paragraph (2) is adequately represented;

(B) give higher priority to projects that—

(i) address multiple problems; and

(ii) are regionally applicable;

(C) ensure, to the maximum extent practicable, that at least 1 small community having a population of 10,000 or less receives a grant each year; and

(D) ensure that, for each fiscal year, no municipality receives more than 25 percent of the total amount of funds made available for the fiscal year to provide grants under this section.

(4) COST SHARING.—

(A) IN GENERAL.—Except as provided in subparagraph (B), the non-Federal share of the cost of a project carried out under this section shall be at least 20 percent.

(B) WAIVER.—The Administrator may reduce or eliminate the non-Federal share of the cost of a project for reasons of affordability.

(c) REPORTS.—

(1) REPORTS FROM MUNICIPALITIES.—A municipality that is selected for participation in the demonstration program shall submit to the Administrator, on the date of completion of a project of the municipality and on each of the dates that is 1, 2, and 3 years after that date, a report that describes the effectiveness of the project.

(2) REPORTS TO CONGRESS.—Not later than 2 years after the date of enactment of this Act, and every 2 years thereafter, the Administrator shall compile, and submit to the Committee on Environment and Public Works of the Senate, and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives, a report that describes the status and results of the demonstration program.

(d) INCORPORATION OF RESULTS AND INFORMATION.—To the maximum extent practicable, the Administrator shall incorporate the results of, and information obtained from, successful projects under this section into programs administered by the Administrator.

(e) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $20,000,000 for each of fiscal years 2003 through 2007.

SEC. 303. RATE STUDY.

(a) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the National Academy of Sciences shall complete a study of the public water system and treatment works rate structures for communities in the United States selected by the Academy in accordance with subsection (c).

(b) REQUIRED ELEMENTS.—

(1) RATES.—The study shall, at a minimum—

(A) determine whether public water system and treatment works rates for communities included in the study adequately address the cost of service, including funds necessary to replace infrastructure;

(B) identify the manner in which the public water system and treatment works rates were determined;

(C) determine the manner in which cost of service is measured;

(D)(i) survey existing practices for establishing public water system and treatment works rates; and

(ii) identify any commonalities in factors and processes used to evaluate rate systems and make related decisions; and

(E) recommend a set of best industry practices for public water systems and treatment works for use in establishing a rate structure that—

(i) adequately addresses the true cost of service; and

(ii) takes into consideration the needs of disadvantaged individuals and communities.

(2) AFFORDABILITY.—The study shall, at a minimum—

(A) identify existing standards for affordability;

(B) determine the manner in which those standards are determined and defined;

(C) determine the manner in which affordability varies with respect to communities of different sizes and in different regions; and

(D) determine the extent to which affordability affects the decision of a community to increase public water system and treatment works rates (including the decision relating to

the percentage by which those rates should be increased).

(3) DISADVANTAGED COMMUNITIES.—The study shall, at a minimum—

(A) survey a cross-section of States representing different sizes, demographics, and geographical regions;

(B) describe, for each State described in subparagraph (A), the definition of "disadvantaged community" used in the State in carrying out projects and activities under the Safe Drinking Water Act (42 U.S.C. 300f et seq.);

(C) review other means of identifying the meaning of the term "disadvantaged", as that term applies to communities;

(D) determine which factors and characteristics are required for a community to be considered "disadvantaged"; and

(E) evaluate the degree to which factors such as a reduction in the tax base over a period of time, a reduction in population, the loss of an industrial base, and the existence of areas of concentrated poverty are taken into account in determining whether a community is a disadvantaged community.

(c) SELECTION OF COMMUNITIES.—The National Academy of Sciences shall select communities, the public water system and treatment works rate structures of which are to be studied under this section, that include a cross section of communities representing various populations, income levels, demographics, and geographical regions.

(d) REPORT TO CONGRESS.—On completion of the study under this section, the National Academy of Sciences shall submit to Congress a report that describes the results of the study.

(e) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $1,000,000 for each of fiscal years 2003 and 2004.

SEC. 304. EFFECTS ON POLICIES AND RIGHTS.

(a) IN GENERAL.—Nothing in this Act—

(1) impairs or otherwise affects in any way, any right or jurisdiction of any State with respect to the water (including boundary water) of the State;

(2) supersedes, abrogates, or otherwise impairs the authority of any State to allocate quantities of water within areas under the jurisdiction of the State; or

(3) supersedes or abrogates any right to any quantity or use of water that has been established by any State.

(b) STATE WATER RIGHTS.—Notwithstanding any other provision of law, with respect to the implementation of this Act and amendments made by this Act—

(1) the management of and control over water in a State shall be subject to and in accordance with the laws of the State in which the water is located;

(2) Congress delegates to each State the authority to regulate water of the State, including the authority to regulate water in interstate commerce (including regulation of usufructuary rights, trade, and transportation); and

(3) the United States, and any agency or officer on behalf of the United States, may exercise management and control over water in a State only in compliance with the laws of the State in which the water is located.

TITLE IV—WATER RESOURCE PLANNING

SEC. 401. FINDINGS.

Congress finds that—

(1) there is ever-growing demand and competition for water from many segments of society, in-

cluding municipal users, agriculture, and critical ecosystems;

(2) population growth in the United States will continue to place increasing pressure on the water supply of the United States;

(3) because sources of water do not follow political boundaries—

(A) the availability of water is increasingly becoming a regional issue; and

(B) it is more difficult to take action—

(i) to monitor the state of water resources;

(ii) to prepare for water shortages or surpluses;

(iii) to prevent the occurrence of water shortages or surpluses; or

(iv) to respond to emergency situations;

(4)(A) water shortages or surpluses can—

(i) impact public health;

(ii) limit economic and agricultural development; and

(iii) damage ecosystems; and

(B) the United States often suffers serious economic and environmental losses from water shortages or surpluses;

(5) there is no national policy to ensure an integrated and coordinated Federal strategy to monitor the state of the water resources of the United States;

(6) periodic assessments of the water resources of the United States are necessary; and

(7)(A) Congress has recognized and deferred to the States the authority to allocate and administer water within the borders of the States;

(B) the courts have confirmed that this is an appropriate role for the States; and

(C) Congress should continue to defer to States on laws and regulations governing the appropriation, distribution, and control or use of water.

SEC. 402. DEFINITION OF SECRETARY.

In this title, the term "Secretary" means the Secretary of the Interior, acting through the Director of the United States Geological Survey.

SEC. 403. ACTIONS.

(a) ASSESSMENT.—

(1) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the Secretary

shall conduct an assessment of the state of water resources in the United States.

(2) COMPONENTS.—The assessment shall, at a minimum—

(A) identify areas in the United States that are at significant risk for water shortages or water surpluses, as those shortages or surpluses pertain to support of human or ecosystem needs, in—

(i) the short term (1 through 10 years);

(ii) the middle term (11 through 20 years); and

(iii) the long term (21 through 50 years); and

(B) identify areas in each category described in subparagraph (A) in which water resource issues cross political boundaries.

(3) REPORT.—On completion of the assessment, the Secretary shall submit to Congress a report that describes the results of the assessment.

(b) WATER RESOURCE RESEARCH PRIORITIES.—

(1) IN GENERAL.—The Secretary shall coordinate a process among Federal agencies (including the Environmental Protection Agency) to develop

and publish, not later than 1 year after the date of enactment of this Act, a list of water resource research priorities that focuses on—

(A) monitoring; and

(B) improving the quality of the information available to State, tribal, and local water resource managers.

(2) USE OF LIST.—The list published under paragraph (1) shall be used by Federal agencies as a guide in making decisions on the allocation of water research funding.

(c) INFORMATION DELIVERY SYSTEM.—

(1) IN GENERAL.—The Secretary shall coordinate a process to develop an effective information delivery system to communicate information described in paragraph (2) to—

(A) decisionmakers at the Federal, regional, State, tribal, and local levels;

(B) the private sector; and

(C) the general public.

(2) TYPES OF INFORMATION.—The information referred to in paragraph (1) may include—

(A) the results of the national water resource assessment;

(B) a summary of the Federal water research priorities developed under subsection (b);

(C) near real-time data and other information on water shortages and surpluses;

(D) planning models for water shortages or surpluses (at various levels, such as State, river basin, and watershed levels);

(E) streamlined procedures for States and localities to interact with and obtain assistance from Federal agencies that perform water resource functions; and

(F) other materials, as determined by the Secretary.

SEC. 404. REPORT TO CONGRESS.

Not later than 2 years after the date of enactment of this Act, and every 2 years thereafter through fiscal year 2007, the Secretary shall submit to Congress a report on the implementation of this title.

SEC. 405. AUTHORIZATION OF APPROPRIATIONS.

There is authorized to be appropriated to the Secretary to carry out this title $3,000,000 for each of fiscal years 2003 through 2007, to remain available until expended.

○

II

107TH CONGRESS
1ST SESSION

S. 252

To amend the Federal Water Pollution Control Act to authorize appropriations for State water pollution control revolving funds, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 6, 2001

Mr. VOINOVICH introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To amend the Federal Water Pollution Control Act to authorize appropriations for State water pollution control revolving funds, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Clean Water Infrastructure Financing Act of 2001".

SEC. 2. GENERAL AUTHORITY FOR CAPITALIZATION GRANTS.

Section 601(a) of the Federal Water Pollution Control Act (33 U.S.C. 1381(a)) is amended by striking "(1)

for construction" and all that follows through the period at the end and inserting "to accomplish the purposes of this Act.".

SEC. 3. CAPITALIZATION GRANTS AGREEMENTS.

(a) REQUIREMENTS FOR CONSTRUCTION OF TREATMENT WORKS.—Section 602(b)(6) of the Federal Water Pollution Control Act (33 U.S.C. 1382(b)(6)) is amended—

(1) by striking "before fiscal year 1995"; and

(2) by striking "201(b)" and all that follows through "218," and inserting "211,".

(b) GUIDANCE FOR SMALL SYSTEMS.—Section 602 of the Federal Water Pollution Control Act (33 U.S.C. 1382) is amended by adding at the end the following:

"(c) GUIDANCE FOR SMALL SYSTEMS.—

"(1) SIMPLIFIED PROCEDURES.—Not later than 1 year after the date of enactment of this subsection, the Administrator shall assist the States in establishing simplified procedures for small systems to obtain assistance under this title.

"(2) PUBLICATION OF MANUAL.—Not later than 1 year after the date of enactment of this subsection, after providing notice and opportunity for public comment, the Administrator shall publish—

"(A) a manual to assist small systems in obtaining assistance under this title; and

"(B) in the Federal Register, notice of the availability of the manual.

"(3) DEFINITION OF SMALL SYSTEM.—In this title, the term 'small system' means a system for which a municipality or intermunicipal, interstate, or State agency seeks assistance under this title and that serves a population of 20,000 or fewer inhabitants.".

SEC. 4. WATER POLLUTION CONTROL REVOLVING FUNDS.

(a) ACTIVITIES ELIGIBLE FOR ASSISTANCE.—Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended by striking subsection (c) and inserting the following:

"(c) ACTIVITIES ELIGIBLE FOR ASSISTANCE.—

"(1) IN GENERAL.—The water pollution control revolving fund of a State shall be used only for providing financial assistance for activities that have, as a principal benefit, the improvement or protection of the water quality of navigable waters to a municipality, intermunicipal, interstate, or State agency, or other person, including activities such as—

"(A) construction of a publicly owned treatment works;

"(B) implementation of lake protection programs and projects under section 314;

"(C) implementation of a nonpoint source management program under section 319;

"(D) implementation of an estuary conservation and management plan under section 320;

"(E) restoration or protection of publicly or privately owned riparian areas, including acquisition of property rights;

"(F) implementation of measures to improve the efficiency of public water use;

"(G) development and implementation of plans by a public recipient to prevent water pollution; and

"(H) acquisition of land necessary to meet any mitigation requirements related to construction of a publicly owned treatment works.

"(2) FUND AMOUNTS.—

"(A) REPAYMENTS.—The water pollution control revolving fund of a State shall be established, maintained, and credited with repayments.

"(B) AVAILABILITY.—The balance in the fund shall be available in perpetuity for pro-

viding financial assistance described in paragraph (1).

"(C) FEES.—Fees charged by a State to recipients of the assistance may be deposited in the fund and may be used only to pay the cost of administering this title.".

(b) EXTENDED REPAYMENT PERIOD FOR FINANCIALLY DISTRESSED COMMUNITIES.—Section 603(d)(1) of the Federal Water Pollution Control Act (33 U.S.C. 1383(d)(1)) is amended—

(1) in subparagraph (A), by inserting after "20 years" the following: "or, in the case of a financially distressed community, the lesser of 40 years or the expected life of the project to be financed with the proceeds of the loan"; and

(2) in subparagraph (B), by striking "not later than 20 years after project completion" and inserting "on the expiration of the term of the loan".

(c) LOAN GUARANTEES.—Section 603(d) of the Federal Water Pollution Control Act (33 U.S.C. 1383(d)) is amended by striking paragraph (5) and inserting the following:

"(5) to provide loan guarantees for—

"(A) similar revolving funds established by municipalities or intermunicipal agencies; and

"(B) developing and implementing innovative technologies;".

(d) ADMINISTRATIVE EXPENSES.—Section 603(d)(7) of the Federal Water Pollution Control Act (33 U.S.C. 1383(d)(7)) is amended by inserting before the period at the end the following: "or the greater of $400,000 per year or an amount equal to ½ percent per year of the current valuation of the fund, plus the amount of any fees collected by the State under subsection (c)(2)(C)".

(e) TECHNICAL AND PLANNING ASSISTANCE FOR SMALL SYSTEMS.—Section 603(d) of the Federal Water Pollution Control Act (33 U.S.C. 1383(d)) is amended—

(1) in paragraph (6), by striking "and" at the end;

(2) in paragraph (7), by striking the period at the end and inserting "; and"; and

(3) by adding at the end the following:

"(8) to provide to small systems technical and planning assistance and assistance in financial management, user fee analysis, budgeting, capital improvement planning, facility operation and maintenance, repair schedules, and other activities to improve wastewater treatment plant operations, except that the amounts used under this paragraph for a fiscal year shall not exceed 2 percent of all grants

provided to the fund for the fiscal year under this title.".

(f) CONSISTENCY WITH PLANNING REQUIREMENTS.—Section 603(f) of the Federal Water Pollution Control Act (33 U.S.C. 1383(f)) is amended by striking "is consistent" and inserting "is not inconsistent".

(g) CONSTRUCTION ASSISTANCE.—Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended by striking subsection (g) and inserting the following:

"(g) CONSTRUCTION ASSISTANCE.—

"(1) PRIORITY LIST REQUIREMENT.—The State may provide financial assistance from the water pollution control revolving fund of the State for a project for construction of a publicly owned treatment works only if the project is on the priority list of the State under section 216, without regard to the rank of the project on the list.

"(2) ELIGIBILITY OF CERTAIN TREATMENT WORKS.—A treatment works shall be treated as a publicly owned treatment works for purposes of subsection (c) if the treatment works, without regard to ownership, would be considered a publicly owned treatment works and is principally treating municipal waste water or domestic sewage.".

(h) PRINCIPAL SUBSIDIZATION.—Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended by adding at the end the following:

"(i) PRINCIPAL SUBSIDIZATION.—

"(1) IN GENERAL.—Subject to paragraph (2), in a case in which a State makes a loan under subsection (d)(1) to a financially distressed community, the State may provide additional subsidization to the loan recipient (including forgiveness of principal).

"(2) LIMITATION.—For each fiscal year, the total amount of loan subsidies made by a State under this subsection shall not exceed 30 percent of the amount of the capitalization grant received by the State for that fiscal year.

"(j) INFORMATION TO ASSIST STATES.—The Administrator may publish information to assist States in establishing the affordability criteria referred to in subsection (l).

"(k) PRIORITY.—In making a loan under this section, a State may give priority to a financially distressed community.

"(l) DEFINITION OF FINANCIALLY DISTRESSED COMMUNITY.—In this section, the term 'financially distressed community' means any community that meets affordability criteria that are—

"(1) established by the State in which the community is located; and

"(2) developed after public review and comment.".

SEC. 5. AUTHORIZATION OF APPROPRIATIONS.

Section 607 of the Federal Water Pollution Control Act (33 U.S.C. 1387) is amended by striking "the following sums:" and all that follows through the period at the end of paragraph (5) and inserting "$3,000,000,000 for each of fiscal years 2002 through 2006.".

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WATER INVESTMENT ACT, S. 1961, AND OTHER WATER INFRASTRUCTURE BILLS

THURSDAY, FEBRUARY 28, 2002

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

The committee met, pursuant to notice, at 9:30 a.m. in room 406, Senate Dirksen Building, Hon. Bob Graham (acting chairman of the subcommittee) presiding.

Present: Senators Graham, Reid, Clinton, Crapo, Chafee, and Jeffords [ex officio].

Also present: Senator Sarbanes.

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

Senator GRAHAM. I will call the hearing to order. We will soon be joined by the ranking member, Senator Crapo.

Last March, this subcommittee began a series of hearings and meetings on the nation's water infrastructure needs. The Subcommittee on Fisheries, Wildlife, and Water continues our commitment to address the water infrastructure concerns of our nation with today's legislative hearing.

The focus of this hearing is going to be on S. 1961, the Water Investment Act of 2002. Witnesses are also asked to provide testimony on a number of related bills currently pending before the subcommittee.

On February 15, I introduced the Water Investment Act with Senator Crapo, Senator Jeffords, and Senator Smith, in an attempt to address the critical challenges facing our nation's wastewater and drinking water infrastructure. These problems include: funding levels, allocation of funds, water supply, project prioritization, and project planning and management.

Specifically, this legislation authorizes $35 billion over 5 years to assure the financial and environmental sustainability of our nation's water programs. In addition, we have revised the allocation formula for Federal money under the State Revolving Fund Programs to reflect a needs-based approach. I think that these two factors are crucial if we are to succeed in maintaining the nation's existing infrastructure and planning for our future needs.

The Water Investment Act also encourages smart planning by assuring that communities look at regional transportation plans, land use plans, and watershed plans. From the perspective of my State of Florida, one of the most improvement provisions of the bill is the

analysis of water supply and drought information. This information will be compiled by the Federal Government and shared with State and local governments, so that we can more adequately prepare for our future water needs. This represents a recognition on the part of the Federal Government that our water supply is becoming an increasingly precious and frequently threatened resource. Sections of our country that had an abundance of water are now looking at restrictions.

This legislation moves us toward suggestions of ways in which the supplies we have can be used more effectively while new supplies are being developed. The Water Investment Act represents the culmination of a year of hearings, meetings, correspondence with national organizations and other governmental entities. The bill responds to the pleas we have heard from those organizations to fund our nation's looming water infrastructure needs.

In closing, I wish to thank my friend and colleague on this subcommittee, Senator Crapo, as well as our chair and ranking members, Senators Jeffords and Smith, and the staff for all the work that they have put into the Water Investment Act. I look forward to hearing from the witnesses about the specific provisions of this legislation, as well as other legislation relating to water infrastructure which has been referred to this subcommittee.

[The prepared statement of Senator Graham follows:]

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

Last March, this subcommittee began a series of hearings and meetings on our nation's water infrastructure needs. The Subcommittee on Fisheries, Wildlife and Water continues our commitment to address water infrastructure concerns with today's legislative hearing.

Although the focus of this hearing is S. 1961, the Water Investment Act of 2002, witnesses are also asked to provide testimony on a number of related bill currently pending before the subcommittee.

On February 15, I introduced the Water Investment Act with Senator Crapo, Senator Jeffords, and Senator Smith in an attempt to address the critical challenges facing our nation's wastewater and drinking water infrastructure. These problems include funding levels, allocation of funds, water supply, project prioritization, and project planning and management. Specifically, the bill authorizes $35 billion over 5 years to ensure the financial and environmental sustainability of our water programs.

In addition, we have revised the allocation formula for Federal money under the SRF programs to reflect a needs-based approach. I think that these two factors are crucial if we are to succeed in maintaining the nation's existing infrastructure and planning for our future needs.

The Water Investment Act also encourages smart planning by ensuring that communities look at regional transportation plans, land use plans, and watershed plans. From the perspective of Florida, one of the most important provisions of the bill is the analysis of water supply and drought information. This information will be compiled by the Federal Government and shared with State and local governments so that we can more adequately prepare for our future water needs. This represents recognition on the part of the Federal Government that our water supply is becoming an increasingly precious resource.

Sections of the country that had an abundance of water are now looking at restrictions. This legislation moves us toward suggestions of ways in which the supplies we have can be used more effectively and new supplies can be developed.

The Water Investment Act represents the culmination of a year of hearings, meetings, and correspondence with national organizations and government entities. The bill responds to the pleas that we have heard from these organizations to fund our nation's looming water infrastructure needs.

In closing, I want to thank Senator Crapo, Senator Jeffords, Senator Smith and their staffs for all of their work on The Water Investment Act I look forward to hearing from the witnesses about the specific provisions in this legislation.

Senator GRAHAM. Senator Crapo, did you have an opening statement?

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

Senator CRAPO. Yes, thank you very much, Mr. Chairman. I had the opportunity to give a full opening statement on Tuesday, so I'll confine myself to just a few remarks right now.

Once again, I want to welcome our witnesses to this hearing. Your review and comments on S. 1961, the Water Investment Act, will be of great use to this subcommittee as we work to perfect and advance this legislative proposal. As you know, S. 1961 is the result of several years of discussions and work by this subcommittee and is in response to the many issues that you and others have raised.

Although the legislation cannot accommodate all of the requests that have been made, I believe it represents an important improvement in our current infrastructure statutes by modernizing State Revolving Fund Programs to ensure assistance is effectively directed to public health and water quality needs, assisting communities in need, and enhancing the capabilities of smaller systems to better serve the public, and ensuring the enhanced Federal investments in State assistance programs are matched by appropriate accountability by those who manage and receive funding. These are strong guiding principles and ones that we should commit ourselves to as S. 1961 moves through the legislative process.

Being the result of a strong collaborative process, S. 1961 recognizes this with an increased Federal investment to assist communities to meet their public health and environmental needs. Simply put, the legislation is possibly the most environmentally significant legislation that we'll handle in Congress this year.

I know I can speak for all of us on the subcommittee that we welcome your thoughts on the bill as witnesses, as well as any constructive improvements that can be made.

Mr. Chairman, I want to thank you for being willing to work with us. There were a lot of issues that we had to resolve. I think we did come together in a good compromise with collaboration that did come forward with a good, strong bill. I appreciate the work that we have been able to do together on this legislation. Thank you very much.

Senator GRAHAM. Senator, I appreciate those gracious words, and I reciprocate in the way in which you and those who have represented you have worked so effectively toward the goal of getting legislation that will be of assistance to the nation in one of its most critical resource areas.

Senator CRAPO. Thank you.

Senator GRAHAM. We've been joined by two other members of the subcommittee, Senator Reid of Nevada and Senator Clinton of New York.

Do you have an opening statement?

OPENING STATEMENT OF HON. HARRY REID, U.S. SENATOR FROM THE STATE OF NEVADA

Senator REID. I do have a brief opening statement, Mr. Chairman. I apologize to my friend from Maryland for having you wait, but I appreciate also the work that you and Senator Crapo have done—and not only the work that you have done, but the timing in drafting this water infrastructure bill. This is so important.

It will not only help us provide clean and safe water across our nation, but it will also be a major catalyst for new jobs. Major infrastructure projects generate good jobs. For every billion dollars we invest, we create approximately 42,000 new jobs. During our debate on the Economic Stimulus Package, I argued that we needed a major new investment in our communities, and that infrastructure funding was the key to stimulating that investment.

After September 11th, Nevada's tourism industry suffered tremendously as tens of thousands of workers lost their jobs. Then, as well as now, we need to stimulate investment that will create jobs. Infrastructure investment is one of the best ways to create jobs in Nevada and the rest of the country. So I'm glad to see this committee picking up where that debate has been on the Senate floor.

I want to mention two ways in which I think we can improve this bill. First, it's critically important that the bill be modified to include comprehensive Davis-Bacon prevailing wage rate protections. There were a lot of things said about these protections during the Tuesday hearing on this water bill. The main argument used by those opposed to such protection was that the market alone should determine wages in our communities. The first response to this argument is Davis-Bacon, named after two Republicans. Prevailing wage protections are set by the Labor Department, which calculates then based on the prevailing wages in that community.

The timely response, however, is that we have recently relearned a very powerful lesson about the market. Enron shows us what happens when we leave the protection of our workers completely in the hands of the market.

The second important issue relates to the needs of our small communities in providing safe, affordable drinking water. There was a lot of heated debate and conflicting views last year about the Bush Administration's response to the arsenic rule, but one area where there seemed to be consensus was that we need to help our smaller communities comply with new drinking water requirements.

While S. 1961 makes several great improvements to the Drinking Water Act Revolving Loan Fund, small communities can't afford to use them. They need more traditional grants to get some of the important work done. In response to that, I introduced the Small Community Drinking Water Funding Act with Senator Ensign to provide grants to help small communities comply with this and other drinking water requirements. Treating small communities differently than large ones makes sense, and this grant component of this legislation should be added to S. 1961.

Why? As some of my colleagues know, the per-household cost of providing water infrastructure improvements in small communities is four times greater than the large communities. Part of the reason for this is that there are just so many small systems across our

nation. In Nevada, for example, upwards of 98 percent of the systems are small, another reason that smaller communities have a much smaller tax base to share in the cost of these expensive improvements.

So, again, I thank you both very much for your leadership. I would hope that when we report this bill next week, we can include the Davis-Bacon prevailing wage protection and also that part of my bill that I talked about earlier.

Senator GRAHAM. Thank you, Senator. Senator Clinton.

OPENING STATEMENT OF HON. HILLARY RODHAM CLINTON, U.S. SENATOR FROM THE STATE OF NEW YORK

Senator CLINTON. Thank you, Mr. Chairman. Mr. Chairman, I want to thank you and the ranking member for the extraordinary work you've done on this legislation. I appreciate your holding this hearing. I apologize, I was not able to be here for the Tuesday hearing, but I know that a number of important points were made at that hearing as well. I want to associate myself with the remarks made then by Senator Voinovich about the need to not just authorize, but appropriate the funding required for our nation's water infrastructure. I would like to associate myself also with the remarks made by the distinguished Senator from Nevada, because I agree with him on both counts with respect to Davis-Bacon and with respect to the difficulty small communities face.

I represent a State that, according to EPA's 1999 Drinking Water Infrastructure Needs Survey, has the highest current and total infrastructure needs when it comes to complying with Federal drinking water regulations. Now some of that is because we've been around a long, long time. Unlike some of the States that developed in the 20th century, we have communities that go back to the 17th century. Unfortunately, we have some water infrastructure that seems like it goes back that far, although it's probably only about a 100-plus years old.

We have the highest clean water infrastructure needs in the country, $16 billion, and that's according, also, to the 1996 EPA Clean Water Needs Survey. If you look at the total drinking water infrastructure, both current and total, we have $10.5 billion and $13.1 billion in needs. So we have a lot to gain and possibly even more to lose with respect to getting this water legislation reauthorized and getting sufficient funds appropriated.

We have seen the results of inadequate infrastructure investment. In the Long Island Sound, for example, we have rather severe water quality problems because we have not had sufficient effective wastewater treatment coming out of New York City into the Long Island Sound. Some of you have learned about that issue and have followed it, and that's only one of many of comparable problems that we currently face in New York.

I think that one way that we can demonstrate the commitment that this committee feels toward this important issue is to recognize that having clean drinking water, having adequate wastewater treatment infrastructure, shouldn't even be debatable. We've always been so fortunate in our country that, historically, we have been able to turn on the tap and drink the water, and when we traveled out of our country and went to other places, one of the

things we often learned was we couldn't do that. We didn't have those kinds of difficulties that other places faced. Although we didn't have the total national infrastructure commitment that we needed, we certainly did better than any place I'm aware of. We're in danger of losing that tremendous investment and the kind of commitment to the health and safety that people should be able to take for granted.

So I want to thank you again, Mr. Chairman, for the work that you've done on a bipartisan basis to ensure that Americans and New Yorkers continue to enjoy the cleanest, safest water in the world, both by providing the necessary authorization and the necessary resources. They have to go hand-in-hand or we're just going to get further and further behind in the effort to try to make sure we make good on the promise of clean water here in our country. Thank you, Mr. Chairman.

Senator GRAHAM. Thank you very much.

Senators, our first witness today is our colleague, Senator Sarbanes, who is here to testify on legislation that he has introduced relative to Chesapeake Bay, one of America's beautiful and most productive water areas.

Senator Sarbanes.

STATEMENT OF HON. PAUL S. SARBANES, U.S. SENATOR FROM THE STATE OF MARYLAND

Senator SARBANES. Well, thank you very much, Mr. Chairman, Senator Crapo, Senator Clinton. I appreciate this opportunity to testify in the context of your consideration of S. 1961, the Water Investment Act, about S. 1044, the Chesapeake Bay Watershed Nutrient Removal Assistance Act, which Senator Mikulski and I, Senators Warner and Allen of Virginia, and Senators Specter and Santorum of Pennsylvania have introduced.

At the outset, I want to commend you and the other members of the committee for focusing this attention on our nation's clean water infrastructure needs. The issue is of vital importance to my State, and, indeed, it's of vital importance to the country, and I very much welcome the attention you have brought to it and the indication of a very prompt schedule for acting.

Despite improvements over the past two decades, Maryland—and, indeed, the entire Chesapeake Bay region—still face very significant water quality problems and needs. In December 2001, a Task Force on Upgrading Sewage Systems, commissioned by Governor Glendening of Maryland, completed an assessment of the cost to implement needed sewerage requirements, to address combined sewer overflows, sanitary sewer overflows, and other upgrades of wastewater treatment plants throughout Maryland, and identified $4.3 billion of capital needs.

Maryland's most recent allotment under the Clean Water Act State Revolving Loan Fund was $32.5 million—$4.3 billion just in this survey, let alone other concerns—as opposed to $32.5 million, and even when combined with State and local funds, the Task Force report estimates a gap of $80 to $140 million a year in needed sewerage infrastructure spending.

Clearly, continuing and enhancing the State Revolving Loan Fund is a vital part of the assistance which is required, and I commend the committee's efforts in that regard.

Before I turn to the Bay bill specifically, let me just say a word about S. 1961 and the formula in there under Needs Survey to Determine State Apportionment. I would hope the subcommittee could consider a couple of what I regard as complicating factors.

One is the Needs Survey was designed for traditional sewer needs. It doesn't account very well for restoration and reconstruction, which is, of course, particularly a problem in older States and older systems; and stormwater and non-point source control needs, which are difficult to quantify. Moreover, it may end up—and I think we need to look at this—penalizing States which have worked aggressively to upgrade sewage treatment facilities by utilizing State funds and overmatching Federal Revolving Loan Funds. In other words, if we have worked very hard to do a good job in the past and met some of our needs, so we reduce the need level, and other States have done nothing, then we revise the formula. I think we have to take that into consideration, to make some adjustment or accommodation to extra effort which may have taken place. So I hope some of these broader water quality measures can be factored in as the committee works toward addressing the formula under which the State Revolving Loan Fund will be determined.

Now in the Chesapeake Bay watershed, we face a special challenge of finding ways to further reduce the level of nitrogen and phosphorous in wastewater effluent. Nutrient over-enrichment from both point and non-point sources remains the most serious pollution problem facing the Chesapeake Bay. In 1987, the Governors of Maryland, Virginia, Pennsylvania, the Chesapeake Bay Commission, the Mayor of the District of Columbia, and the Administrator of the EPA, acting on behalf of the Federal Government, signed a Chesapeake Bay Agreement which set a goal of a 40 percent reduction of nitrogen and phosphorous loads to the main stem of the Bay by the year 2000. That was the most ambitious voluntary commitment for restoring water quality projected in any region of the country.

During that 13-year period, tremendous efforts and investments were made by all the jurisdictions in upgrading sewage treatment plants as well as implementing best management practices on agricultural lands to meet that goal. I want to commend the farmers in those States for their response to this initiative in terms of cooperating on the best management practices approach.

Two years ago, the States and the Federal Government conducted an extensive evaluation of cleanup progress since the 1980's and determined, unfortunately, that we have fallen considerably short of the 40 percent reduction goal. Estimates, through the use of computer models, indicated that although nitrogen loads delivered to the Bay and all its tributaries declined by nearly 53 million pounds a year and phosphorous loads declined nearly 7 million pounds a year, that we were still well short, 21 million pounds on nitrogen loads and 3 million pounds on phosphorous, from the 2000 goal.

In 2000, a new Chesapeake Bay Agreement was signed, reaffirming the 40 percent nutrient reduction goal agreed to in 1987 and committing the signatories to go well beyond that to correct all nutrient-related problems by the year 2010. But we need Federal funds in significant amounts for the wastewater treatment plant upgrades that are required.

Recent modeling of the EPA's Bay Program found that total nutrient pollution must be further reduced by more than 45 percent from current levels to restore the Bay and its tributaries to health. Municipal wastewater treatment plants, in particular, can be a major source of those needed reductions.

Now, as you can see from this map, there are approximately 300 major wastewater treatment plants in the Chesapeake Bay Watershed. Now, Mr. Chairman and members of the committee, maybe you can't see it by this map because those red dots are kind of small, but on that map everywhere you see sort of a name and a red dot, that's a wastewater treatment plant, major plant. They contribute about 60 million pounds of nitrogen per year. They discharge typically 18 milligrams per liter of nitrogen in their effluent. Some 71 of them have been upgraded with some form of nutrient removal technology to reduce nitrogen concentrations to about 8 milligrams per liter. We can upgrade them under the state-of-the-art technology where we get them down to where they produce 3 milligrams per liter. That, obviously, would make an enormous impact on this nitrogen removal problem.

The legislation which Senators Mikulski, Warner, Allen, Specter, Santorum, and I have sponsored would establish a grants program to encourage States and municipalities in the six-State Bay Watershed to go the extra mile and install nutrient-reduction technologies at major wastewater treatment facilities. Our legislation would provide grants for 55 percent of the capital cost of upgrading the plants. We estimate the total cost would be about $1.2 billion. So the Federal share would be slightly over half of that; the rest of it would have to be provided at the State and local level.

This effort would be the most reliable, the most immediate, and the most cost-effective way to reduce nutrient loads on the Chesapeake Bay. Mr. Chairman, I think it's pretty obvious that if we're going to achieve our long-run objectives, we need Federal assistance in upgrading these sewage treatment plants, reducing the nutrient loads. The States can't do it alone, particularly given the interstate nature of the pollution problem facing the Chesapeake Bay.

We regard the Bay as a unique national resource. It's the largest and most productive estuary in the country, has a watershed encompassing 64,000 square miles and parts of six States and the District of Columbia. Its unique ecological features combine with its tremendous economic and cultural importance to make it a resource that deserves national protection. I'm reminded of the Florida Everglades as I think of unique resources that require national commitment and a national protection effort.

I very much hope that the committee can see its way clear to approve this measure and include it in the legislation it's considering reporting to the floor of the Senate.

Thank you very much, Mr. Chairman, for the opportunity to appear before you today on this important issue.

Senator GRAHAM. Thank you very much. Senator, you are not only unusually persuasive, but your selection of analogies helped to explain the significance of your proposal.

[Laughter.]

Senator GRAHAM. Let me just ask a couple of factual questions. What is the share of the nutrient discharge into the Chesapeake that comes from point source such as wastewater treatment plants or industrial or other facilities, and how much comes from nonpoint runoff from agriculture and other such sites?

Senator SARBANES. I am not sure I have those exact figures in front of me. The point source is the easiest, obviously, to get it, because it can be identified, and that's why we're focusing on these wastewater treatment plants which are, of course, spread throughout the Bay.

We also do have a very aggressive program to try to address nonpoint source pollution, but that's more difficult. That's harder to quantify, and it's harder to get at. It requires, of course, the cooperation of literally thousands and thousands of people. But I'll try to get the exact figures for you and submit it. Well, I'm told that point sources, including industrial and sewage treatment, make up 25 to 30 percent of the total nutrient load coming into the Bay from all sources, but we focus on that because it's the most easily located and identified, and the quickest to get at, and we have a very good technology for bringing about these very significant improvements.

As I said, we're now at the 18 milligrams per liter. We reduced that by upgrading the technology to 8, and we now have state-of-the-art technology where, if we take the facilities up to that level, we can reduce it to 3 milligrams per liter, which is obviously a huge improvement over where most of these plants now find themselves.

Senator GRAHAM. Senator Crapo.

Senator CRAPO. Thank you, Mr. Chairman. I don't have any further questions. I appreciate Senator Sarbanes bringing this important issue to our attention.

Senator GRAHAM. Thank you very much, Senator. We will look forward to working with you as we proceed with S. 1961.

Senator SARBANES. Yes, we would certainly place ourselves at the call of the committee. We're very anxious to work with you both on S. 1961 and the inclusion of this as well. Thank you very much.

Senator GRAHAM. Our second panel consists of Mr. Robert Hirsch, Associate Director of Water, U.S. Geological Survey. Mr. Hirsch, thank you very much.

STATEMENT OF ROBERT HIRSCH, ASSOCIATE DIRECTOR OF WATER, U.S. GEOLOGICAL SURVEY

Mr. HIRSCH. Thank you, Mr. Chairman. Mr. Chairman and members of the subcommittee, thank you for the opportunity to testify today on S. 1961, the Water Investment Act of 2002. As you know, the mission of the U.S. Geological Survey is to provide scientific information to support decisionmaking on issues of resources, environmental quality, and natural hazards. Information about water

has been a central part of our Agency's mission throughout our 123-year history. My remarks will be limited to Title IV of the bill, which relates to USGS. EPA has provided the administration's views on the remainder of the bill.

We agree that the role defined in Title IV of the bill is an appropriate one for the USGS, but we would welcome an opportunity to work with the committee on the bill language to refine the assigned tasks for the USGS. Let me begin my remarks by providing some general context.

Competition for water to meet the needs of families, communities, farmers, and industries in many parts of the country is increasing, as are requirements to leave water in the streams to meet environmental and recreational needs. Information on water resources is needed to help inform decisions about potential changes in water policies and investments.

In this regard, the USGS received a directive from Congress as part of the report on our Fiscal Year 2002 appropriations to prepare a report describing the scope and magnitude of efforts needed to provide periodic assessments of the status and trends in the availability and use of fresh water resources. Our efforts over the past 6 months in preparing that report have provided us with insights that may be useful to this subcommittee as it considers this legislation.

In preparing our report to Congress, the USGS has solicited input from many individuals and organizations involved in issues of water availability and use. In response to our request, we received nearly 100 responses from the water management and policy communities. Two messages stood out.

First, there was a consensus that a better set of water facts is needed for informed decisions related to water availability and use. National organizations, in particular, noted the need for consistent indicators of water availability across the nation. However, individuals representing State and local governments reminded us that many States have conducted extensive planning to quantify water availability and that the availability and use of water is largely a State, local, or tribal issue.

Our report to the House Appropriations Committee is in the final stages of review at the present time. Based on the comments we received from others, we believe that the critical need is for regular reporting of indicators of the status and trends of storage volumes, flow rates, and uses of water nationwide. This information is not available in an up-to-date, nationally comprehensive and integrated form at the present time.

An assessment such as called for in this bill would need to rely on up-to-date, nationally consistent indicators that would reflect the status in surface water flows and storage, groundwater levels and storage, and water use. Currently, the USGS provides a number of assessment-type streamflow products on daily, weekly, and monthly time scales. Under a new program such as called for in this bill, the USGS would also produce indicators that describe streamflow at longer time scales.

Long-term, systematic measurements of groundwater level provide essential data needed to evaluate changes in groundwater storage over time. However, at the present time, no Agency pre-

pares a regular report of long-term changes in groundwater storage in our nation's aquifers.

Tracking water use is an important part of understanding water availability. The USGS has compiled and disseminated estimates of water use for the nation at 5-year intervals since 1950. The National Research Council recently reviewed the USGS program for water use information and will be making a number of recommendations for improvement in the program. This NRC report will be released within the next few months. We would encourage the committee to seek their input on this important component of the water resource equation. Valid and consistent water use data are as vital as river flow or groundwater data and are often more difficult to acquire.

In summary, if this bill were enacted and funds appropriated, the USGS would develop and report on indicators of the status and trends of storage volumes, flow rates, and uses of water nationwide. The development and reporting of national indicators of water availability and use would be analogous to the task of other Federal statistical programs that produce and regularly update indicator variables that describe economic, demographic, or health conditions of the nation.

In regard to Section 403(b) on water resource research priorities, we would note that we are currently contracting with the National Research Council, at the direction of Congress, to conduct a study of the priorities for, and best means of, organizing water research across the Federal Government. We would suggest that this National Research Council effort may provide very valuable inputs to help carry out the objectives of this section.

In regard to Section 403(c) on information delivery systems, the objectives defined here are very much in concert with the existing charge to the USGS under OMB Memorandum 92–01 on coordination of water resources information. This section would reinforce our ongoing role of coordination of water information across the Federal Government.

We do have some concerns about the feasibility and appropriateness of some of the tasks defined in the bill. For example, the bill directs the USGS to identify areas of the United States that are at risk for water shortages or surpluses. However, long-range predictions of water supplies cannot be determined solely by physical science, but are heavily dependent on human decisions to invest in infrastructure, restrict use, change water laws, et cetera, which are largely State decisions.

The USGS can make a significant contribution to these issues by regularly providing indicators of the changing status of the nation's water resources derived from long-term monitoring. However, defining areas of shortage and surplus over long timeframes is neither feasible nor is it appropriate for a Federal scientific Agency.

We would welcome an opportunity to work with the committee on the language of Title IV to assure that it defines a task that is appropriate and useful. I welcome any questions you may have.

Thank you, Mr. Chairman.

Senator GRAHAM. Good. Mr. Hirsch, thank you for your testimony, and particularly your several indications that the USGS will work with the committee as we try to construct in Title IV an ap-

propriate capacity to get the best scientific information as to the current status and the future direction of water supply, recognizing that there is a considerable time gap between the recognition that you have a problem and your ability to take actions that will begin to affect that problem. We accept your generous offer and look forward to doing so.

Frankly, I was one, with Senator Crapo, who had urged that Title IV be heavily oriented toward the U.S. Geological Survey because both of us have had experience with the USGS and recognize its professionalism and the degree of credibility which many of the stakeholders in this area invest in the USGS.

We also come out of a strong background of State water rights and recognize the special role of the States in the management of their water, are not by any means in this title suggesting that the Federal Government is going to become authoritarian and take over water supplies, but rather use its special scientific knowledge, particularly as invested in the U.S. Geological Survey, to be of assistance to the States.

With having said that, you raise some concern about projecting future water needs, and all of the factors, many of which are nonscientific there, they are demographic or public policy judgments. But do you think, can USGS give to the States such as mine, which is one of those that used to think of itself as having an abundance of water and has only recently started to recognize its restraints, the scientific basis upon which then better public policy decisions, and including land use and others that affect demographic distribution, can be made?

Mr. HIRSCH. Thank you for those comments and question. I think we can and do make significant contributions, and I would point particularly to something called our Cooperative Water Program, in which we cooperate with over 1,400 State and local agencies nationwide, and that program is extraordinarily and productive in the State of Florida, in which we provide a great deal of information of that kind.

I think what this particular legislation would do is add another dimension to what we do, particularly as things move beyond the boundaries of a State into multi-State issues, so that we have consistent look at, for example, large river basins that cross State lines, aquifer systems that cross State lines, which is somewhat difficult for us to deal with simply through the mechanism of our cooperative program, which is cooperative just with individual State governments or localities. So I think this program would add a dimension to our ability to answer those kinds of questions.

Senator GRAHAM. Senator Crapo.

Senator CRAPO. Thank you very much, and, Mr. Chairman, I appreciate you highlighting our concern about State sovereignty over water. Mr. Hirsch, I also appreciate the fact that you also mentioned it in your testimony.

One of the very important considerations that we undertook as we prepared this section of the legislation was to do everything we could to assure that it was clear that we are not in this section of the legislation seeking to in any way undermine State sovereignty over the allocation, management, and use of water.

The question I have for you is, viewing Title IV, the entire section under which you would be involved, do you see any way in which the authorities that we establish here and the studies that we establish here could undermine State sovereignty of water?

Mr. HIRSCH. Let me give an example. I was particularly struck in the reading of it by the use of the word "surplus." Hypothetically, if we were to issue a report sometime in the future that says a particular State has a surplus of water, and that State were to enter into negotiations with an adjoining State or even international, I think that would have perhaps an undesirable effect on those negotiations.

I know of no jurisdiction that probably thinks that it has a surplus of water. On the other hand, a declaration from us that there is a shortage of water, when State officials feel, based on their information and their policy decisions, that it is appropriate to allocate additional water, we would set ourselves in a position of really contradicting those State authorities, who I think should be the ones to say, from a legal sense, is there a shortage or is there is a surplus, and how should we deal with it?

So the other aspect of it is that a community could be in severe State of shortage at a particular moment in time, but a decision to invest in certain infrastructure, such as additional dams, pipelines, wells, et cetera, could remedy that shortage very rapidly. So that statement is very much subject to those investment decisions that it chooses to make.

Senator CRAPO. So is this one of those areas of the language in the legislation that you felt you——

Mr. HIRSCH. Right.

Senator CRAPO.—could work with us on the committee to further refine——

Mr. HIRSCH. Right.

Senator CRAPO.—so that we make it clear that we achieve the objectives of the legislation but don't create any possible undermining of State sovereignty?

Mr. HIRSCH. Exactly. I think our attempt would be to make objective statements of, for example, in areas where there are major aquifers that are being mined, where the water is being depleted over the long-term to simply quantify the extent of that mining of groundwater just as one would define the mining of coal or the extraction of oil, and to put a number on that, but as opposed to projecting it or calling it a shortage or a surplus.

Senator CRAPO. Leave it to the policymakers to call it a surplus or a shortage?

Mr. HIRSCH. Exactly.

Senator CRAPO. You define what it is, quantifiably?

Mr. HIRSCH. That's right.

Senator CRAPO. Well, thank you very much. I appreciate that.

Senator GRAHAM. Thank you very much, sir.

The members of panel three would please come forward. I will introduce you by name and affiliation: Mr. Andrew Chapman, who is testifying on behalf of the National Association of Water Companies; Mr. Ed Archuleta, testifying on behalf of the Association of Metropolitan Water Agencies; Mr. Paul Pinault, testifying on behalf of the American Metropolitan Sewerage Association; Mr.

Elmer Ronnebaum, testifying on behalf of the National Rural Water Association, and Mr. Howard Neukrug, testifying on behalf of the American Water Works Association.

I wish, on behalf of the subcommittee, to express our appreciation to each of you for your joining us this afternoon. We look forward to hearing your remarks. I will ask you to make your remarks in the order in which you were introduced. Mr. Chapman.

STATEMENT OF ANDREW M. CHAPMAN, PRESIDENT, ELIZABETHTOWN WATER COMPANY, ON BEHALF OF THE NATIONAL ASSOCIATION OF WATER COMPANIES

Mr. CHAPMAN. Good afternoon, Mr. Chairman and Senator Crapo. My name is Andrew Chapman. I'm president of the Elizabethtown Water Company, which serves a million people in central New Jersey, and I am also vice president of the National Association of Water Companies, which is a nonprofit trade association representing the investor-owned drinking water utilities.

Mr. Chairman, NAWC commends you and the subcommittee for taking on this issue and introducing S. 1961, the Water Investment Act of 2002. We're particularly encouraged with your bipartisan approach to this legislation, and this practice has characterized your committee's and the Congress' work on drinking water for many years, and we certainly hope that that bipartisan approach continues.

We are not here to complain or suggest substantial changes to S. 1961. In fact, NAWC, along with our colleagues in the H_2O Coalition, support S. 1961 in its current form. We do so for the following reasons:

First, the bill requires, as a condition for getting State Revolving Fund assistance, that a potential recipient consider consolidating ownership and management functions with other utilities. There are over 50,000 community water systems in the United States, and many of these systems are very small. In many cases the financial challenges facing these utilities can be addressed by achieving economies of scale through consolidation, and by tying consideration of consolidation with SRF assistance. S. 1961 will encourage localities to look for these economies of scale. To do so, they are, of course, putting aside their own parochial interests, but they're doing what's right for the customer in providing safe, adequate, and proper service at minimum cost.

Second, the bill encourages utilities to use public/private partnerships. Municipalities all over the country, large and small, have realized substantial savings and success through these partnership arrangements. Cost savings that localities have realized over the years from such arrangements can run up to 40 percent. I can tell you from personal experience with my company, that these approaches can work, and your inclusion of this provision in the bill and tying that to SRF funding makes a lot of sense.

Third, the bill will also keep the industry moving on the path toward self-sustainability from the standpoint of financial operations because you need rational, cost-based rate structures to cover the full cost of providing services, and also supporting good asset management policies.

Fourth, the authors of the bill have wisely gone outside the box to an innovative program designed to assist disadvantaged consumers, instead of an entire utility operation and in circumstances where only some of the utility's customers are disadvantaged. Programs like this have been used in the gas and electric utilities with substantial success, and they enable Federal financial support to be targeted exactly toward those consumers who need that support, rather than to the overall utility.

Finally, as you can imagine, NAWC, which represents the private water industry, is particularly happy to see that all utilities are being treated equitably under S. 1961 regardless of ownership. The bill makes private utilities eligible for the first time for assistance under the Clean Water Act SRF, which is good. This is a long delayed and much-needed innovation for the program that will place all systems in the wastewater field also on a level playing field with respect to access to the SRF.

We are also very supportive of the provisions in S. 1961 that will bring fairness to the State SRF allocation process. The bill's provisions require States that include private utilities in their needs survey to ensure that private utilities are actually eligible for assistance.

We're glad that S. 1961 does not authorize a large grant program, which some have been advocating. We think that these grant programs can encourage inefficient application of capital within the industry and can impede the industry's progress toward being a financially self-sustaining industry, which it needs to be going forward.

Also, by requiring asset management and full cost-of-service rates, S. 1961 requires utility managers who chose to take the SRF financing to take the steps necessary to assure self-sustainability of these utilities over the long-term. Without provisions like these, history has shown that water utilities will keep coming back to the government for additional subsidies at cost to the taxpayer, and with good ratemaking procedures, this is unnecessary.

Senator GRAHAM. Could you conclude your statement in 25 seconds?

Mr. CHAPMAN. There are two other issues that I would like to raise.

First of all, the industry strongly believes that the caps on private activity bonds for water and wastewater facilities should be removed. This simple change will make capital easier for both private and public sector water and wastewater investments, and would be a step in the right direction.

Finally, we're encouraging the committee to include language in S. 1961 to make compliance with drinking water standards a defense in lawsuits. This would address a problem the entire water industry is facing. Failure to address this issue will undermine the entire standard-setting process, which is a terrific bipartisan achievement of Congress, the executive branch, the States, and the industry.

Mr. Chairman, Senator Crapo, thank you for the opportunity to speak, and I'm happy to take any questions.

Senator GRAHAM. Thank you very much, Mr. Chapman. We'll withhold questions until all the members of the panel have had an opportunity to present their opening statement.

Mr. Archuleta.

STATEMENT OF ED ARCHULETA, GENERAL MANAGER, EL PASO WATER UTILITIES, ON BEHALF OF THE ASSOCIATION OF METROPOLITAN WATER AGENCIES

Mr. ARCHULETA. Yes, good afternoon, Mr. Chairman and Senator Crapo. My name is Ed Archuleta, and I'm the general manager of El Paso Water Utilities. I'm testifying today on behalf of the Association of Metropolitan Water Agencies, AMWA, which represents the nation's largest publicly owned drinking water systems.

We want to thank you for introducing Senate bill 1961, which is the first legislation to increase the Federal investment in drinking water infrastructure since the 1996 amendments to the Safe Drinking Water Act. Our association believes the bill takes a major step in the right direction by proposing to triple the authorization of the Drinking Water State Revolving Fund.

Senate bill 1961 reinforces the drinking water SRF support of small water systems, but AMWA would like the subcommittee to consider how legislation could help metropolitan water systems, too. Earlier this afternoon Senator Clinton mentioned New York and its tremendous infrastructure issues, and these are indicative of major needs that we have in large systems across this country.

These are the systems that serve our nation's largest communities. To get a sense of the needs facing these very large systems, consider this: According to a recent survey, just 32 metropolitan systems reported that they must spend $27 billion over the next 5 years on drinking water and wastewater infrastructure. Nationwide the needs of metropolitan water systems are much higher. Yet, 31 States provided no assistance to metropolitan water agencies in Fiscal Year 2001.

To help these cities, AMWA recommends a 15 percent set-aside for metropolitan drinking water agencies to make certain that States address their needs. Among the new requirements established by this bill are implementation of responsible rate structures and asset management plans, coordination with State planning agencies, and consideration of partnerships and non-structural alternatives. These practices embody those commonly used in metropolitan water agencies today.

For example, in my city we have a number of public/public and public/private partnerships. I'm currently doing planning with Mexico, with WTAS in Mexico under our own initiative. So these are already in place in regional metropolitan areas.

In our particular city, over the next 10 years we will have to spend $800 million in capital. We just raised rates by 9 percent, effective March 1, and we anticipate a 60 percent increase over the next 10 years. In our particular city, we have major water supply issues that we face in the future as a desert community. We face a new arsenic standard we must comply with, and, of course, rehabilitation and replacement, as well as growth of our city.

In our city we also have an asset management plan, which major cities have, to ensure capital is available for future upgrades. Like

most large water systems, the authority complies with the general accounting standards for State and local governments known as GASB-34.

So AMWA encourages the subcommittee to maintain these best practices as ideals and provide the opportunity for utilities that have not yet adopted them to do so. But these areas are not in the realm of State environmental agencies or the U.S. EPA, both of which would have to develop rules or guidance and criteria for enforcement and compliance. AMWA urges the subcommittee to avoid a situation in which the States or U.S. EPA enter the domain of local government and attempt to reinvent the wheel.

Also among the requirements of Senate bill 1961 is, one, to require water systems to consider public/private partnerships, but whether a water agency specifically considers public/private partnerships should remain at the discretion of local government, because local factors will dictate whether the partnership is in the interest of the consumers or not.

Also, privatization experts have identified some of the issues that need further exploration. Among them are those surrounding accountability and the blurring of roles and responsibilities. For example, who is responsible for complying with environmental regulations, resolving service complaints, and planning to meet future needs? Who pays if the private partner fails? If the private partner takes on more liability than it can afford, who's responsible when something goes wrong?

Another issue that has recently emerged is a concern about the implications of international agreements on domestic privatization, since four of the major companies involved in the United States water market are located in other countries. Therefore, the association urges the subcommittee to look into public/private partnerships more closely before so strongly endorsing them. Privatization can be a very contentious issue in communities and worth a full exploration before Congress legislates it.

In summary, we thank you for introducing the Water Investment Act of 2002, and our association is willing and able to work with you on any appropriate language changes, as we have suggested. Thank you.

Senator GRAHAM. Thank you very much, sir.

Mr. Paul Pinault.

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

Mr. PINAULT. Good afternoon, Chairman Graham, Senator Crapo, Senator Chafee. My name is Paul Pinault. I'm executive director of the Narragansett Bay Commission in Providence, RI, and I also serve as vice president of the Association of Metropolitan Sewerage Agencies, AMSA.

Thank you for introducing the Water Investment Act and for holding this hearing today. AMSA commends you for moving toward a strong financial commitment that would significantly increase the authorization levels of the SRFs to $35 billion over 5 years. AMSA is grateful for your recognition that our nation's clean and safe water is a priority worth paying for. We urge an increase

in the proposed funding level to help meet the documented gap between local financing and long-term needs, several of which were discussed this afternoon by your colleagues.

The magnitude of the challenges we face are daunting. The continued viability of our nation's core water and wastewater infrastructure requires long-term Federal funding, including grants. Without this commitment, we will face an environmental and public health crisis that is simply unthinkable.

Municipalities today shoulder nearly 90 percent of infrastructure costs and face costly regulatory requirements, including combined sewer and sanitary sewer overflow rules. The tragedies of September 11th have also increased our operating costs, as many facilities face expensive vulnerability assessments and security upgrades.

Our local ratepayers simply cannot fund all these requirements and also modernize and repair their plants and collection systems without a long-term Federal commitment. For example, my Commission's current debt service as a percentage of total operating budget is 22 percent. By 2007, debt service will jump to 48 percent, due to $365 million in planned capital projects over the next 5 years, a total of $746 million over the next 10 years, including startup costs on a federally mandated combined sewer overflow project.

The fact that 48 cents out of every dollar we receive will go to debt service clarifies the urgent need for a long-term Federal infrastructure commitment. Accordingly, we respectfully recommend the following modifications to S. 1961, beginning with streamlining SRF funding procedures:

As written, the bill assigns new Federal and State roles in reviewing local wastewater rate structures, public/private partnership efforts, and asset management programs, and makes many of these prerequisites to SRF loans. Municipalities already consider all of these issues regularly and carefully. Adding layers of oversight will narrow the pool of SRF applicants, the precise opposite of S. 1961's stated purpose.

We also recommend that the committee consider modifying the bill to encourage and assist communities in developing asset management programs, instead of making asset management a prerequisite to apply for an SRF loan, which will only discourage applicants. In fact, the market is already directing us toward this goal, and AMSA is leading the way.

For example, AMSA recently released this Asset Management Workbook, and starting today we're running a series of workshops around the country to educate our members on asset management tools and the growing demand for asset management. AMSA shares the committee's concern for our disadvantaged communities and populations. States and municipalities are, however, addressing many of these concerns under existing programs. We are worried that the bill's allowance of up to 45 percent of all SRF funds to be directed to disadvantaged communities and asset management programs will direct funds away from core infrastructure funding. As such, we recommend States be given broader flexibility to target grants, principal forgiveness, and negative interest rates on loans where they are most needed. Similarly, we recommend

that the bill allow all communities to take advantage of the 30-year or life-of-the-project loan repayment schedule.

AMSA would also like the committee to revisit the provision requiring a National Academy of Sciences rate study. Much of the data is already available and AMSA's financial survey demonstrates this. We can make copies available to you and your staff.

AMSA believes authorization of a program for innovative technologies and research is vitally important. We would like to see funding levels for the program increased and eligibility expanded to help municipalities meet core infrastructure and regulatory challenges.

We applaud your leadership efforts and look forward to working with you on S. 1961 to ensure a lasting, long-term fiscal partnership with the Federal Government to meet the nation's core water and wastewater infrastructure needs. Again, we're available to answer your questions.

Senator GRAHAM. Thank you very much, sir.

Mr. Ronnebaum.

STATEMENT OF ELMER RONNEBAUM, GENERAL MANAGER, KANSAS RURAL WATER ASSOCIATION, ON BEHALF OF THE NATIONAL RURAL WATER ASSOCIATION

Mr. RONNEBAUM. Mr. Chairman, Senator Crapo, Senator Chafee, good afternoon.

Thank you for the opportunity to be here today to discuss small communities and their water funding needs. My name is Elmer Ronnebaum. I'm general manager for Kansas Rural Water. We're a member of the National Rural Water Association in Kansas. We have approximately 900 public water supply systems, 700 of which are members of Kansas Rural Water. National Rural Water represents some 22,000 small water and community water and wastewater utilities.

We thank you for your efforts to assist small communities in finding solutions to the Clean Water Act and Safe Drinking Water Act, and to provide the safest drinking water and cleanest effluent possible. Rural Water looks forward to working with you as you move these ideas into laws and actual dollars in the field.

I feel the principal dynamics of small communities that we believe need to be recognized in discussing funding policies include: first, that small communities make up 90 percent of the systems in the country; second, that a lack of economics due to scale, small town consumers often pay high water rates. In Kansas it's not uncommon to have a water bill of $50 for 5,000 gallons. Many of these communities do not have other funds on which to pay that water bill. It's simply a revenue base.

Small systems often have limited technical and administrative resources to deal with compliance and navigate through funding programs. Consolidation and privatization are options, yes, but only when economies make sense. We can't run a pipeline 42 miles to connect Atwood to Stockton, KS.

In 1996, another Senator from Idaho had a great idea, and he introduced a great amount of flexibility into this program called the State Revolving Loan Fund. Small communities' message here today is that that was a monumental step in the right direction.

This flexibility has made State SRFs better and more responsive to nearly every stakeholder. Small systems have seen a level of inclusion and involvement and the benefits for drinking water that we would not have imagined, given the history of the Clean Water Act SRF.

My State of Kansas is exemplary. The State Drinking Water Revolving Loan Fund is the highest leveraged in the United States. It leverages $1 to $4. We've made $133.4 million in loans to 65 communities. Fifty-two of those communities were populations of less than 10,000. Of the dollar amount, that is $65 million. So that's a big percentage to small systems.

We would like to summarize the key elements for small and rural communities in modifying the wastewater and drinking water SRFs as follows:

Make the Wastewater Fund more like the Drinking Water Fund and put more money in both.

We urge you to include three legislative provisions contained in the current drinking water SRF in both water and wastewater to ensure communities with the greatest public health and economic need receive prioritization: No. 1, that communities exhibiting the greatest need should receive priority, No. 2, provide both loans and grants, and No. 3, a minimum portion of the funds should be set aside for small systems.

Our specific comments on Senate bill 1961 include: First, we appreciate that the bill did not include a myriad of new priorities for funding set-asides for various sized systems and changes in the disadvantaged communities' determination.

Second, we appreciate that the bill retains the three SDWA provisions to ensure funding results in the greatest advancements in public health and protection. We urge the committee to include the same set-aside amounts for the wastewater as in the drinking water program, a minimum of 15 percent.

We believe that corporate water systems should not be eligible for State revolving funding. Taxpayer subsidies should be prohibited from profit-generating companies or companies paying profits to shareholders and investors.

The bill includes many new requirements for applicants, including environmental, land use planning, capacity, actual cost of water, common industry practices. We urge you to exercise caution for increasing demands on these, as more and more complicated application processes will detract the small systems from participating in the program.

We urge the committee to limit the ability of any portion of the water system or wastewater system to be eligible as a disadvantaged-type subsidy or other special treatment. To assist a portion of a system moves the effort from an infrastructure program into a social program.

We urge the committee to consider including provisions guiding a percent of the project for professional services' use for engineering and consulting, similar to what USDA has in its programs.

Last, it's not clear what defines public/private partnerships. This may be too ambiguous, and it means various things to various people.

Thank you, Mr. Chairman and members of the committee. We would be happy to take questions later.

Senator GRAHAM. Thank you very much, sir.

Mr. Neukrug.

STATEMENT OF HOWARD NEUKRUG, DIRECTOR, OFFICE OF WATERSHEDS, PHILADELPHIA WATER DEPARTMENT, ON BEHALF OF THE AMERICAN WATER WORKS ASSOCIATION

Mr. NEUKRUG. Well, good afternoon, Mr. Chairman and Senator Crapo.

I am Howard Neukrug. I'm the director of the Office of Watersheds with the city of Philadelphia Water Department. I am speaking today on behalf of the American Water Works Association, where I serve as chair of the Water Utility Council. AWWA has 57,000 members, 4,700 utility members. We represent not just small and not just large, but both small and large utilities, and not just municipal or private, but both municipal and private utilities serving drinking water throughout the United States.

I'm honored by this opportunity to express to you the views of the American Water Works Association concerning this important legislation. This bill marks a significant step by Congress toward solving our nation's enormous water infrastructure challenges. We appreciate the time and consideration already given to the drinking water suppliers by the committee and its staff. We look forward to continuing our work with you and to see this bill passed and signed into law this year.

As you know, the drinking water community faces many new and expensive Federal mandates, including standards for arsenic, radon, disinfection byproducts, and enhanced surface water treatment. Wastewater utilities also face enormous challenges related to CSOs and SSO programs. Over the next 20 years it is clear that the Safe Drinking Water Act and the Clean Water Act mandates, combined with other infrastructure requirements and new security-related upgrades, will compete for limited capital resources.

We must respectfully note that this bill's authorization levels are a very small fraction of the $250 billion in infrastructure replacement needs identified by AWWA in this publication, which is available to committee and staff, and the $57 billion recommended by WIN over 5 years. Under this bill, the burden of paying for public water system improvements will remain overwhelmingly with the utilities and their ratepaying customers.

Further, significant assistance in the form of both grants and higher levels of authorization for loans is, indeed, justified to help meet the costs of these Federal mandates. Without the support, we risk deferment of infrastructure repair where Federal mandates overwhelm local capital programs.

Concerning project eligibility, we applaud the provisions of the bill that authorize the use of SRF moneys to support source water protection projects. As you know, source water assessments are required under the 1996 Safe Drinking Water Act amendments, but there are no requirements to implement source water protection. The ability to use SRF funds to support source water initiatives will be of significant assistance.

With respect to distribution system infrastructure repairs and security upgrades, AWWA respectfully suggests that these be explicitly listed in the statute as SRF-eligible. Specific congressional language would not only signal your strong support for SRF funding for infrastructure repairs and security upgrades, but will help clarify any remaining ambiguity.

With respect to streamlining procedures for obtaining drinking water SRF loans, we believe careful attention is required to strike an appropriate balance between Congress' desire to encourage certain behaviors at utilities and the need to keep the SRF as unencumbered as possible by unproductive red tape. We believe that Section 202 requires significant review with this in mind.

In particular, while we strongly support the concepts of asset management best practices, self-sustaining rate structures, procurement competition, and optimizing management strategies, these are most appropriately local decisions based on local circumstances. Federal oversight of these management tools does not, in our opinion, either improve nor streamline the drinking water SRF program.

Finally, we respectfully recommend that the American Water Works Association Research Foundation be identified in the bill to manage many of the studies and demonstration projects listed under Sections 302, 303, and 304. The Foundation is an internationally recognized research organization of the drinking water community. With over $37 million in Federal support over recent years, the AWWARF has leveraged almost $260 million in total research on both technical and policy issues facing drinking water utilities.

In conclusion, AWWA believes that S. 1961 is an appropriate first step to achieving our joint goals. In our testimony we have made recommendations that we believe will improve the bill. AWWA pledges to work with Congress to develop a responsible and fair solution to the nation's growing drinking water infrastructure challenge. I thank you for your consideration of our views. Thank you.

Senator GRAHAM. Thank you very much. To each of you, we would be very appreciative, if you have any specific recommendations beyond what is in your prepared statement for modifications of the legislation. As was indicated earlier, we are going to be moving on, I hope, a fast track on this legislation with the possibility of having a mark-up hearing on this bill within the next 2 to 3 weeks, and then move it to the floor. So your comments would be timely and very much appreciated.

Mr. Pinault, you made a comment—we've been jointed by our chairman, Senator Jeffords, who is typically generous enough to say that we should proceed with our questions.

You made a statement that we should preserve the 30-year loan repayment schedule. My State had a State Revolving Fund before the national program was initiated, and our thesis was that the principal problem that local water facilities had was in the preoperational phase; that is, in the period in which they were doing land acquisition, planning, design, and construction, and there was no revenue coming in. That was a hard phase to finance;

that once the plant was completed and operational and generating revenue, you could then go to other sources of financing for that.

So I have been influenced by that experience to say that the SRF ought to be primarily focused not on permanent financing, but rather on that difficult-to-finance, early stage of plant design, planning, and construction. One of the benefits of focus is that that means the money turns over more rapidly, and is, therefore, available to more communities that want to use the State Revolving Fund.

Have you experienced some difficulty in getting revenue-based financing for the plant once it is in operation and is an ongoing economic entity?

Mr. PINAULT. That hasn't been an issue in New England. In the Providence metropolitan area, which we serve, it's basically been sewered since the 1800's, and development is not an issue as much as it is in your area of the country.

The problem we have faced, though, is, because we have $746 million in projects in various stages of planning, design, and construction, we have been warned by the rating agencies, Standard and Poor's and Moody's, that they are concerned about the impact on rates. We had a 25 percent rate increase last January. In December of this year we applied for another 25 percent rate increase, and we will be doing that annually just to pay for the $300 million first phase of our CSO project over the next 5 years.

So one of the things we've looked at is we can only borrow up to 20 years. We always try to pay back the loan as quickly as possible because, obviously, the longer you spread it out, the more it costs you. But there may be a situation in time where, because the facilities we're putting in the ground are going to last at least 50 years, at least the pipelines, we feel that there is a justification to at least have the provisions to pay back up to 30 years, which we feel gives some flexibility which could be added to this bill.

Right now the 30-year provision is limited to disadvantaged communities only. Whether or not you're a disadvantaged community is left up to the definition by each State. It could vary from State to State. So we feel that this is a flexibility tool. Whether or not it is used will be determined on a case-by-case basis, and that's our position on that matter.

Senator GRAHAM. Are there any other comments on the question of whether the State Revolving Funds should be focused on the initial period pre-revenue-generating or should be available as permanent financing?

Mr. NEUKRUG. Yes, we fully support the eligibility for the SRF funding to be for pre-revenue-producing times of the project.

Senator GRAHAM. Any others? Yes, Mr. Chapman?

Mr. CHAPMAN. I wouldn't want the availability of the program for permanent financing to be reduced. With an investor-owned utility where you have a State commission setting the rates, the typical practice is that the lower cost of capital provided through the Revolving Fund Program is passed through to the customers when the utility goes in and files for rates.

So, to the extent that we don't have permanent financing through the program anymore, but only construction financing, and then you would shift to market-based permanent financing, the

rates would kick up at that time; the customer rates would kick up to cover that higher cost of capital.

We have used the program in our company in several circumstances where it is providing a good long-term source of capital under a 20-year repayment scheme, and that's been very successful for us, and our customers are enjoying the benefit of that lower cost of capital.

Senator GRAHAM. The concern is, however, if you have your money tied up in long-term permanent financing, then does that not make it more difficult for other communities within the State to be able to access the State Revolving Loan Fund for their initial pre-revenue construction phases?

Mr. CHAPMAN. Our experience has been, as long as that permanent financing either is in place or reasonably can be in place, the availability of construction period financing or financing prior to the in-service date has not been a problem.

Senator GRAHAM. My 5 minutes are up.

Senator Crapo.

Senator CRAPO. Thank you very much. In fact, Senator Graham, you have covered the issue I was going to cover. I just would like to specifically direct this question to Mr. Ronnebaum.

That is, as Senator Graham has indicated, S. 1961 provides eligibility for standalone projects to do design, planning, and engineering, and to be covered in the loan process. I just wanted to get for the record your feelings about whether that is a positive development in the utilization of these funds.

Mr. RONNEBAUM. Rural Water would support that, Senator. In Kansas, any work in design and planning presently can be covered by an SRF loan once it's approved. However, that doesn't sometimes kick in the local community to work on the regional concept; that otherwise may not be ever brought to the table. So if you have that incentive possibly out there to allow those types of grants, there would be more communities participating.

Senator CRAPO. Thank you. I have no further questions, Mr. Chairman.

Senator JEFFORDS. I have just one question for you. What do you think is the appropriate Federal responsibility for water infrastructure, and how does that affect the future of the SRF program? All the hands leaping into the air there.

[Laughter.]

Senator JEFFORDS. Go right ahead, Mr. Ronnebaum.

Mr. RONNEBAUM. Senator, with all due respect, most of the communities—you hear a lot about self-sufficiency. If they didn't have increasing Federal mandates to comply with, they could be self-sufficient. It's the Federal mandates and the decreasing standards that cost more and more money.

In the city of Atwood, KS, when it has a 12-part-per-billion arsenic standard, it's going to cost that community of 1,300 people from $1.3 to $2 million additional money to change that standard possibly by a total of two. So that is what is adding to the cost of infrastructure improvements.

Mr. ARCHULETA. Yes, representing AMWA, our largest cities, I think it's a combination of, in the West, for example, as well as in other parts of the country, growth is a big issue. In most commu-

nities development is not paying entirely for growth of the system, particularly for large water plants, wastewater plants, and large infrastructure. Typically, there's fees or other revenues associated with some parts of the infrastructure, including subdivisions, and what have you.

So it's a growth issue. You do have the regulations, which are a big impact, particularly on drinking water, to us as large systems. Then, of course, the rehabilitation. But the answer is I think there has to be a reasonable program of at least low interest loans.

In our particular city, we've used commercial paper. I think most large cities do not necessarily have to have the access to the engineering and pre-construction moneys, like small cities, because we can access that. It's when you get into construction, and we've had to go longer, too. We're having to go longer-term, more than 20 years, like we used to, because of the fact that, otherwise, you upload all your fees and cause big rate impacts on customers.

Senator JEFFORDS. Mr. Chapman.

Mr. CHAPMAN. Senator, this SRF program really works. It's been incredibly effective in my State, in New Jersey. I was actually the treasurer of the State organization that was established to do the State side of the funding. Many of our municipalities and privately owned/investor-owned water companies have participated in this program, and it's been a huge success.

Senate bill 1961 is an appropriate next step in the evolution of a really successful program. There is certainly an ongoing Federal role for providing low-cost capital to those communities that need it, but there is also language in this bill which is appropriate in that it pushes the water utility industry further toward financial self-sustainability. I think that ultimately gets us to the point where you have water provided on a cost-of-service basis in the communities where it can be provided on that basis, where you do not have the industry coming in year after year or decade after decade trying to get substantial amounts of Federal money. I think that is an appropriate direction for the industry to take. I applaud the provisions of this bill that continue to move the industry in that direction.

Mr. NEUKRUG. Senator, in the State of Pennsylvania, we find that the State Evolving Fund Program is also a very successful program and we are very pleased to see this bill put in place. If there is a complaint that we had with it, probably the biggest one is the appropriations, the level of appropriations, compared to the amount of Federal mandates, particularly in the CSO programs and on the drinking water side with the new regulations coming down, a significant amount of additional cost coming in.

We look forward to continuing a partnership with the Federal Government funding the SRF program and seeing it continue for many years.

Mr. PINAULT. I noted earlier, Mr. Chairman, that in the State of Rhode Island we have the largest wastewater authority. We are under a consent agreement to spend at least $600 million to solve combined sewer overflow problems. Right now we're the largest borrower from the SRF program. We receive over 50 percent of the loans.

But even with that help, rates are going up at an average of 25 percent a year, and they will go up by about 120 percent in the next 5 years, just because of the CSO project. So any assistance that we can get from the government would help.

In addition, we just awarded a contract last week for $60 million for nutrient removal for our smaller treatment plant. So it's ongoing Federal requirements, meeting TMDLs, SSO, CSO; it never ends. We're trying to do the best we can, but it's very difficult, especially in our community we have 22 percent below the poverty level, 16 percent are elderly, 65 percent of the poor children in the State live in our district, and a lot of people have trouble paying their bills right now.

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

Senator GRAHAM. Thank you, Mr. Chairman.

One of the objectives of this legislation, which authorizes an additional $35 billion for the State Revolving Fund, is that this be the last authorization for the State Revolving Fund. The theory has been that there would be a block of Federal funds allocated among the States, and the States would manage that in a manner that, as one loan is paid off, then that would release funds which could be used for future loans.

In fact, the original structure of the program called for the last Federal payment under the State Revolving Fund for the Clean Water Act to be in 1995. Do you believe that the $35 billion that we are appropriating here, in conjunction with the previous appropriations for this purpose, will, in fact, be such that no further Federal funds after this 5-year authorization period is expended will be required?

Mr. Pinault.

Mr. PINAULT. Again, Senator Clinton mentioned the needs in her State, billions of dollars, similarly in the State of Rhode Island, billions of dollars, with current requirements. As we all know, requirements continue to increase. If things were fixed and we could make a judgment today, we may be able to say that the funds that you are proposing may be adequate. However, the gap is significant. We're talking about a trillion dollars here and there, looking at the various studies. Obviously, this is a step in the right direction. Will it be sufficient funding? I think only time will tell.

Senator GRAHAM. Clearly, this is not going to be sufficient to finance all of the future water needs, even in conjunction with the significant previous Federal appropriation for this purpose, but can it be managed, along with those previous appropriations, in such a way as to fulfill this difficult-to-finance, early phase of pre-revenue activity?

Mr. NEUKRUG. Senator, I don't think it's appropriate to think at this point that we have sufficient funding and sufficient partnership in the Federal Government to consider that this $35 billion is really going to do the trick in bringing our infrastructure issues to a completion. We really need to look at this more on a long-term basis. This is the infrastructure; we're talking not just 5 years out; we're talking 20, 100 years out. We're putting things into the ground today that we will have to replace 100 years from now. I think that the program of the SRF concept is to buildup a bank

sufficient to provide that money, but I don't know if we are there yet with the suggested authorizations that are in this bill.

Mr. RONNEBAUM. Mr. Chairman, the other gentleman, panelist, mentioned the increasing regulations, and that is really what's driving a lot of the infrastructure needs. As another thing just to think about, when the Rural Development Agency, Farmers' Home Administration's Agency, sold its assets back in 1988, we had interest rates of 10.5 and 11 percent. Just think of what we would be looking at today out on the street if you had to issue a bond, a revenue bond, and you had to pay 7.5 percent versus 5.25 percent, for example, in Kansas. I mean, the interest rate is a big component of that water rate. We are enjoying presently very low interest rates, historically low interest rates. So we're in the best of all times in that regard.

Senator GRAHAM. Mr. Chapman.

Mr. CHAPMAN. The $35 billion, obviously, is a small number relative to what everybody's estimates of the long-term needs are, but what you're doing in this bill by requiring consideration of asset management planning, privatization, consolidation to take into account or get the benefits of the economies of scale, and establishing/moving the industry more toward cost-based ratemaking, you're encouraging the industry to become self-funded. So these provisions by themselves over time require utilities to start funding their own depreciation, and so forth, reinvesting in these assets, which should minimize the requests of this industry of the Federal taxpayer in the future.

So I can't give you a quantified answer, but I can definitely say that the qualitative provisions of this bill will mitigate future requests, which I think is totally appropriate Federal policy.

Senator GRAHAM. Again, gentlemen, thank you very much for your contribution. If you have any additional thoughts that you would like to submit for the record, the record will be open for 2 days for that. I would particularly appreciate any specific suggested language changes in the legislation itself. Thank you. Best wishes.

Would the participants on panel four please come forward?

Mr. Tom Morrissey is the president of the Association of State and Interstate Water Pollution Control Administrations and is the director of the Connecticut Division of Planning and Standards. Mr. Morrissey, thank you very much.

Mr. Jay Rutherford is from Vermont, and Senator Jeffords will introduce Mr. Rutherford.

Senator JEFFORDS. I am very pleased to do so. Nice to have you here.

I am very pleased today to welcome a representative of the Green Mountain State, Mr. Jay Rutherford. Jay is testifying on behalf of the Association of State Drinking Water Administrators. Jay has had a long career of environmental service not only in Vermont, but around the world. A graduate of the University of Vermont with a degree in civil engineering, Jay has his skills to the test, building small public water systems for villages in the Northeastern. In 1980, he took a position as environmental engineer with the Vermont Department of Environmental Conservation, DEC, and he has remained there ever since. Jay has held the position of

director of Water Supply and ASDWA member twice, with a brief stint in between with the DEC as director of enforcement.

Jay, it is a pleasure to have you with us.

Do you want a second introduction or do you want him to go right ahead?

Senator GRAHAM. If you don't mind, Mr. Morrissey, we have been asking our panelists to speak in the order in which they were introduced, which has basically been alphabetical. So following that precedent, Mr. Morrissey.

STATEMENT OF TOM MORRISSEY, PRESIDENT, ASSOCIATION OF STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATIONS, AND DIRECTOR, CONNECTICUT DIVISION OF PLANNING AND STANDARDS

Mr. MORRISSEY. Thank you, Chairman Graham. Thank you, Chairman Jeffords and Senator Crapo. We appreciate very much and thank you for inviting us here to testify before your committee today and to provide you input on Senate bill 1961.

As you may not know, the Association of State and Interstate Water Pollution Control Administrators is an organization representing water pollution control administrators from all 50 States and many territories within the U.S. domain. As you may not know, by way of background, ASIWPCA was very much involved in the transition which occurred in 1987, when we went from a Title II grants program to really the SRF program as we know it today.

That evolution has created a very effective program for financing wastewater infrastructure facilities. The Clean Water SRF has become one of the most, if not the most, successful public works programs in history, which is attributable to its careful design as a streamlined State-based program.

Senate and House authors intended to address a vast array of State water quality program priorities under the States' Clean Water Fund Program, and I believe they achieved that objective when they passed that law.

Having just passed the 15th anniversary of the last Clean Water Act reauthorization, we now have had sufficient time to build and document the track record of our SRF successes. We know, for example, that projects built are built under the SRF program in half the time than those constructed under the Federal Grants Program, the old Title II program. We know that the Clean Water SRF has saved taxpayers hundreds of millions of dollars, and we know that with each Federal dollar spent, there is almost an equal contribution at the State level to the same program.

Mr. Chairman, States are committed to the Clean Water State Revolving Loan Fund because it has met and exceeded the expectations set by its creators and its customers, including the provision of funding to address State water pollution control priorities, including the development of a funding mechanism that would revolve and provide in perpetuity funding sources and support for those programs, and the establishment of the States as the program lead to manage and operate the fund, providing close and consistent assistance to its recipients, the loan recipients.

ASIWPCA believes that in reauthorizing the Clean Water SRF program, it is vitally important to increase the funding for the program, to assure that the SRF remains competitive in the financial marketplace, to maintain a streamlined program which is accepted by its customers, principally municipalities and private entities, and to enable States to direct the fundings with priority water quality needs, which brings me to the Water Investment Act of 2002.

The association takes great pride in the fact that the Clean Water SRF program continues to enjoy strong support of both the administration, the Congress, and this committee. We appreciate the committee's effort to propose and develop S. 1961 and to hold hearings to address issues associated with it.

Mr. Chairman, as we have discussed with you in prior meetings, the association appreciates your leadership in developing the Year of Clean Water legislation to commemorate the 30th anniversary of the Clean Water Act. We can think of no better way to celebrate the 30th anniversary of the Clean Water Act than reauthorizing the SRF, which is the engine which drives clean water fund programs throughout the United States.

The goals of S. 1961 are laudable and the bill, if enacted, could advance the program with increasing funding levels and authorization levels, extended eligibilities for what funding can be dedicated to, extended loan repayment periods, particularly for distressed communities, loan subsidies for distressed communities and for hardship situations, and fund transfers between the clean water and drinking water SRF, which would promote flexibility within the States.

These enhancements will, for example, better enable States to address small communities' onsite systems non-point source pollution, urban stormwater, and combined sewer overflow pollution problems. We do have several concerns with the bill, and we're very anxious to work with you and your staffs to address those concerns.

One of those concerns involves loan conditions. The loan conditions include land use planning at the planning stages, evaluating the cost of services, capital replacement, rate structures, restructuring, and private partnership enhancements, and capacity development for loan recipients.

In many cases States already have programs in place to address those needs. For instance, in Connecticut we provide a 55 percent grant from State funding to do the planning work upfront to plan and design facilities. We believe that to improve the bill you may want to consider State equivalency tests, so that if States have these programs in place already, there's not a need to overlay it with another Federal requirement.

Another area of concern where we know we have problems now is in the area of administrative fees. In the proposed legislation there are certain administrative requirements that will consume resources at the State level. We want to provide assistance and technical capabilities to the people who receive our loans, and we do now, but in order to enhance that program, States would probably have to allocate a greater amount of administrative fees charged to the program, both at the State and the Federal level, so that we can enhance those services.

But, again, in general, we very much support the bill. We look forward to working with you and your staffs to improve it, and we would be very happy to provide you with detailed comments and suggestions on the draft legislation as it exists today. Thank you very much.

Senator GRAHAM. Thank you, Mr. Morrissey.

Mr. Rutherford.

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

Mr. RUTHERFORD. Mr. Chairman, Mr. Chairman Jeffords, and Senator Crapo, good afternoon and thank you, Chairman Jeffords, for the introduction.

I am Jay Rutherford, director of Vermont's Drinking Water Program, and I'm here today speaking to you on behalf of the Association of State Drinking Water Administrators, which represents the 50 States, territories, and the District of Columbia in helping to ensure the provision of safe water to all Americans.

We'll continue our comments today to the provision in S. 1961 that affect the Safe Drinking Water Act. We thank you for the opportunity to address this bill, and we very much appreciate the committee's interest in ensuring that this much-needed and successful program will continue to receive funding, and that drinking water SRF funding will be enhanced substantially to a total of $14.5 billion through Fiscal Year 2007.

We also strongly support the purposes of this bill to streamline the drinking water SRF, to maximize use of Federal funds, and to encourage efficiency. The several of the provisions will assist in this area, such as extending the transferability of funds between the drinking water and clean water SRFs, authorizing fund use for source water protection activities, calling for increased accountability for the 10 Technology Assistance Centers, and the information generated by the proposed NAS rate study and USGS assessments.

We're concerned, however, that some provisions of the bill may, in fact, hinder, rather than help, meet the designated purposes of the bill. Our written testimony details our concerns, so I'll only touch on three examples.

Under Title II, the legislation proposes to strengthen activities relating to the use of the SRF for source water protection, consolidation initiatives, assistance for small and disadvantaged communities, and coordination with other planning programs. These activities would be authorized under SDWA Section 1452(g), which currently requires a dollar-for-dollar or 100 percent State match in order to access these funds.

Many States cannot take full advantage of these funds now, and certainly may not be able to access them for these additional activities. We suggest that the bill strike the 100 percent match and replace it with a 25 percent match for these important activities. In addition, States would also like to see drinking water security added to the list of drinking water SRF-eligible activities.

Another example concerns Section 203, which authorizes States to use up to 15 percent of the capitalization grant to provide assistance to the poverty pockets in communities which are otherwise not disadvantaged. This 15 percent is in addition to the 30 percent cap on loan subsidies to disadvantaged communities, meaning that up to 45 percent of the capitalization grant may be used for grants or grant-like assistance. We think this threatens the corpus of the Revolving Loan Fund, since these funds will not be repaid and will not then be able to be used for loans for new projects.

Finally, there are requirements in this bill for States to ensure that water system set rates for full-cost recovery and that the systems follow through on providing the subsidies to individual households. These types of activities have typically been local determinations over which the States have no control and very little experience in this area.

We're very concerned that water systems will forgo the use of the drinking water SRF rather than subject themselves to such close State scrutiny. We fear that if this happens, of course, it will lead us away from the purposes of the bill.

Although the States have a number of concerns with several of the initiatives in S. 1961, we would very much like to continue to work with this committee to ensure that these provisions will not be excessively burdensome to either States or drinking water systems, and that this legislation will, indeed, maximize the effectiveness and enhance efficiency of the drinking water SRF.

Mr. Chairman, I very much appreciate the opportunity to speak with the committee today, and I would be pleased to answer any questions you or Mr. Chairman Jeffords might have. Thank you.

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

First, Mr. Morrissey, you, after stating your concerns about some of the pre-conditions that had been added, then suggested that maybe adopting the principle of State equivalency should be allowed to substitute. As an example, several of the conditions relate to compatibility of decisions on water policy with areas such as land use, transportation, and other, what I would call, growth management-type decisions.

There are a number of States which already have in place some form of a comprehensive planning requirement that incorporates all of the above plus more. Would you find it to be desirable if, for instance, there were to be a waiver of the specific requirements that are called for in this legislation upon a demonstration that the State already had the equivalent type of comprehensive reviews through some other methodology?

Mr. MORRISSEY. Yes, sir. Our fear would be, if there were additional Federal requirements and they were imposed, superimposed, upon our existing State requirements, those States would have to do it twice or do it in a different format, and we would be wasting resources. Our hope is that with an equivalency waiver, we would only have to do it once, do it at the State level, in a manner in which we're used to doing, and therefore, forgo or not have to involve ourselves in another layer of review similar to Federal requirements.

So I'll give you an example. When we conduct a facilities plan for a wastewater treatment system in Connecticut, we first study what

area we're going to sewer and we assure the local communities that we're not going to induce growth by sewering areas outside of this. We build the capacity and we limit the hydraulic capacity of the facility which will be serving this sewer area to prescribe the growth area that this will induce. From our perspective, that meets with the Connecticut Plan of Conservation and Development, and it has to be consistent with zoning laws throughout the local communities. We see that as a similar requirement as you've outlined here, and we would not have to do that twice or, to do different standards, if you will.

Senator GRAHAM. I would be interested, Mr. Morrissey, if you might suggest some language that we could consider that would accomplish what seems to be an imminently reasonable suggestion.

Mr. MORRISSEY. Another thing to keep in mind is this: The old Title II program did not allow for growth in the development of sewage treatment plants financed with those grants. Many States have held over those requirements, so that there may be already a no-growth statute prohibition at the State level as a remnant, if you will, of the old Title II program.

Senator GRAHAM. Mr. Rutherford, the issue of requiring asset management plans an including full cost recovery rate structures has as one of its goals to assure that there's going to be enough money available for maintenance and repair, so that we don't 30 years downstream have a system that was designed to last 75 years collapse on us because it hasn't been adequately maintained.

You raise some objection to doing it the way this bill proposes to do it. How would you, if you agree that it is a reasonable objective that there should be some asset management, including the capability to do necessary ongoing maintenance and repair and rehabilitation, how would you suggest we accomplish that objective?

Mr. RUTHERFORD. Mr. Chairman, I'll have to fall back on my more parochial role from Vermont rather than speaking nationally to this question. We have encouraged systems for a long time—in fact, we do have a State requirement for assistance to set up a sinking fund, if you will, to be able to make necessary repairs over the useful life of a system. It does not require that it have any funds in it, however. So the purpose of it has not quite met its need.

The concern that I have over that particular portion is that I interpret it to mean that systems would have to not just recover or not just cover the costs of ongoing maintenance and repairs to keep that system going for its useful life, but that it would also have to be setting aside a sinking fund to be able to pay for future capital construction needs, which I'm guessing is going to happen sooner than 60 or 75 years out. Given Federal drinking water regulations just in the last decade, there's been a substantial amount of construction that's needed to happen just to stay up with those, and there are more still coming.

So if that interpretation is correct, then I think we would be looking at a water system paying back the loan that they got today over a 20- or even a 30-year period while at the same time they're having to save up money to be able to pay for the next set of improvements.

My experience has been that with many of the small systems that we have in Vermont, which are virtually all of them—we have no large systems in the State—is that, even with all of the assistance that we can give them, the best that they can do is just to keep up with that assistance. I don't know how we're going to be able to have in 20 years' time an independent set of systems in the country that would be able to finance their own improvements when they needed them. I think there will continue to be a need for Federal or State assistance.

Senator GRAHAM. Senator Jeffords, I was a little concerned that Mr. Rutherford started his response to that last question by saying that he was not going to be looking at this from a national perspective, but from the perspective of Vermont. You've taught us that Vermont is the national perspective.

[Laughter.]

Senator JEFFORDS. I didn't see any conflict.

[Laughter.]

Senator JEFFORDS. For both of you, S. 1961 includes a provision to coordinate planning for water infrastructure projects with land use planning and transportation planning entities. How does this coordination, if any, actually happen today? That's an easy one for you, Mr. Rutherford.

Mr. RUTHERFORD. Yes, it is, Mr. Chairman. Planning has been a difficult process, as we both know, in our State. But so much of the work that we've done in the Drinking Water Revolving Fund has been associated with addition of treatment to address Federal regulations or infrastructure improvements, that the issue of planning and growth has always struck me as something that should have been considered perhaps years ago, before these small systems, which we have so many of in Vermont, were created.

So it seemed to me that it's going to be hard to address this particular part of the legislation because we don't have strong regional statewide planning to coordinate with, and yet our systems are there. They are in the ground. They need to make improvements, whether they're well-thought-out or not.

Senator JEFFORDS. Mr. Morrissey.

Mr. MORRISSEY. Senator Jeffords, we in Connecticut have what we call a Plan of Conservation and Development. That plan maps all of Connecticut into growth areas and non-growth areas, conservation areas and open space areas. We are prohibited, by State statute, through the Connecticut Environmental Protection Act, in sewering areas which are designated as protection or open space. Therefore, when we develop a facilities plan, as I was saying before, with a municipality to determine a sewer shed, we can only delineate the sewer shed in those areas designated for growth. We cannot use Federal or State funds to build sewers outside those areas which would induce growth in the rural conservation or in the open space areas. So it is part of our system already, as part of the CEPA review, if you will, in Connecticut.

Senator JEFFORDS. Has it created any serious problems, as you rethink that, or is it working pretty well?

Mr. MORRISSEY. Oh, it creates problems. There's no doubt about that.

Senator JEFFORDS. Yes.

Mr. MORRISSEY. For instance, recently, we have a town which historically planned on building an industrial park within its watershed for its water supply reservoir, and we've had quite a row about whether or not we're going to build sewers there, and if sewers are built there, what special land use controls will we place on that industrial development, such as limiting impervious areas to less than 10 percent, so that we don't adversely affect that reservoir and the drinking water supply for that town.

So it does lead to conflicts. Several of the conflicts are resolved legislatively, but typically we can work them out through negotiation. By and large, though, it works. It keeps sewers within the designated sewer sheds that we agree to with municipalities during the planning stages for our projects.

Senator JEFFORDS. Thank you, Mr. Chairman.

Mr. MORRISSEY. May I ask, what is that?

[Laughter.]

Senator GRAHAM. Well, the answer to that question is that is a quorum call, which is the parliamentary equivalent of timeout, which means that, for various reasons, whatever is currently transpiring will be suspended until people can figure out what they want to do next.

[Laughter.]

Senator JEFFORDS. These are some, well, shall we say, awaited moments where nobody's talking on the Senate floor, and so everybody relaxes a little while, and sometimes that helps, but we'll see.

[Laughter.]

Senator JEFFORDS. Well, it's a close balance between the help that you get by a few seconds of respite from talk and the mental distress at having to listen to those "blank" buttons go off.

[Laughter.]

Senator GRAHAM. Gentlemen, thank you very much. I would like to make the same request that I did of the previous witnesses. If there are any specific modifications—to use as an example, Mr. Morrissey, your suggestion of an equivalency standard—we would like the benefit of your specific wording, and similarly, Mr. Rutherford.

As I indicated, because we are operating under the whiplash of Senator Jeffords, we're trying to move this bill expeditiously, and we would appreciate having your suggestions, say, within the next week, and the record will be open for the next 2 days, if you would like to supplement the statements that you have made.

Mr. RUTHERFORD. Thank you, Mr. Chairman.

Mr. MORRISSEY. Thank you.

Senator JEFFORDS. Thank you very much.

Senator GRAHAM. Thank you.

[Whereupon, at 12:05 p.m., the subcommittee was adjourned, to reconvene at the call of the chair.]

[Additional statements submitted for the record follows:]

STATEMENT OF HON. PAUL S. SARBANES, U.S. SENATOR FROM THE STATE OF MARYLAND

Thank you, Mr. Chairman, for this opportunity to testify on S. 1044, the Chesapeake Bay Watershed Nutrient Removal Assistance Act. At the very outset, I want to commend you, and other members of the Committee, for focusing attention on our

nation's clean water infrastructure needs. This issue is of vital importance to the State of Maryland and to our continued efforts to restore the Chesapeake Bay.

Despite improvements over the past two decades, Maryland and, indeed, the Chesapeake Bay region still face very significant water quality problems and needs. In December 2001, a "Task Force on Upgrading Sewerage Systems," commissioned by Governor Parris Glendening completed an assessment of the costs to implement needed sewerage requirements to address combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), and other upgrades at wastewater treatment plants throughout Maryland and identified $4.3 billion of capital needs. Maryland's most recent allotment under the Clean Water Act's State Revolving Loan Fund was $32.5 million, and even when combined with State and local funds, the Task Force report estimates a gap of $80—$140 million a Year in needed sewerage infrastructure spending. Clearly, continuing and enhancing the State Revolving Loan Fund is a vital part of the assistance needed to help address that gap.

But I am concerned about using just the needs survey to determine State apportionments for the SRF, as proposed is S. 1961. The survey was designed for traditional sewer needs and does not account very accurately for restoration, reconstruction, storm water and non-point source control needs, which are difficult to quantify. Moreover, it unfairly penalizes States, like Maryland, which have worked aggressively to upgrade sewage treatment facilities—utilizing State funds and overmatching Federal revolving loan funds. In addition, it fails to measure very well the overall water quality challenge a State or region faces. In my judgment, the ultimate formula for the SRF should have a broader water quality measure in it—some factor related to the percent of waters not meeting designated uses or water quality standards. I hope that the Committee will work with us to address these deficiencies in the needs survey, which is being used as the basis for the new formulas in S. 1961.

In the Chesapeake Bay watershed, we face a special challenge of finding ways to further reduce the level of nitrogen and phosphorus in wastewater effluent. Nutrient over-enrichment from both point and non-point sources remains the most serious and ubiquitous pollution problem facing the Chesapeake Bay. In 1987, the Governors of Maryland, Virginia, Pennsylvania, the Chesapeake Bay Commission, the Mayor of the District of Columbia and the Administrator of the EPA, on behalf of the Federal Government, signed a Chesapeake Bay Agreement which set a goal of a 40 percent reduction of nitrogen and phosphorous loads to the main stem of the Bay by the year 2000—the most ambitious voluntary commitment for restoring water quality of any region in the nation. During that 13 year period, tremendous efforts and investments were made by all the jurisdictions in upgrading sewage treatment plants as well as implementing Best Management Practices on agricultural lands to meet that goal.

Two years ago, the States and the Federal Government conducted an extensive evaluation of cleanup progress since the 1980's and determined that, unfortunately, we have fallen short of the 40 percent goal. Estimates through the use of computer models indicated that, although nitrogen loads delivered to the Bay and all its tributaries declined by nearly 53 million lbs/year and phosphorus loads declined nearly 7 million lbs/year, Bay-wide nitrogen loads fell about 21 million lbs/year short and phosphorus loads fell nearly 3 million lbs/year shy of the 2000 goal. A new Chesapeake 2000 agreement was signed reaffirming the 40 percent nutrient reduction goal agreed to in 1987, and committing the signatories to go much further by correcting all nutrient related problems in the Chesapeake Bay by the year 2010. But, without Federal funds for wastewater treatment plant upgrades, the States will be unlikely to meet the 2010 water quality goal.

Recent modeling of EPA's Bay Program has found that total nutrient pollution must be further reduced by more than 45 percent from current levels to restore the Chesapeake Bay and its major tributaries to health. To do so, the current annual nitrogen discharge of 285 million pounds will need to be cut by at least 130 million pounds. Municipal wastewater treatment plants, in particular, can be a major source of these needed reductions.

As you can see from this map, there are approximately 300 major wastewater treatment plants in the Chesapeake Bay watershed. These plants contribute about 60 million pounds of nitrogen per year, more than one-fifth, of the total load of nitrogen to the Bay. Typically, these plants discharge about 18 mg/liter of nitrogen in their effluent but 71 of the plants have been upgraded with some form of nutrient removal technology to achieve nitrogen concentrations of about 8 mg/liter. By further upgrading these plants with nutrient removal technologies to achieve nitrogen reductions of 3 mg/liter—state-of-the-art reductions—scientists estimate that we would remove 42 million pounds of nitrogen in the Bay each year or about 40 percent of the total nitrogen reductions needed.

The legislation which Senators Mikulski, Warner, Allen, Specter, Santorum and I sponsored, would establish a grants program to encourage States and municipalities in the six-State Chesapeake Bay watershed to go the extra mile and install nutrient reduction technologies at major wastewater treatment facilities to achieve state-of-the-art nitrogen reductions of 3 mg/liter. Our legislation would provide grants for 55 percent of the capital cost of upgrading the plants. The total cost of these upgrades is estimated at $1.2 billion, with a Federal share of $660 million. Any publicly owned wastewater treatment plant which has a permitted design capacity to treat an annual average of 0.5 million gallons per day within the Chesapeake Bay watershed portion of New York, Pennsylvania, Maryland, West Virginia, Delaware, Virginia and the District of Columbia would be eligible to receive these grants. These nutrient reduction technologies are the most reliable, immediate and cost-effective ways to reduce nutrient loads to the Chesapeake Bay.

Mr. Chairman, if we are to achieve the ultimate, long-term goal of the Bay Program—improving and protecting the water quality and living resources of the Chesapeake Bay—Federal assistance in upgrading sewage treatment plants and in this nutrient reduction effort is absolutely essential. The States cannot do it alone, particularly given the interstate nature of the pollution problem facing the Chesapeake Bay. The Bay is a unique national resource. It is the largest and most productive estuary in the country, with a watershed encompassing 64,000 square miles and parts of six States and the District of Columbia. Its unique ecological features combine with its tremendous economic and cultural importance to make it a resource that deserves national protection. I hope that the Committee can act quickly to approve this measure and report it to the full Senate for consideration.

STATEMENT OF ROBERT M. HIRSCH, ASSOCIATE DIRECTOR FOR WATER, U.S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR

Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to testify today on S. 1961, "The Water Investment Act of 2002." As you know, the mission of the U.S. Geological Survey (USGS) is to provide scientific information to support decisionmaking on issues of resources, environmental quality, and natural hazards. Information about water has been a central part of our agency's mission throughout our 123-year history. My remarks will be limited to Title IV of the bill, which relates to USGS. EPA has provided the Administration's views on the remainder of the bill.

As such, we agree that the role defined in Title IV of the bill is an appropriate one for the USGS and that it could improve Federal coordination of water information, but we would welcome an opportunity to work with the Committee on the bill language to assure that the tasks are feasible and clearly defined and that they are appropriate for the USGS as a Federal scientific agency. Let me begin by providing some general context for my remarks.

Competition for water to meet the needs of homes, cities, farms, and industries in many parts of the country is increasing, as are requirements to leave water in the streams and rivers to meet environmental and recreational needs. Information on water resources is needed at many levels to address these issues. Included among these is information to help shed light on overall changing conditions of scarcity, use, and competition for water to help inform discussions about potential changes in policies and investment plans related to water. In this regard, the USGS received a directive from Congress as part of the report on the fiscal year (FY) 2002 Appropriations for Interior and Related Agencies (House Committee on Appropriations) to prepare a report describing the scope and magnitude of the efforts needed to provide periodic assessments of the status and trends in the availability and use of freshwater resources.

Our efforts over the past 6 months in preparing that report have provided us with some insight that may be useful to this Subcommittee as it considers this legislation. In preparing our report to Congress, the USGS has solicited input from many individuals and organizations involved in issues of water availability and use. We asked them what types of decisions and policy issues would benefit from improved water facts today and in the future, how to build on existing efforts, and where to expand collaborative opportunities. In response to our request, we received nearly 100 responses from the water-management and policy communities.

There were several clear messages. First, there was consensus that a better set of facts is needed for informed decisions related to water availability and use. National organizations, in particular, noted the need for consistent indicators of water availability across the country. However, individuals representing State and local governments reminded us that many States have conducted extensive planning to

quantify water availability now and in the future, and that the availability and use of water is a State, local, or tribal issue in most respects.

Our report to the House Appropriations Committee is in the final stages of review at the present time. Based on the comments we received from others, we believe that the critical need is for regular reporting on indicators of the status and trends in storage volumes, flow rates, and uses of water nationwide. This information is not available in an up-to-date, nationally comprehensive and integrated form.

Water availability is a function of the total flow of water through a basin, its quality, and the structures, laws, regulations, and institutions that control its use. Information is currently synthesized about the Nation's water quality by the USGS National Water-Quality Assessment (NAWQA) program—A program that has recently been reviewed by the National Research Council (NRC) after completing its first decade. The NRC/NAWQA review committee stated "NAWQA is providing key national leadership, reporting, and assessing the quality of surface water and groundwater resources across the Nation. Furthermore, NAWQA is playing a vital role in balancing its good science with responsiveness to policy and regulatory needs. This is a vital function." The assessment required by this bill could be used with water-quality information from NAWQA and other existing water-quality programs to provide a more complete national picture of both the quantity and quality aspects of water availability.

Data that are germane to issues of water availability include population statistics, land uses, water costs and pricing, climate data, and instream-flow requirements for aquatic habitats. These data are compiled by State and local agencies, by universities and water-resource organizations, and by several Federal agencies.

INDICATORS OF WATER AVAILABILITY AND USE

An assessment, such as called for in this bill, would need to rely on up-to-date, nationally consistent indicators that would reflect the status and trends in water availability and use nationwide, for surface-water flows and storage, ground-water levels and storage, and water use.

Surface Water

Currently, the USGS provides a number of assessment-type streamflow products at daily, weekly, and monthly time scales. These products, such as the online WaterWatch Internet site, are useful to emergency managers, public officials, and others tracking floods and droughts and to private citizens planning recreational activities. The USGS will continue to produce these types of information on daily to monthly conditions through our existing programs. Indicators that support longer-term water-availability decisions, however, require compilation of streamflow information at longer time scales.

Groundwater

Long-term, systematic measurements of ground-water levels provide essential data needed to evaluate changes in ground-water storage over time. The density of existing monitoring wells varies considerably from State-to-State, and even more so among major aquifers, with very limited monitoring in many aquifers. Thus, an inventory of existing water-level networks for major aquifer systems would be useful to identify data gaps across the Nation and determine the detail to which we can provide this information.

Water Use

Tracking water use is an important part of understanding water availability. The USGS has compiled and disseminated estimates of water use for the Nation at 5-year intervals since 1950. The National Research Council (NRC) recently reviewed the USGS program for water-use information and will be making a number of recommendations for improvement of the program to address inconsistencies in the availability of water-use data from State to State. This NRC report will be released within the next few months. We would encourage the Committee to seek their input on this important component of the water resource equation. Valid and consistent water-use data are as vital as river flow or ground-water data and are often even more difficult to acquire. An assessment such as is envisioned by this legislation depends on water-use data. The responsibility for collecting and analyzing these data must be shared by the States and the Federal Government.

SUMMARY

In summary, in response to the directive from Congress and with input from many others, the USGS has developed concepts for a national assessment of freshwater availability and use. The proposed assessment would develop and report on

indicators of the status and trends in storage volumes, flow rates, and uses of water nationwide. Currently, this information is not available in an up-to-date, nationally comprehensive and integrated form. The development and reporting of national indicators of water availability and use would be analogous to the task of other Federal statistical programs that produce and regularly update indicator variables that describe economic, demographic, or health conditions of the Nation. Any such effort would comply with the Office of Management and Budget's (OMB) recently issued Information Quality Guidelines.

The assessment would be highly collaborative, involving the USGS along with Federal and State agencies, Indian tribes, universities, and non-governmental interests. Collaboration across agency boundaries would ensure that information produced by the USGS could be aggregated with other types of physical, social, economic, and environmental data that affect water availability.

In regard to Section 403(b) on water resource research priorities we would note that we are currently engaged in contracting with the National Research Council, at the direction of Congress, to conduct a study of the priorities for, and best means of organizing, water research across the Federal Government. We would suggest that this National Research Council effort may provide very valuable inputs to help carry out the objectives of this section.

In regard to Section 403(c) on information delivery systems, the objectives defined here are very much in concert with the existing charge to the USGS under OMB Memorandum 92–01 on "Coordination of Water Resources Information." This section would reinforce our ongoing role of coordination of water information across the Federal Government.

In closing, again, we agree that the role defined in the bill is an appropriate one for the USGS, but we would welcome an opportunity to work with the Committee on the language of Title IV, to assure that the tasks are clear and feasible and that they are appropriate for the USGS as a Federal scientific agency. For example, the bill directs the USGS to identify areas of the United States that are at risk for water shortages or surpluses. However, long range predictions of water supplies cannot be determined solely by physical science but are heavily dependent on human decisions to invest in infrastructure, restrict use, change water laws, etc., which are largely State decisions. The USGS makes a significant contribution to these issues by regularly providing indicators of the changing status of the Nation's water resources derived from long-term monitoring.

We appreciate this opportunity to discuss USGS capabilities and I welcome any questions you may have.

STATEMENT OF ANDREW M. CHAPMAN, PRESIDENT, ELIZABETHTOWN WATER COMPANY ON BEHALF OF THE NATIONAL ASSOCIATION OF WATER COMPANIES

Good afternoon, Mr. Chairman and Members of the Subcommittee, my name is Andrew Chapman. I am the President of Elizabethtown Water Company in New Jersey, and I am a Vice-President of the National Association of Water Companies.

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 39 States-which provide safe reliable drinking water to more than 22 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.

Mr. Chairman, NAWC commends you and this Subcommittee for taking on the important issue of water infrastructure financing, introducing S. 1961, the Water Investment Act of 2002, and holding these hearings today. The challenge of replacing and upgrading infrastructure is one of the greatest and most pressing facing our industry today. Congressional interest in this challenge, as demonstrated by the introduction of S. 1961 and the several hearings on the issue held over the last year, underlines this fact.

We are particularly encouraged that this legislative project is being undertaken in a bipartisan fashion, a practice that drinking water issues have enjoyed in this committee for some time, and one that we sincerely hope continues far into the future.

GENERAL COMMENTS

NAWC along with our colleagues in the H_2O Coalition1[1] support S. 1961 and urge this committee to consider and report the bill to the full Senate at the earliest possible date.

This bill embraces many of the principles the H_2O Coalition has been advocating for more than a year now. It encourages utilities to use creative public-private partnerships, consolidation and other solutions in addressing their infrastructure challenges. The bill will also keep the industry on the path to self-sustainability through rational rate structures and sound asset management practices. The authors of the bill have wisely thought outside the box with an innovative program designed to assist disadvantaged consumers, instead of the entire utility in circumstances where only some of the utility's customers are disadvantaged. Finally, S. 1961 at last puts the customers of privately owned utilities on full and equal footing with those of municipal utilities by extending private utility eligibility to the Clean Water SRF (CW-SRF) and encouraging all States to extend private utility eligibility to both the CW-SRF and Drinking Water SRF (DW-SRF).

Conversely, S. 1961 wisely does not authorize a large grant program which some have been advocating. We are encouraged, Mr. Chairman, that you and your colleagues in drafting this bill saw the error in authorizing an old fashioned and outdated grant program that would do more harm than good for the entire water industry, waste taxpayers' money, and add to the Federal budget deficit.

SPECIFIC COMMENTS

DW-SRF and CW-SRF Restructuring.—First, S. 1961 signals congressional support for creative non-governmental solutions to the infrastructure financing challenge by explicitly tying SRF assistance (both DW-SRF and CW-SRF) to:

1. Consolidating ownership and/or management functions with other facilities.

   There are over 50,000 community water systems in the United States many of which are very small. In many, but not all, cases the financial challenges facing these utilities can be addressed by achieving economies of scale through consolidation. By tying consideration of consolidation with SRF assistance, Congress will encourage localities to put aside parochial interests, expand their vision and do what is right for the customer.

2. Forming public-private partnerships or other cooperative partnerships

   Municipalities large and small all over the country have realized great savings and success through partnerships with private firms. These partnerships take many forms, from contracting out small portions of a utility's operations, such as billing or meter reading, to multi-year all inclusive management contracts wherein a private firm runs and manages all aspects of a municipally owned utility, to the transfer of assets to a private company. Cost savings that localities have realized over the years from such arrangements range up to 40 percent, freeing up much needed capital for infrastructure replacement, without burdening either the customers or the American taxpayer.

Second, S. 1961 seeks to avoid some past mistakes of government assistance programs by requiring utilities receiving DW-SRF and CW-SRF assistance to have in place:

1. A rate structure that reflects the actual cost of service, taking into account capital replacement funds, and
2. A sound asset management plan conforming to generally accepted industry practices and including a schedule of investments to meet and sustain performance objectives.

These provisions require managers to take an enterprise approach to utility management and move all systems toward self-sustainability. The provisions will force utilities to solve their infrastructure problems in ways that are the least onerous to the American taxpayer, yet are responsible, efficient and effective.

Absent these important safeguards we could relive many of the problems of past government subsidy programs wherein:

1. Small or inefficient utilities were artificially propped up, discouraging consolidation and regionalization;

2. Utilities became dependent on the government funds and needed regular infusions creating greater reliance on government money;

[1] The H_2O Coalition is made of the National Association of Water Companies, the Water and Wastewater Equipment Manufacturers Association, and the National Council on Public-Private Parnerships.

3. Because of the subsidy, the American people got a false impression of the true cost of water, discouraging conservation; and

4. The private sector was effectively barred from participation in the industry, thus denying utilities the benefits of the free marketplace and its associated innovations and economies.

Some will argue that these provisions represent a too heavy-handed government approach to legislating, and are thus a step backward. We disagree. While both the CW-SRF and DW-SRF are administered through the States and include some State matching money, the vast majority of the SRFs' corpora are made up of Federal money coming from the American taxpayer. Therefore, the Federal Government has a responsibility to the American taxpayer to be sure their money is distributed and used in an efficient and accountable manner, as S. 1961 would do.

Subsidization for Disadvantaged Users.—Section 203 introduces a new and innovative approach for targeting SRF moneys to subsidize the water rates of economically disadvantaged customers, as opposed to giving assistance to utilities in a form that subsidizes everyone's water rates. The bill provides for favorable loan terms, including principal forgiveness, to directly assist disadvantaged customers. NAWC and the H_2O Coalition have long championed this target use of DW-SRF assistance and we are greatly encouraged to see the sponsors of this bill moving the DW-SRF in this direction.

There may be many instances, particularly in larger utilities, where there are many disadvantaged customers who need assistance paying their bills, even though the vast majority of the customers of the particular utility have the means to pay the full cost of service. In such cases it makes no sense for the DW-SRF to subsidize the entire utility, when in fact only a percentage of customers need the assistance. This innovation will allow States to target assistance to where it is most needed, freeing up money for the worthiest projects.

Private Utility Access.—As you can imagine, the NAWC, as the representative of the private water industry, is particular happy to see that all utilities are treated equally in S. 1961, regardless of ownership. First, the bill makes private utilities eligible for the first time for assistance from the CW-SRF. This is a long delayed and much needed innovation to that program that will place all systems on a level playing field.

Private utilities have had access to the DW-SRF since it was established in 1996. When Congress established the DW-SRF it correctly determined that benefits of the DW-SRF would flow to the customers of the utilities, not to the owners or shareholders. This is no less true for the customers of privately owned wastewater utilities.

Second, we are also greatly supportive of provisions in S. 1961 that will bring fairness to the State SRF allocation process. The bill's provisions require States that include private utilities in their needs survey (thus maximizing the State's total DW-SRF allocation) to also ensure that private utilities are actually eligible for such assistance. As incredible as it may sound, currently there are 13 States that include private utilities in their needs survey but exclude those same utilities from eligibility for loans because of State laws or practices. S. 1961 will end this practice in the DW-SRF and keep it from happening in the CW-SRF.

Authorizations.—S. 1961 would authorize $35 billion over the next 5 years for the two SRFs, with a combined $7 billion in fiscal year 2006, and an eye-popping $12 billion in fiscal year 2007. We question whether Congress will ever appropriate anything close to these levels, considering that such appropriations would increase EPA's budget about 2.5 times.

We are concerned that such large authorizations, with relatively little chance of similar appropriations, may send counterproductive signals to utility operators. Utilities may defer making the necessary investments and hard choices required today with the false hope of significant Federal assistance coming their way in the future.

Section 205: Competition Requirements.—While we embrace the concept of competition in procurement, we are concerned with the requirements in Section 205 that might force utilities to specify "brand name or equal" in their procurement documents. We have found from long experience that "equal" often means in practice inferior equipment. We believe the procurement process today under the Drinking Water SRF is highly competitive, encourages innovation, and need not be modified.

ADDITIONAL ISSUES FOR CONSIDERATION

Private Activity Bonds.—As we have testified here before, one of the easiest and least expensive 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 local governments 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 ($147 million over 10 years[2]), yet leverage huge sums of private capital.

This proposal has precedent. Congress has exempted other environmental facilities (certain waste disposal facilities) from the State volume caps because of a perceived public need.

This proposal enjoys far reaching support. In the House, bipartisan legislation has been introduced which would make these changes. Also, the U.S. Conference of Mayors, the Water Infrastructure Network (WIN), and the U.S. Environmental Protection Agency's Environmental Financial Advisory Board have endorsed the proposal.

Compliance with Drinking Water as a Defense in Lawsuits.—We have reported many times to this Committee on a disturbing trend that 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 standard setting and 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 that would make compliance with drinking water standards a defense in such lawsuits. Such legislation would not only deter unfounded lawsuits but would also assure the viability of Federal standards that would otherwise be eroded by juries second-guessing the national regulatory process. A regulatory process that has given our citizens the safest water in the world. Therefore, NAWC, 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 of expensive, unfounded lawsuits could be extremely costly to our industry, the EPA, and the public. Costs include significant utility defense costs, higher liability insurance costs, and the costs of any adverse judgments that may be imposed by the courts, even when the utility has been in full compliance with EPA's standards.

In addition, if lawsuits like these are successful and proliferate, it will be a terrible blow to the drinking water standard setting process. In effect EPA's standards, which are developed through an open and scientifically based regulatory process established under the SDWA of 1996 after long deliberations, will be replaced with standards established by juries all around the United States, who have no scientific training or water expertise. Any new "safe" levels established by these juries will become de facto standards and undermine the legal authority of EPA's national standards, producing chaos within the industry, since utilities will not know which standard to comply with.

We do not need this at a time when there are other pressing needs, such as infrastructure replacement, increased security, and compliance with new standards, such as arsenic. 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 that water, America's best value, will become unaffordable.

Two years ago the U.S. Supreme Court confirmed the principle of compliance with Federal regulations as a defense in a tort action *Geier* v. *American Honda Motor Company*. The action alleged that Honda was negligent in failing to equip its 1987 Accords with airbags, even though Honda was in compliance with U.S. Department of Transportation (DOT) standards, which provided for a phase in of passive re-

[2] According to the Joint Tax Committee; February 12, 2002.

straints over time. The Court held that the plaintiffs attempt to establish a different standard was pre-empted by the uniform Federal regulations.

The *Honda* case is directly controlling over the recent drinking water cases, and we believe that utilities that are in compliance will ultimately win these lawsuits-but only after expensive trials and lengthy appeals. In a time of scarce resources we believe that Congress has an opportunity to resolve the issue now, and we encourage this Committee to include in S. 1961 language making compliance with drinking water standards a defense in lawsuits.

CONCLUSION

Mr. Chairman, we appreciate the leadership role that you and this Subcommittee have taken to address drinking water infrastructure problems. S. 1961 is an excellent response to the infrastructure challenge and we look forward to working with you, the entire Committee, and your staffs in advancing this legislation through Congress.

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.

STATEMENT OF JERRY JOHNSON, GENERAL MANAGER, DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY ON BEHALF OF THE ASSOCIATION OF METROPOLITAN WATER AGENCIES

Good afternoon, Mr. Chairman, members of the subcommittee.

My name is Jerry Johnson, and I'm the General Manager of the District of Columbia Water and Sewer Authority. I'm testifying today on behalf of the Association of Metropolitan Water Agencies (AMWA). AMWA is a nonprofit organization representing the nation's largest publicly owned water agencies. These large systems provide drinking water to approximately 110 million people from Anchorage, Alaska to Miami, Florida.

The DC Water and Sewer Authority provides retail water services to residents and businesses in the District of Columbia and parts of Virginia. WASA also provides wastewater treatment for the District of Columbia, portions of Montgomery and Prince Georges counties in Maryland and Fairfax and Loudon counties in Virginia as well as the town of Vienna, Virginia. WASA's Blue Plains Wastewater Treatment Plant, located in South West Washington, is the largest advanced wastewater treatment facility in the world.

Thank you for introducing S. 1961, the Water Investment Act of 2002, which is the first legislation to increase the Federal investment in drinking water infrastructure since the 1996 amendments to the Safe Drinking Water Act.

The association believes the bill takes a major step in the right direction, by proposing to triple the authorization of the Drinking Water State Revolving Fund (SRF). While the needs of drinking water agencies over the 5-year period covered by the bill are nearly $60 billion, the bill's proposed authorization, if enacted and appropriated, would fund hundreds of projects to ensure safe drinking water for decades to come.

ASSISTANCE TO METROPOLITAN WATER AGENCIES

Like current law, the bill's main focus is to help drinking water systems comply with the Safe Drinking Water Act. The bill also reinforces the Drinking Water SRF's support of small water systems, through the capacity development program, restructuring assistance, technical assistance and, most importantly, a 15-percent set aside for small systems. (Some States make loans to large water systems to ensure the funds revolve, especially where small systems are not prepared to apply for assistance.)

AMWA would like the subcommittee to consider ways to help metropolitan water agencies with replacing aging infrastructure. (Metropolitan water agencies serve the nation's larger communities.) To get a sense of the needs facing metropolitan water agencies, consider this: according to a recent survey, just 32 metropolitan systems reported that they must spend $27 billion over the next 5 years on drinking water and wastewater infrastructure[1]. Nationwide, the needs of metropolitan water agencies are much higher. Yet 31 States provided no assistance to metropolitan water agencies in fiscal year 2001. If the proposed authorization in S. 1961 is appro-

[1] Waterworld, December 2001

priated, States will have more money to lend to metropolitan water systems, but higher authorizations and programmatic changes are necessary, too.

The cities that are served by metropolitan water utilities are the economic engines of their States and the Nation, and a significant Federal investment in these large publicly owned agencies will translate into stronger water delivery systems, better fire protection, and thousands of new jobs.

Therefore, AMWA recommends a 15-percent set-aside for metropolitan drinking water agencies, to make certain that States address their needs. Under this proposal, small systems would continue to get the help they need to comply with the Safe Drinking Water Act, and metropolitan water agencies could invest the billions of dollars needed to replace aging infrastructure. In States where there are few metropolitan systems or where the systems do not need assistance, the funds set aside could be used for small systems.

SECURITY

The capital needs facing water systems to make their facilities and consumer more secure are likely to run into the billion of dollars, and AMWA believes the Safe Drinking Water Act should specifically authorize Drinking Water SRF assistance for capital projects related to security. EPA guidance to States indicates these projects are eligible for funding, but something more substantial, namely legislation, is needed to show congressional intent to allow such assistance.

RATE STRUCTURE AND ASSET MANAGEMENT

Among the new requirements established by S. 1961 are implementation of responsible rate structures and asset management plans. These practices embody those commonly used in metropolitan water agencies today. For instance, WASA has developed a comprehensive, 10-year capital improvement program that totals $1.6 billion, of which approximately $505 million is attributable to drinking water infrastructure projects. Since its creation in 1996, WASA has raised its rates by 52 percent. Over the next 10 years, WASA projects that it will need to raise its rates by 5 to 7 percent annually, due primarily to infrastructure upgrade and replacement needs.

In addition, WASA has an asset management plan to ensure capital is available for future upgrades, and, like most large water systems, the authority complies with the general accounting standards for State and local government known as GASB 34.

These concepts are nothing new to metropolitan water systems. Maintaining our bond ratings and accessing capital in open market necessitate our adherence to these good practices.

For these reasons, AMWA applauds the sponsors of S. 1961 for highlighting them, and AMWA encourages the subcommittee to maintain these best practices as ideals and provide the opportunity for utilities that have not yet adopted them to do so. There are a wide variety of equally reasonable approaches to defining the full cost of service and responsible asset management, and these areas are not in the realm of State environmental agencies or the U.S. EPA, both of which would have to develop rules or guidance and criteria for enforcement and compliance. Rate design is a particularly complex issue. For instance, consider the possibility that charging the full cost of service, covering all Federal and State regulations and replacement of aging infrastructure, could put rates far beyond U.S. EPA's affordability criteria.

AMWA urges the subcommittee to avoid a situation in which the States or U.S. EPA enter the domain of local government and attempt to reinvent the wheel. Instead, industry organizations have many years of experience in this area and could be relied upon to provide technical and educational service to those utilities that have not adopted the practices. Let's not discard what responsible water agencies have already accomplished and create a layer of bureaucracy that could make applying for SRF assistance too cumbersome, thus undermining the purpose of the program.

CONSULTATION WITH STATE PLANNING AGENCIES

AMWA appreciates S. 1961 highlighting the importance of coordinating planning decisions with relevant State planning agencies, but the association is concerned that a Federal requirement to consult these agencies may be burdensome or may intrude on the domain of local government. Metropolitan water agencies are naturally a part of local land use planning efforts, and consulting and coordinating with the appropriate bodies is standard practice.

CONSOLIDATION, PARTNERSHIPS AND NONSTRUCTURAL ALTERNATIVES

AMWA applauds the bill's sponsors for emphasizing the importance of creative approaches to managing a water utility by encouraging consolidation, partnerships, and adoption of nonstructural alternatives. Many water systems are already considering various approaches to regional water management and it is important that these types of arrangements be evaluated and supported.

An excellent example is the Contra Costa Water District, a metropolitan system in California. Contra Costa is working with other local water entities in a variety of partnerships, ranging from providing less costly water supplies to cooperation in obtaining new supplies and developing needed infrastructure. One Contra Costa partnership with a local water system will save more than $7 million over the cost of separate solutions. Another Contra Costa partnership, involving three agencies, provided an alternative water supply that will save up to $13 million. In a third, 10 water and sanitation agencies joined to conduct a water supply and infrastructure study that focused on the region, thereby providing a more beneficial plan for the region as a whole.

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

PUBLIC-PRIVATE PARTNERSHIPS

Among the partnerships water systems would be required to consider under S. 1961 are public-private partnerships. These could include design-build solutions, contract management or other forms of privatization.

Whether a water agency specifically considers public-private partnerships should remain at the discretion of local government, because local factors will dictate whether the partnership is in the interest of the consumers. Therefore, the association urges the subcommittee to look into public-private partnerships more closely before so strongly endorsing them. Privatization can be a very contentious issue in communities and worth a full exploration before legislated by Congress.

Privatization experts have identified some of the issues that need further exploration. Among them are those surrounding accountability and the blurring of roles and responsibilities. For example, who is responsible for complying with environmental regulations, resolving service complaints and planning to meet future needs.[2] Who pays if the private partner fails? If the private partner takes on more liability than it can afford, who's responsible when something goes wrong?

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

Members of the subcommittee, AMWA is not here today to oppose private-public partnerships. Many drinking water utilities have entered into such arrangements for a variety of purposes. It is another matter, however, to sanction these arrangements and make consideration of public-private partnerships a requirement in Federal law.

AMWA is simply urging the subcommittee to look into public-private partnerships more closely before endorsing them. Legislating privatization may not be in the public interest.

PROCUREMENT REQUIREMENTS

Section 205 of the bill proposes imposing on drinking water agencies procurement provisions that were abandoned in the Clean Water Act when the Clean Water SRF program was adopted. The requirements were abandoned because they encumbered both State agencies and local government, overrode State and local procurement laws and created many disputes. The same would hold true for today, and AMWA urges the subcommittee to drop those provisions from the bill.

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

RATE STUDY AND WATER RESOURCE PLANNING STUDIES

Among the provisions of Title III is a study on rates, affordability and how to define disadvantaged communities. Rate setting is a very difficult process and many water systems will appreciate assistance. Information on determining affordability and disadvantaged communities will be very beneficial, too. AMWA believes that U.S. EPA's current affordability criteria in many States does not fully capture the conditions that create disadvantaged communities. Most States determine whether a community is disadvantaged by looking at median household income and, sometimes, water rates. A more well-rounded analysis would consider additional facts such as: the number of people living below the poverty level, inflation and the loss of a tax base.

Title IV contains provisions for a study (and periodic update) of the nation's water resources. The study and the updates will provide a wealth of information that will help Federal, State and local government make well-informed decisions. We applaud the sponsors' appreciation of water resource shortages.

Again, thank you for introducing the Water Investment Act of 2002 and for the opportunity to provide testimony on it.

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

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 in Providence, Rhode Island and Vice President of the Association of Metropolitan Sewerage Agencies (AMSA). AMSA represents more than 270 publicly owned treatment works (POTWs) across the country. AMSA's members treat more than 18 billion gallons of wastewater each day and service the majority of the U.S. sewered population.

On behalf of AMSA and the Narragansett Bay Commission, I thank you and your colleagues for introducing S. 1961, the Water Investment Act of 2002, and for holding this hearing. Like you, AMSA and its members are committed to one very serious and important goal—commemorating this year's 30th Anniversary of the Clean Water Act by passage of a meaningful funding bill for our nation's core water and wastewater infrastructure. This bill should:

- Focus on core infrastructure needs, including repair and replacement of aging pipes and facilities;
- Fully fund the documented water infrastructure funding needs at an authorized level of $57 billion over 5 years through a combination of grant and loan funding options;
- Streamline State funding procedures; and
- Invest in 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.

The Senate during hearings last year laid the foundation necessary to introduce S. 1961 by reinforcing the need to reinstate a long-term financial partnership between the Federal Government, States, and communities, which is essential to achieve our nation's water quality goals. Water quality should be a priority at every level of government, and America's municipalities should not be left alone to face the challenge of providing clean and safe water to every citizen. Existing and new regulatory requirements continue to strain local budgets, including the tremendous expenses needed to comply with total maximum daily loads (TMDLs), and combined sewer (CSO) and sanitary sewer (SSO) overflow programs and requirements. The events of September 11, 2001 added to these already tremendous operating costs by requiring expensive facility security upgrades. The reality is that without a significant fiscal partnership that includes long-term Federal participation to meet these core infrastructure challenges, we will see a continued and devastating decline in both our national wastewater treatment and collection systems and the nation's public health and environmental well being.

S. 1961 addresses two essential issues at the heart of the water infrastructure matter—the vast dollars needed to ensure the continued viability of our water systems, and the efficiency of our wastewater treatment systems. However, many of the bill's provisions send a troubling message to all of us in the wastewater treatment community. They suggest that the Federal Government is not with us for the long haul, that Congress does not have confidence in our management skills and believes

we are not charging Americans enough for their water, and that the States and the U.S. Environmental Protection Agency (EPA) need to micromanage our operations. The provisions of S. 1961 suggest that after this bill's infusion of Federal funds, we will once again be left on our own. The reality, however, is that even with Congress' appropriation of Federal infrastructure funds at the WIN recommended level of $57 billion over 5 years, local water rates will continue to rise and local rate payers will still assume between 85 and 90 percent of infrastructure costs.

Accordingly, I now would like to provide the Subcommittee with AMSA's and my perspective on these issues as they are addressed in the bill.

INFRASTRUCTURE FUNDING

S. 1961 comes part way toward addressing the true, significant funding gap addressed by so many sources, including EPA, the General Accounting Office (GAO), and the Water Infrastructure Network (WIN). The bill authorizes $20 billion over 5 years for the Clean Water SRF and $15 billion over the same period of time for the Drinking Water SRF. This authorization is an important and significant step toward bridging the funding gap. However, S. 1961 falls short of the WIN-recommended $57 billion over the next 5 years needed to truly address core infrastructure investments. We urge the Subcommittee to amend the bill to fully fund both SRFs at the WIN recommended levels. Our focus on core infrastructure funding leads us also to urge that the Subcommittee add to the bill's Section 2 "Purposes" the following additional issue—"to recognize the national, environmental and public health importance of maintaining our nation's water and wastewater infrastructure."

We also recommend that the Subcommittee add to S. 1961 a provision to make grant funding available to all communities. Only grant funding in significant amounts provides sufficient resources and incentives to gain local support for increasing utility rates to pay for new regulatory costs and the costs of replacing or rehabilitating aging infrastructure. If there is any doubt regarding whether water infrastructure grants are in fact an essential part of addressing the significant core infrastructure needs of our nation's communities, one need look no further than the fiscal year 2002 VA-HUD appropriations bill for EPA. In this bill, Congress approved direct grants for 337 core water infrastructure projects totaling nearly $344 million to communities across the country. The fact is that grants are, and always have been, a necessary part of a real solution to our local infrastructure needs. Without a grant component specifically targeted to address core infrastructure concerns, S. 1961 will not succeed in addressing the most critical of our communities' investment needs.

SRF PAYMENT TERMS AND RESERVATION OF SRF FUNDS FOR SPECIFIC PURPOSES

S. 1961 offers "disadvantaged communities," as defined by their States, up to 30 years to fully amortize a SRF loan. AMSA encourages the Subcommittee to amend the bill to allow all communities to take advantage of a 30-year repayment schedule or to choose repayment "over the life of the project." Longer repayment terms for all communities are an essential way to add flexibility to the SRF program, and an important way to achieve the bill's stated purpose of "maximizing use of Federal funds."

S. 1961 also allows up to 15 percent of SRF funds to be used for additional subsidization for all communities so long as the funds are "directed through the user charge rate system to disadvantaged users within the residential user class of the community." Title I, Sec. 103(c)(8)(A)-(B). Title I, Section 103(e)(2) further provides that States can direct up to 30 percent of SRF loans to:

- Fund the development of "technical, managerial, and financial capacity" and asset management plans (Sec. 103(c)(7)) in all communities; and
- "Provide additional subsidization (including forgiveness of principal) to a disadvantaged community, or to a community that the State expects to become a disadvantaged community as the result of a proposed project" (Sec. 103(c)(9)).

We address the bill's asset management provisions in the next section. As to disadvantaged communities, we understand the Subcommittee's desire to ensure that low-income and disadvantaged persons and localities are given a variety of flexible ways to afford water service and finance core infrastructure upgrades. In fact, many AMSA members have these systems in place. In addition, local support systems in the form of third parties such as churches, community service organizations, and other organizations provide direct assistance to water users. The reality is, however, that many local rate setting and billing methods do not give POTWs the ability to target subsidization to individual ratepayers as S. 1961 directs.

Further, we are concerned that the bill's allowance of a total of up to 45 percent of the already limited SRF dollars to be directed to low income users within communities, disadvantaged communities, and for the development of asset management plans will seriously jeopardize the availability of adequate funds for core critical infrastructure projects. We urge the Subcommittee to delete these requirements, and instead express the sense of Congress that SRF funds should be directed as much as possible to needy communities, and that Congress expects the States will carry out this responsibility as they review and prioritize SRF fund applications.

EFFICIENCY AND STABILITY OF WASTEWATER TREATMENT SYSTEMS

S. 1961 creates several new requirements for communities to receive SRF loans. AMSA is seriously concerned that these provisions will only slow down and hinder the SRF process, rather than streamline the fund as the bill's "Purposes" intend, and as many stakeholders have recommended over the years.

Demonstration of Technical, Managerial, and Financial Capacity, Including Asset Management

One new requirement in S. 1961 is that within 3 years, each POTW receiving "significant" SRF assistance—we note this is an undefined term—must demonstrate "adequate technical, managerial, and financial capacity, including the establishment and implementation of an asset management plan" to receive the funds. Title I, Sec. 103(i)(5). States are given 3 years to implement a detailed strategy to assist treatment works in attaining and maintaining such technical, managerial, operations, maintenance, and capital investments, and meeting and sustaining compliance with Federal and State laws. Sec. 103(i)(2)(A)-(B). States with inadequate strategies would lose 20 percent of their SRF funds within 1 year, and significant future funding if the strategy remains unacceptable to EPA. Sec. 103(i)(3)-(4). States must submit annual reports to EPA on their progress improving the technical, managerial, and financial capacity of POTWs.

We are seriously concerned that this entire "hammer" approach, which would make States responsible for keeping the asset management ball rolling, combined with loss of SRF funding for both States and communities, will create an enormous disincentive to access the SRF at all. This is the complete opposite result contemplated in the bill's stated "Purposes." The bottom line is that without any Federal requirements, the type of asset management S. 1961 contemplates is already happening. Asset management and long-term planning are an essential part of protecting our nation's water infrastructure investments. AMSA and its member agency operators are working consistently to improve the efficiency of their operations. In fact, the AMSA Index has been reporting significant reductions in operations and maintenance costs since 1996. In addition, AMSA just released a comprehensive asset management handbook to POTWs across the country, and we are holding workshops throughout the year—including later this week—to train hundreds of facility managers in asset management techniques. The asset management plan outlined in the bill, including the mandate to develop an asset inventory, useful life projection, and an optimal schedule of capital and maintenance expenditures to sustain performance objectives, are precisely the techniques advanced in AMSA's handbook and workshops. In addition to knowing that asset management is the right way to manage a facility and its infrastructure assets, the legal requirements of Government Accounting Standards Board Statement 34 (GASB 34) are requiring cities across the country to document and discuss in detail the condition of their major infrastructure assets.

Let us not be lulled into believing that good management can repair the aging infrastructure of the past. Although extremely important, good management does not provide the bricks, mortar, concrete, and pipe to build and maintain a sewer system. And this is where S. 1961 must focus—on giving communities the funds they need to make their core infrastructure investments. We recommend that the Subcommittee remove these asset management requirements, and instead, revise the congressional statement of policy in the bill to express the sense of Congress that asset management is essential and strongly encouraged. We urge the Subcommittee to recognize that making asset management a prerequisite for SRF funds will have the effect of denying communities the very funds they need to fix their core infrastructure.

Coordination with Local Land Use and Transportation Planning

Another new requirement in S. 1961 is that States must ensure that SRF applicants consult and coordinate with local land use plans, regional transportation improvement and long-range transportation plans, and watershed plans. Title I, Sec. 103(e)(2). This type of coordination is already occurring across the Nation, and in

fact, already is required by many SRFs, making this provision of the bill duplicative and potentially confusing. In fact, the State and regional clearing house process long-implemented under the Demonstration Cities and Metropolitan Development Act of 1968 and OMB Circular A–102 already provides sufficient local coordination in the areas contemplated in S. 1961. For these reasons, we recommend that the Subcommittee remove this requirement from the bill.

Consolidation of Management Functions; Rates Reflecting "Actual Cost of Service"

A third new requirement in S. 1961 is that communities may only receive SRF funding if they have considered "consolidating management functions or ownership with another facility; [and] forming public-private partnerships or other cooperative partnerships." Title I, Sec. 103(j)(1). A fourth new requirement is that the community must have in effect "a plan to achieve, within a reasonable period of time, a rate structure that to the maximum extent practicable . . . reflects the actual cost of service provided by the recipient" as well as an asset management plan. Sec. 103(j)(2). These provisions would introduce an inappropriate level of Federal and State oversight into the setting of local wastewater rates and the management of local utilities—areas in which they do not have sufficient expertise—and will deter communities from applying for the very SRF funds the bill intends them to receive more easily and directly. The subjective nature of the wording in these provisions only causes us greater concern. As a result, we strongly recommend they be deleted.

Let me be clear—AMSA members are committed to supporting our operations and capital needs through our rates. In fact, most AMSA members operate as an authority or division of government with tight enterprise accounting procedures, and already recover full costs of service, including a payment to the underlying government for "services rendered" or "in lieu of taxes." AMSA's own triennial financial survey of our industry, which we have provided to this Subcommittee, supports this statement. Most AMSA members' rates also address capital replacement funds to the extent they are identified. While some replacement costs and future regulatory requirements may not be typically captured in the traditional capital replacement programs, POTWs are working to fine tune their projections every day. In addition, we regularly explore new ways of doing business, including consolidating management functions or ownership with another facility, and forming public-private partnerships or other cooperative partnerships. Where these partnerships and business structures make sense for a locality, they are pursued. However, these decisions should be made at the local level, and not be legislated by the Federal Government as a requirement for a community to receive SRF funds.

INNOVATIVE TECHNOLOGY/DEMONSTRATION PROJECTS

For many years, AMSA and WIN have supported the addition of provisions that will promote investment in 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. Title III, Section 302 of the bill establishes a demonstration program for water quality enhancement and management. We urge the Subcommittee to increase the $100,000,000 authorized for this important initiative, and to expand the types of projects that would be eligible for the program.

NAS RATE, AFFORDABILITY, AND DISADVANTAGED COMMUNITIES STUDY

We also recommend removal of S. 1961's provision at Title III, Section 303 for a National Academy of Sciences (NAS) study of public drinking and wastewater treatment system rates, affordability, and disadvantaged communities. The study would, among other things:

- Assess whether rates adequately address the cost of service and infrastructure replacement needs;
- Recommend best practices to establish rate structures addressing the "true cost of service" and the needs of disadvantaged communities and individuals;
- Evaluate existing standards of affordability;
- Describe how a "disadvantaged" community is determined in various parts of the country; and
- Assess how various factors affect whether a community is considered "disadvantaged."

AMSA believes the answers to many of these questions already exist and render the study unnecessary. We also are concerned that S. 1961 requires POTWs to make rate structure assurances, and the States to define "disadvantaged" through notice and comment rulemaking, well before this NAS study would be complete and its results examined. AMSA also does not believe it is the best use of the NAS' expertise

to study topics that not only have been studied by academics and social scientists across the Nation for many years, but also that are as locally driven and diverse as these issues.

SUMMARY OF AMSA'S KEY RECOMMENDATIONS

AMSA is pleased to provide the following summary of our recommended revisions to S. 1961:

- Fully fund the documented water infrastructure funding needs at an authorized level of $57 billion over 5 years using a combination of grants and loans, consistent with the WIN Report;
- Focus on core infrastructure needs;
- Recognize the national, environmental and public health importance of maintaining our nation's water and wastewater infrastructure;
- Allow all communities to take advantage of a 30-year or "life of the project" repayment schedule;
- Remove provisions allowing up to 45 percent of SRF dollars to be directed toward assistance to disadvantaged communities, low-income individuals, and asset management work. Instead, express the sense of Congress that SRF funds should be directed to needy communities and individuals in the States' discretion as they review and prioritize SRF fund applications, and that municipal asset management is an essential activity for which SRF funds may be used;
- Add provisions to truly streamline State funding procedures consistent with the bill's stated purposes, and to ensure the swiftest possible fund allocations for local infrastructure needs;
- Remove provisions making asset management a prerequisite for SRF funds and instead, include in the congressional statement of policy that asset management is encouraged;
- Remove provisions that introduce an inappropriate Federal and State role in the setting of local wastewater rates, utility partnerships, and land use planning;
- Increase the $100,000,000 authorization for the demonstration program for water quality enhancement and management, and expand the types of projects eligible for this program; and
- Remove the provision for a National Academy of Sciences study on public drinking and wastewater treatment system rates and factors creating disadvantaged communities.

CONCLUSION

The Water Investment Act of 2002 is an important first step toward reaching the $57 billion over 5 years needed to address core water infrastructure projects. The needs of communities across the Nation are not being met by EPA's current SRF program. AMSA believes that S. 1961 should be amended to streamline SRF requirements and to direct funds to support the core needs of our industry—infrastructure repair and replacement, and compliance with new and forthcoming regulatory requirements.

Wastewater agency executives like myself face our environmental challenges each day. Wastewater treatment plants operate 24/7 to provide secure systems, upgrade and replace our treatment plants and pipes, control sewer overflows and stormwater, protect wetlands, manage coastal areas, and meet a host of other water quality responsibilities. Simply stated, a lasting, long-term fiscal partnership with the Federal Government and the States is the answer to our call for assistance with this tremendous responsibility.

Chairman Graham, we look forward to working with you to modify S. 1961 to reflect our suggestions and those of other stakeholders in the coming weeks. Thank you for the opportunity to present AMSA's perspective on the bill. At this time, I will be happy to answer any questions.

STATEMENT OF ELMER RONNEBAUM, GENERAL MANAGER, KANSAS RURAL WATER ASSOCIATION FOR THE NATIONAL RURAL WATER ASSOCIATION

Good afternoon. Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to be here today to discuss small communities and their water funding concerns.

My name is Elmer Ronnebaum. I am General Manager of the Kansas Rural Water Association. We have more than 650 small community members that operate water utilities and most operate wastewater utilities. Kansas Rural Water Association is governed by the local communities. The mission of the Association is to im-

prove and protect water quality through grassroots technical assistance of utility operation and maintenance and training. Every community wants to provide the best possible water quality to their consumers. Rural Water provides the resources and training to achieve this objective in a common sense, hands-on manner systems can utilize. I have personally worked with hundreds of small communities in Kansas on problems ranging from securing SRF or other funding, to water supply, to explaining to a new operator or city council member what the Safe Drinking Water Act, the Clean Water Act, and the Federal Register are and what they require. Kansas Rural Water is similar to the State rural water association in each of your States. I am honored to speak on their behalf today.

On behalf of all small and rural communities, I would like to thank the Committee for your efforts to assist small communities with compliance with the Federal Clean Water Act and Safe Drinking Water Act and to provide the safe drinking water and highest quality of effluent possible. Rural Water looks forward to working with you to move these ideas into laws and actual dollars in the field.

The five principle dynamics of small communities that we believe need to be recognized in discussing funding policies are:

• One, that small communities make up the overwhelming percentage of water and wastewater utilities—over ninety percent of regulated communities.

• Two, that due to a lack of economies of scale, small town consumers often pay high water and sewer rates. Water bills of more than $50 for 5000 gallons of water are not uncommon in rural areas. This dynamic often results in very high compliance costs per household in rural systems. Simultaneously, the rural areas have a greater percentage of the nation's poor and a lower median household income. This results in very high compliance cost per household in rural systems coupled with a lesser ability to pay.

• Three, small systems often have limited technical and administrative resources to deal with compliance and navigate through funding programs. In the smallest systems, one person may run both the water and sewer system and in some cases communities can only afford a part-time or volunteer operator. This lack of resources makes small systems a challenge for State agencies—the more complicated we make funding programs the more likely the small communities, which need the funds most, will not be able to participate.

• Four, small community water systems have been the historical solution to rural families living without water. Small water systems were ONLY started to improve the public health. The result is dramatic improvements in public health by providing an alternative for families from gathering their drinking water from untreated streams, shallow and contaminated wells, roof collection and cisterns. In 2001, there are hundreds of thousands of rural families that still don't have piped water in their homes. Millions of rural families still have water delivered to their homes. According to the USDA at least 2.2 million rural Americans live with critical quality and accessibility problems with their drinking water, including an estimated 730,000 people who have no running water in their homes. About five million more rural residents are affected by less critical, but still significant, water problems.

• Five, consolidation and privatization are limited solutions for small systems. Consolidation can work in some situations, but only for a small portion of small systems and only when the systems are in close proximity and the economics make sense. Rural Water is the lead proponent of consolidation when it makes sense (when it results in better service for the consumer) and we have consolidated numerous communities in all the States. Consolidation and regionalization that is in the consumers' best interest will happen naturally at the local level regardless of Federal policy on issue. Federal policy that favors consolidation over the locally preferred solution is a step in the wrong direction for consumers (i.e. 42 U.S.C. Sec. 300g-3(h) Consolidation Incentive). Privatization is rarely a less costly solution for very small communities. In the very small communities it is, perhaps, more common to see private systems being transferred to public bodies so they can obtain better financing and local governmental control. The missions of private water and rural water systems are fundamentally different, the reason being the lack of profitability in sparse rural populations.

In 1996, another Senator from Idaho, Dirk Kempthorne, made a significant policy change in the Safe Drinking Water Act. At every opportunity, he ameliorated the Act by including as much flexibility as possible. Nowhere is this more apparent than in the State revolving fund section. Under the Kempthorne approach States were given all sorts of discretion on how to spend the money to meet their local priorities. For example, a State can make grants, can fund set-asides, expand technical assistance efforts, create new prevention programs, increase State staff, or choose to do none of these and retain the traditional low interest loan focus.

Small communities' message here today is that this was a monumental step in the right direction. This flexibility has made State SRFs better and more responsive to nearly every stakeholder. Small systems have seen a level of inclusion and benefits from the drinking water SRF that we could not imagine based on our experience with the wastewater SRF that does not include these flexible provisions.

Some State rural water associations have not been impressed with the way their State has chosen to utilize their discretion. Some States have steered funds to larger systems with less urgent needs, in their opinion, to make fund administration easy and keep bond ratings high. However, this is not a complaint that is appropriate for this committee. Those concerns are best handled in the States and each year locals have a better chance to improve their own State's program.

My State of Kansas is an exemplary case for success in SRF implementation. Many of our small systems are receiving large funding packages from the SRF. The State has made small system funding a priority in Kansas and we have expanded technical assistance to small systems. Assistance is also provided to help small systems through the funding process. The Kansas application for drinking water funding is streamlined and simple enough for a small system operator (with too little time and too much to do) to complete.

Also in Kansas, Mr. Kempthorne's creative experiment in policy ignited innovation in governmental programs. Our State's drinking water administration has exploited the provisions in the SRF to invent one of the best local-State partnerships in all of government. As you consider crafting new funding legislation, small and rural communities urge you to include a few key provisions dealing with flexibility and targeting of funding that have made the drinking water program more responsive to small systems.

Mr. Chairman, I would like to summarize the key elements for small and rural communities in modifying the wastewater the drinking water SRFs as follows: Make the wastewater fund more like the drinking water fund and put more money in both.

We urge you to include three legislative provisions in both water and wastewater that would ensure communities in the greatest public health and economic need receive prioritization in funding programs. One, the communities exhibiting the greatest need should receive funding first. Second, programs should not be limited to making loans because in many situations, small communities will not have the ability to pay back a loan—even with very low interest rates. Third, a minimum portion of the funds should be set-aside for small systems. This ensures that a State must set up a process for dealing with small communities. Once established, local pressures and priorities will determine the actual portion directed to small systems, which we expect will often be greater than the minimum prescribed. All of these provisions were included in some manner in the drinking water SRF—balancing the Federal priorities with the State's flexibility to tailor individual programs and discretion on implementation of each these programs.

The SDWA included the following three provisions to ensure that funds would result in the greatest advancement in public health/environmental protection and be used to assist the consumer with the most economic needs.

(1) A small system set-aside like the drinking water SRF (this serves as an incentive to create a useful process for outreach to small systems). *Section 1452 (a)(2) Use of Funds.*—Of the amount credited to any State loan fund established under this section in any fiscal year, 15 percent shall be available solely for providing loan assistance to public water systems which regularly serve fewer than 10,000 persons to the extent such funds can be obligated for eligible projects of public water systems.

(2) A requirement to target systems most in need like the drinking water SRF. *Section 1452 (b)(3)(A) In General.*—An intended use plan shall provide, to the maximum extent practicable, that priority for the use of funds be given to projects that—(i) address the most serious risk to human health; (ii) are necessary to ensure compliance with the requirements of this title (including requirements for filtration); and (iii) assist systems most in need on a per household basis according to State affordability criteria.

(3) Grants (some type of mechanism to make funding useful for hardship communities). *Section 1452 (d) Assistance for Disadvantaged Communities (1) Loan Subsidy.*—Notwithstanding any other provision of this section, in any case in which the State makes a loan pursuant to subsection (a)(2) to a disadvantaged community or to a community that the State expects to become a disadvantaged community as the result of a proposed project, the State may provide additional subsidization (including forgiveness of principal). (2) *Total Amount of Subsidies.*—For each fiscal year, the total amount of loan subsidies made by a State pursuant to paragraph (1) may not exceed 30 percent of the amount of the capitalization grant received by the State

for the year. (3) *Definition of Disadvantaged Community.*—In this subsection, the term 'disadvantaged community' means the service area of a public water system that meets affordability criteria established after public review and comment by the State in which the public water system is located. The Administrator may publish information to assist States in establishing affordability criteria.

Our specific comments on Senate Bill 1961 include:

1. We appreciate that the bill did not include new priorities for funding, set-asides for various size systems, and changes in the disadvantage community determination. We have been told that large system groups believe too high a percentage of the present drinking water SRF funding is going to small communities. However, a significant portion of the funding should flow toward small systems because, generally, they need it more. Rates are often much higher per household in small communities—often from compliance requirements. EPA rules on the horizon will likely triple water rates in rural systems. Also, rural communities often have lower median household incomes. The CWA and SDWA axiom in rural areas is: much higher cost per household with much lower income. No large system is facing cost increases on a per household basis comparable to what is facing small systems. It only makes sense that federally subsidized funding would flow toward the communities with the greatest need—that is to small systems.

2. We appreciate that the bill retains the three SDWA provisions (mentioned above) that ensure funding results in the greatest advancement in public health/environmental protection and be used to assist the consumer with the most economic need. This keeps the money tied to the regulations. Funds should be used for the greatest health protection, which should be what the regulations are targeting. To target funding for issues outside of the scope of the regulations would infer that the regulations are not covering the greatest health risks.

3. We urge the Committee to include the three SDWA provisions [sec. 1452 (b)(3)(A)—above] in wastewater program in a comparable form. This will ensure the more critical projects with the greatest need receive priority.

4. We urge the Committee to include the same set-aside amounts for the wastewater and drinking water programs; 15 percent minimum for small systems as like the drinking water program and 30 percent disadvantaged community subsidy like in the drinking water programs. This parity will ensure States have the tools to help the systems most in need and will be especially important if the two funds have transfer authority between them.

5. Corporate water systems should not be eligible for State revolving funding. Taxpayer subsidies should be prohibited from profit generating companies or companies paying profits for shareholders/investors. Private companies argue that they have to comply with the same regulations. However, they voluntarily chose to get into this "business" and compliance is not the over-riding principle that should be considered in this discussion. We believe that the distinction in mission between public and private is the core principal that should be considered. Private systems are in the business to maximize profit. Public water utilities were and are created to provide for public welfare (the reason why public water continues to expand to underserved and non-profitable populations). This is a significant difference. And while we believe that maximizing profit is a noble virtue and as American as safe water, we do not think that taxpayers should help the cause of privately owned systems. In addition, the needs of less affluent public water systems and families with no piped water dwarf the current SRF allocations. The State of Florida has a novel compromise to this issue. Florida limits SRF funds to private water systems less than 1,500 people—ensuring funds are limited to the class of private water systems that did not get into the business as a corporate enterprise. Also, this group of private systems could be included in the State's needs assessment which determines allocations under the bill.

6. The bill includes many new requirements for applicants including: environmental, land use planning, capacity, actual cost of water, common industry practices, etc. We urge you to exercise caution for increasing demands on applicants as each new demand makes the process too complicated for small systems and therefore less attractive. We believe that the current review process is fully adequate to ensure repayment of loans, progressive environmental planning, and long-term capacity of applicants. Nationalizing policy industry practices and determining actual cost of water could lead to gold-plating of water utility practices which is not in the best interests of consumers.

7. We urge the Committee to limit the ability of any portion of a water or wastewater system to be eligible for disadvantage type subsidies or other special treatment. To assist any portion of a system moves the effort from an environmental-public health program to a social program. If particular low-income consumers are having problems paying their water bills, we don't think the SRF should be used

as the solution. That may be an issue for agencies other than the EPA. It is important to note that a State can determine a large system disadvantaged as well as a small system. Funding a portion of a system seems to be a way to skirt the current process which is working so well at prioritizing systems most in need. Also, this moves the SRF in a direction contrary to the CWA and the SDWA's regulatory structure which only applied on a system-by-system scope.

8. We urge the Committee to consider including provisions guiding the percent of a project that can be used for engineering/consulting services on projects. USDA has such a provision [*Part 1780-Water and Waste Loans and Grants,* § 1780.39(b) Professional services and contracts related to the facility]. In Kansas, our research shows that engineering fees are sometimes charged at twice as much in programs that don't have such guidance on engineering fees.

9. It is not clear exactly what defines "public-private" partnerships. This may be too ambiguous and means various things to various people—left open to EPA or State determinations may result in unintended consequences. Also, the States are doing a fine job of public outreach under the current rules. Before requiring more "significant" public outreach, we should first conclude the current is not working (which states and why would be useful information).

10. The proposed wastewater program is limited to "municipal" systems and privates. We urge you to consider opening it up to a variety of non-profit systems including districts and other quasi-governmental systems, which we believe was intended and is consistent with the drinking water programs. Many rural wastewater systems are not legally municipalities, but rather district or other non-profit utilities.

11. We urge the Committee to consider allowing States the discretion to 30 years loans to any small community—not just to communities designated disadvantaged.

The coming arsenic rule will increase the number of small systems facing funding challenges. Dozens of small systems in Kansas (thousands across all the States) will need funding to comply with the arsenic regulation.

One municipality in Kansas that will be greatly affected by Arsenic Rule, established at 10 ppb, is the city of Atwood (population of 1,300) surrounded by farmland and an agricultural economy.

Past arsenic water quality results for the city of Atwood has shown a range of 12 to 18 ppb in the three currently used municipal wells. The proposed arsenic MCL of 10 ppb allows the City two general feasible options to attain the MCL. The community has an option to develop new well fields in the Ogallala formation located several miles from the community. However, while Ogallala formation generally provides better water quality and perhaps an arsenic concentration below the 10 ppb, it is a much more cemented and finer formation. This fine formation decreases production of wells. Thus to develop a sufficient municipal water supply, more area for wells is required since they must be a greater distance apart. The estimated cost of this option would be $2,200,000 based on a 5-mile transmission main with four wells to meet daily water demand. A second option available is treatment of the existing water supply sources.

The city presently does not have a single point of entry into the distribution system. Each well is directly connected into the distribution system. All wells are located in separate areas of the existing system. Over 3,000 feet of distance exist between the two farthest wells. In order to implement a point of use treatment plant, a new dedicated transmission main would have to be constructed between the wells. Land and easements would have to be procured to build a treatment facility. Atwood's sulfate concentrations in the range of 90 to 309 mg/L will affect treatment efficiencies in an ion exchange process requiring frequent regeneration. This creates higher operation and maintenance cost (O&M). The estimated treatment facility cost would range from $1,300,000 to $2,100,000 depending on the Best Available Technologies (BAT) selected. Atwood could experience a budget increase of $50,000 to $75,000 per year with the incorporation of a treatment plant. These budget increases are due to operation and personnel requirements. Special by-product disposal requirements could require more operation costs.

In order to provide funding for capital construction and O&M assuming a 5 percent interest rate and 20-year loan period that corresponds with the life of a treatment facility with 700 connections, the monthly water rate would have to increase by $18 to $29 per connection. Again, please keep in mind this does not include the current water rate and upgrades currently necessary to keep the system in compliance. [Miller & Associates Consulting Engineers, P.C., McCook, NE 2001]

This is a conservative estimate and does factor in all the costs for compliance. Rate increases on this type of a community could be devastating.

However, Mr. Chairman, while no system will be in greater need for Federal assistance than Atwood, KS the challenge is how to craft a funding program that will

work for those most in need. Cost estimates of the funding needed to sustain a healthy U.S. water supply are staggering. The Water Infrastructure Network, of which Rural Water is a member, estimates an $11 billion annually funding gap over the next 20 years. This estimate is over 4 times the current combined Federal contribution in the USDA, EPA Drinking Water, and EPA Wastewater programs.

Rural Water is not the type of organization that can present an accurate cost figure on the future need for funding. However, we can acknowledge the extreme shortfall in both EPA SRF and the USDA water programs, as indicators that the current needs are not being met. The USDA program, which is the core-funding program for small water and wastewater projects, is currently experiencing a $3.2 billion backlog. We believe this is the most accurate indicator of need because all of the systems in USDA's backlog have applied for funding. They have met the requirements of USDA's strict needs requirement (including lack of commercial funding availability and high ratios of median household income to water rates).

In addition to this current need, EPA is proposing more regulations. Many of the regulations will force small towns to come up with millions in financing—many systems will be stressed to comply. I think it is significant to observe a new dynamic in EPA regulations: the regulation of naturally occurring contaminants and the regulations of operations and maintenance in utilities. The result of this new effort by EPA will be to greatly expand the number of systems forced into costly compliance with EPA rules. For example, very few systems were required to treat for EPA's previous rules on organic contaminants, many with anthropogenic origins. However, the forthcoming arsenic rule could capture as many as 4,000 communities; this will greatly drive the demand for additional funding resources. Upcoming EPA rules that may be expensive in thousands of rural communities include: standards for certification of operators, filter backwash, radon, surface water treatment rules, arsenic, disinfection byproducts, groundwater disinfection, etc.

STATEMENT OF HOWARD NEUKRUG, DIRECTOR, OFFICE OF WATERSHEDS, PHILADELPHIA WATER DEPARTMENT ON BEHALF OF THE AMERICAN WATER WORKS ASSOCIATION

INTRODUCTION

Good morning Mr. Chairman. I am Howard Neukrug, Director of the Office of Watersheds for the Philadelphia Water Department in Pennsylvania. The Philadelphia Water Department is a municipal water, wastewater and storm water utility serving over two million people in the Philadelphia metropolitan area. I serve as the Chair of the American Water Works Association (AWWA) Water Utility Council (WUC). I am here today on behalf of AWWA. AWWA appreciates the opportunity to present its views on S. 1961, Water Investment Act of 2002 and drinking water infrastructure needs.

Founded in 1881, AWWA is the world's largest and oldest scientific and educational association representing drinking water supply professionals. The association's 57,000 members are comprised of administrators, utility operators, professional engineers, contractors, manufacturers, scientists, professors and health professionals. The association's membership includes over 4,300 utilities that provide over 80 percent of the nation's drinking water. AWWA and its members are dedicated to providing safe, reliable drinking water to the American people.

AWWA utility members are regulated under the Safe Drinking Water Act (SDWA) and other statutes. AWWA believes few environmental activities are more important to the health of this country than assuring the protection of water supply sources, and the treatment, distribution and consumption of a safe, healthful and adequate supply of drinking water.

AWWA and its members commend you for introducing S. 1961 to address the growing needs facing public water systems and their customers in the coming years. In previous testimony before this committee last year and in our report entitled *Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure*, that we provided to all members of the Committee, AWWA called for a new partnership for investing in drinking water infrastructure. AWWA recommended changing and expanding the existing Drinking Water State Revolving Fund to significantly increase Federal funding for projects to repair, replace, or rehabilitate drinking water infrastructure to include the aging distribution pipes. We are pleased that many of our recommendations have been incorporated into S. 1961. We appreciate the time and consideration given to drinking water suppliers by the committee staff in the drafting of this bill. AWWA looks forward to working with the committee to continue making improvements and to see this bill passed and signed into law this

year. In our testimony today, we will confine most of our specific comments to the Safe Drinking Water Modifications in Title II of the bill, with a general comment about wastewater funding issues.

FEDERAL MANDATES AND THE CONTEXT FOR WATER AND WASTEWATER FUNDING ISSUES

Both drinking water and wastewater utilities face enormously expensive Federal mandates that set the context for all other funding issues. The drinking water community faces a complex array of expensive new Federal requirements and new standards, including standards for arsenic, radon, disinfection byproducts, enhanced surface water treatment, and others. Wastewater utilities also face enormously expensive Federal mandates, such as those relating to Combined Sewer Overflows (CSO) and Sanitary Sewer Overflows (SSO). For both water and wastewater utilities, these needs significantly skew financing for other investments, including the replacement of aging pipes, appurtenances, and other infrastructure. Local ratepayers are often seriously challenged to pay for these mandates, and little, if any, room is left in the ratepayer's budget for other vital spending. In many cases, it appears that mandatory spending for clean water mandates has "driven out" the ability to raise rates for drinking water services.

We believe that significant Federal assistance, including grants, is necessary and justified to help meet the cost of these very expensive Federal mandates on water and wastewater utilities, and to meet the costs of infrastructure repair and replacement that have been, in many cases, deferred because Federal mandates have consumed the ratepayer's budget.

We would point out that, in the case of CSO and SSO mandates, Federal support for the cost of those requirements is not only justified in the community receiving Federal support, it also lowers costs for drinking water utilities downstream in the form of improved water quality. This is especially true in critical source water protection areas.

DWSRF AUTHORIZATIONS

AWWA applauds the increase in authorizations for the Drinking Water State Revolving Fund (DWSRF) capitalization grants from the current $1 billion per year to $6 billion per year in fiscal year 2007. This represents more than a threefold increase in total authorized funds above the current authorized levels for this period of time. We believe that this authorization marks a significant step by Congress toward assisting in the enormous challenge public water systems and their customers face in meeting Federal mandates and at the same time replacing aging distribution pipes in the coming years. As illustrated in AWWA's report entitled *Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure*, the "demographics" of pipe replacement is real, it is big, and the bill is coming due soon. This challenge is exacerbated by population shifts and growth patterns over the years, economic conditions and the changed demographics of urban populations. While AWWA certainly appreciates the significant increase in Federal funding for the DWSRF, we must note that the authorization is a very small fraction of the $250 billion in infrastructure replacement needs identified by AWWA. And even if every penny of the funds in this bill is appropriated and every State gives out loan subsidies to the maximum extent allowed under the bill, Federal loan subsidies will amount to less than 4 percent of total spending by drinking water utilities over the coming 5 years. It is clear that the burden of paying for public water system improvements will remain overwhelmingly with utilities and their rate-paying customers.

In recognition of these facts, we believe that, if the needs of older cities with large economically disadvantaged populations are to be met, an increase in the authorization is warranted. The Water Infrastructure Network has recommended an authorization of $57 billion over 5 years, and we ask you to consider that level of funding. We look forward to working with the committee to ensure that authorization levels will be adequate to address the needs of older cities with economically disadvantaged populations.

LARGE PUBLIC WATER SYSTEMS

AWWA does not believe that S. 1961 adequately addresses the challenges presented by large urban public water systems and particularly those with declining and economically disadvantaged populations. In Section 203, the bill authorizes up to 15 percent of a State capitalization grant to be used for subsidizing the water bills of economically disadvantaged customers. AWWA believes that is a significant step forward for the Nation. However, during the short history of the DWSRF, large public water systems have not been receiving a fair share of SRF loans. According to EPA, States have made approximately 75 percent of all SRF loans to small com-

munities. In per capita terms, assistance to very small communities has averaged over $400, while loans to large communities (with over 100,000 people) have averaged a little over $50 per capita.

Committee staff has told AWWA that they believe that the overall increased authorization for the DWSRF will provide States the ability to provide assistance for more projects and thus be able to provide more assistance to large public water systems than was possible previously. AWWA is not convinced that the authorization levels in this bill are sufficient to ensure this will happen.

Current law mandates that 15 percent of a State capitalization grant shall be reserved for small systems serving populations under 10,000 to the extent that such funds can be obligated for eligible projects. AWWA supported that set-aside in 1996, to ensure that small systems could participate in the loan program. We did not anticipate that large systems would be left out of the program, relatively speaking, and there is no corresponding set-aside for large public water systems serving populations over 100,000. As noted, the bulk of DWSRF funding is going to small systems. To assure that systems of all sizes can participate in the SRF program, AWWA believes that a corresponding set-aside of 15 percent of a State capitalization grant should be reserved for public water systems serving a population of 100,000 or more, assuming there are eligible project applications. This will ensure that large system can participate in the DWSRF program in all States.

ELIGIBLE PROJECTS

Aging Infrastructure.—As mentioned in the introduction in the AWWA report entitled *Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure*, AWWA recommended changing and expanding the existing Drinking Water State Revolving Fund to significantly increase Federal funding for projects to repair, replace, or rehabilitate drinking water infrastructure to include the aging distribution pipes. This, we believe should be the major purpose of the increased DWSRF authorizations. However, S. 1961 makes no mention of this purpose for the DWSRF. In discussions with committee staff, the staff notes that the U.S. Environmental Protection Agency (USEPA) has interpreted the current provisions of the Safe Drinking Water Act (SDWA) to authorize the use of DWSRF funding for the replacement and rehabilitation of aging distribution pipes as furthering the health protection objectives of the SDWA as authorized in Section 1452 of the Act. While this interpretation of the SDWA is welcome, it is not universally accepted. Nor does it signal EPA and the States that the Congress believes repair and replacement of aging infrastructure is an important priority. AWWA recommends that the DWSRF eligibility of projects for the replacement and rehabilitation of aging distribution system pipes and appurtenances be made explicit in the statute.

Security Upgrades.—Since September 11, 2001, AWWA has been advocating for Federal assistance for public water systems to help pay for security upgrades to protect public water systems from terrorist attack. Since that time events have validated this concern, and water utilities are undertaking comprehensive vulnerability assessments and emergency planning to protect both water quality (for health protection) and water supply (for fire suppression and sanitation). Of note are documents found in the possession of al Queda terrorists in Afghanistan that could be used to help plan an attack on a drinking water utility. Security concerns thus represent a large, immediate, and unprecedented cost for public water systems. AWWA strongly recommends that bill make explicit the DWSRF eligibility of capital projects to address security concerns.

In discussions with committee staff, staff notes that the U.S. Environmental Protection Agency (USEPA) has interpreted the current provisions of the Safe Drinking Water Act (SDWA) to authorize the use of DWSRF funding for security upgrades as furthering the health protection objectives of the SDWA as authorized in Section 1452 of the SDWA. While this interpretation of the SDWA is welcome, it rests on interpretation and is subject to change. Moreover, it does not signal that Congress believes capital projects to address security concerns should be priority projects for DWSRF funding. We strongly recommend that Congress send that signal to both EPA and the States.

Source Water Protection.—We applaud the provisions of the bill that authorize the use of DWSRF moneys to support source water protection projects. It is increasingly important to consider source water protection as an integral part of utility resource planning, and to do so on a watershed basis. Many utilities have been in the forefront of doing this, and the ability to use DWSRF funds to support source water initiatives can be of significant assistance in those efforts.

ADDITIONAL SUBSIDIZATION

AWWA endorses the intent of Section 203 concerning additional subsidization for disadvantaged users. AWWA believes this is a significant step forward to address the affordability of drinking water for economically disadvantaged drinking water customers. AWWA remains committed to the principle that utility operations should be fully supported by rates in the long run. This provision will enable a public water system to charge higher rates if they are appropriate, without placing an unacceptable burden on economically disadvantaged customers.

However, we believe it is important to ensure maximum flexibility in how this provision is carried out. Many public water systems currently provide some form of rate subsidy for their economically disadvantaged customers. This is done in a variety of ways. AWWA wants to ensure that this flexibility remains, and that no public water system is mandated to create a bureaucracy to administer what is essentially a social welfare program that is beyond the capability and expertise of most public water systems. Many public water systems contract with a third party, such as a community service organization, to administer their rate subsidy programs. AWWA recommends that Section 203 be amended to clarify that a public water system has flexibility in how to meet this requirement, including contracting with third party organizations.

NEW DWSRF LOAN REQUIREMENTS

AWWA has recommended streamlining many of the requirements and procedures for obtaining loans from the DWRSF. With respect to the bill, we believe careful attention is required to strike an appropriate balance between Congress' desire to encourage certain behaviors at utilities, and the need to keep the SRF as unencumbered as possible by unproductive red tape. Congress or EPA should exempt certain types of projects or projects below a certain size threshhold from SRF red tape requirements that don't make sense. For example, under current law SRF funds may not be used for growth. In a project that is not directed at (and with certain very tight exceptions cannot even anticipate) growth, it is not clear why it makes sense to require consultation with regional transportation planners, etc. A requirement to do so simply makes the whole notion of SRF funding less attractive for that project, without advancing any reasonable social goals. Similarly, capital investments to improve the security of the nations' drinking water should be exempt from "red tape" to the maximum extent possible. We believe that Section 202 requires significant review with this in mind.

Planning and Engineering Phase Requirements.—AWWA recommends deleting the requirements identified for consideration during the planning and engineering phase of SRF projects. These are inappropriate Federal requirements for a DWSRF loan. If a public water system is otherwise financially sound, can repay the loan, and can comply with applicable drinking water regulations, these requirements are irrelevant and an additional burden to obtaining a loan. The Federal requirement to consider consolidation, public-private partnerships and the use of non-structural alternatives or technologies is redundant to State requirements in most cases. AWWA believes that public-private partnerships are an appropriate utility management option; however, this is a local decision based on local circumstances. These requirements involve local planning and open the door for inappropriate Federal involvement in local decisions. These provisions add nothing to improving or streamlining the DWSRF and are an invitation to Federal one-size-fits-all requirements.

Rate Structure Requirements.—AWWA remains committed to the principle that utilities should be self sustaining through their rates. In the long run, the objectives must be to manage the costs of replacing pipes and treatment plants and ensure financial sustainability through local rate structures. However, AWWA wishes to ensure that the provisions of S. 1961 do not lead to inappropriate Federal involvement in local rate setting. Particularly in light of the enormously expensive Federal mandates mentioned earlier, there are cases in which recovering the full cost of service through rates may not be possible in the short term at rates that are acceptable and affordable. We recommend that public water systems review their rates as a condition a DWSRF loan. After the National Academy of Sciences report on rates (as required in Section 303 of the bill) is published, USEPA should provide the report to States and drinking water utilities. AWWA would strongly oppose any requirement that would involve the Federal Government in reviewing or approving drinking water rates.

Asset Management.—AWWA advocates that public water systems have an asset management plan as part of good utility management. However, it is important to ensure that the provisions of S. 1961 do not lead to Federal micro-management, such as review or approval of these asset management plans. One way to accom-

plish this is to make the provision a "self certification" requirement with no USEPA or State role in judging the method by which the asset management plan was developed or its adequacy.

Local Planning Requirements.—AWWA believes that this provision requires clarification as to what is intended and how the provision would be implemented. It appears to only require consultation in "appropriate" circumstances but it's not clear who determines what is "appropriate." Moreover, as noted above, many projects for which utilities might seek SRF support are not likely to be connected in any meaningful way to growth or open space considerations. At a minimum, those projects should be exempted, and for other projects, the requirement should be satisfied by a certification that utility has consulted with other local agencies as it deems appropriate.

COMPETITION REQUIREMENTS

AWWA recommends that Section 205 concerning competition requirements be deleted from the bill. The provision appears to come from the old construction grants program of the Clean Water Act and has no place as a Federal mandate for a drinking water loan program. This provision that governs utility procurement would get the Federal Government into local procurement decisions. The provision is redundant because every States already has procurement procedures in effect. Rather than streamlining the DWSRF, this provision is an unnecessary encumbrance on the DWSRF that we cannot endorse.

RESEARCH AND DEMONSTRATIONS

S. 1961 includes several provisions relating to research and demonstrations, including the demonstration program in Section 302, the rate study in Section 303, and the water resource planning provisions of Section 401. We believe it is critical that the public water supply community be substantially involved in planning and carrying out those sections of the bill to ensure that the research is relevant, credible, and coordinated with other drinking water related research efforts. The American Water Works Association Research Foundation (AWWARF) is the internationally recognized research organization of the drinking water community. With over $37 million in Federal support over recent years, the AWWARF has leveraged almost $260 million in total research on both technical and policy issues facing drinking water utilities. AWWARF should select and manage several of the demonstration projects under Section 302, carry out the rate study under Section 303, and have substantial involvement in the water resources study under Section 401.

CONCLUSION

How we address our emerging drinking water infrastructure needs is a critical question facing the Nation and this Congress. America needs a new partnership for reinvesting in drinking water infrastructure. There are important roles at all levels of government.

AWWA does not expect that Federal funds will be available for 100 percent of the infrastructure needs facing the nation's water utilities. However, AWWA does believe that due to concurrent needs for investment in water and wastewater infrastructure, security projects, replacement of treatment plants, new drinking water standards, and demographics, many utilities will be very hard pressed to meet their capital needs without some form of Federal assistance. Over the next 20 years, it is clear that Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) compliance requirements and infrastructure needs will compete for limited capital resources. Customers are likely to be very hard pressed in many areas of the country. Compliance and infrastructure needs under the SDWA and CWA can no longer be approached as separate issues. Solutions need to be developed in the context of the total drinking water and wastewater compliance and infrastructure needs.

AWWA believes that S. 1961 is an appropriate first step to achieving these goals. In our testimony we have made recommendations that we believe will improve the bill. AWWA pledges to work with Congress to develop a responsible and fair solution to the Nation's growing drinking water infrastructure challenge. We thank you for your consideration of our views.

This concludes the AWWA statement on S. 1961, Water Investment Act of 2002. I would be pleased to answer any questions or provide additional material for the committee.

STATEMENT OF TOM MORRISSEY, PRESIDENT, ASSOCIATION OF STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATORS

Mr. Chairman, Members of the Committee and Subcommittee, my name is Tom Morrissey. I am the President of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) and Director of the Planning and Standards Division for the Connecticut Department of Environmental Protection.

I would like to provide a little history as a backdrop to the Association's testimony here today. In the early 1980's, representatives of our organization, along with the then chair of the National Governors' Association (NGA), were called to the White House to discuss the future of the construction grants program. The $5 billion program authorized by Congress for the construction of wastewater treatment facilities was under attack. The Director of the Office of Management and Budget told the State officials that the Administration intended to phaseout the grants program. OMB's Director said that if there was to be any subsidy for municipal wastewater treatment works, States and Congress would have to find a better vehicle. From the Administration's perspective, the grant program had lost credibility and was too expensive, too burdensome and a drag on the national economy.

NGA and ASIWPCA took OMB's counsel to heart, as did a member of this Committee (John Chafee (RI), Mack Mattingly (GA), David Durenberger (MN), etc.). Congress and the States met the challenge, drafted legislation in early 1987 and the Clean Water State Revolving Loan Fund (CWSRF) was born. The CWSRF has become one of the most successful Federal public works programs in history, which is attributable to its careful design as a streamlined, State-based program. Senate and House authors intended to address the vast array of State Water Quality Program priorities under a States' Water Program fund.

Having just passed the 15th anniversary of the last Clean Water Act reauthorization, we have had sufficient time to build and document a track record of SRF success. We know, for example, that projects are built in half the time than those constructed under the Federal grants program. We know that the CWSRF has saved taxpayers hundreds of millions of dollars and we know that, with each Federal dollar, there has been an almost equal contribution at the State level. Since 1987:

- More than $18.3 billion in Federal funds have been awarded and $37.7 billion is currently available for program use.
- States have made over 10,919 loans totaling over $34 billion.
- 25 percent of assistance agreements were for nonpoint source (NPS).

Communities Funded by the CWSRF Since 1987	Assistance Agreements	Loan Amount [in billion of dollars]
Up to 9,999 population	6499 (60 percent)	$8.2
10,000—99,999 population	3175 (29 percent)	12.5
Over 100,000 Population	1245 (11 percent)	13.7
Total	10,919	$34.4

Mr. Chairman, States are committed to the Clean Water State Revolving Loan Fund, because it has met and exceed the expectations set by its creators.

1. To provide funding to address State water quality program priorities,
2. To develop a funding mechanism that would revolve and provide a perpetual source of support and
3. To establish the States as the program lead to manage and operate the Fund.

ASIWPCA believes that in reauthorizing the CWSRF to it is vitally important:

- Increase funding for the program,
- Assure the SRF remains competitive in the financial market place,
- Maintain a streamlined program, and
- Enable States to direct the funding to priority water quality needs.

THE WATER INVESTMENT ACT OF 2002 (SENATE BILL 1961)

The Association takes great pride in the fact that the CWSRF program continues to enjoy the strong support of the Administration, the Congress and this Committee. We appreciate the Committee's effort to develop S. 1961 and hold hearings. And, Mr. Chairman, as we have discussed with you in prior meetings, ASIWPCA appreciates your leadership in developing Year of Clean Water Legislation to commemorate the 30th anniversary of the Clean Water Act. The goals of S. 1961 are laudable

and the bill, if enacted, could advance the program in key areas particularly related to:

- Increased CWSRF funding authorization levels,
- Expanded eligibilities,
- Extended loan repayment periods,
- Expansion to forgive principal in hardship situations, and
- Fund transfers between the Clean Water and Drinking Water SRFs.

These enhancements will, for example, better enable States to address small communities, onsite systems, nonpoint source pollution, urban stormwater and combined sewer overflows.

As appreciative as we are of the Senate Committee efforts to enhance the CWSRF, our hope and expectation was that this proposed legislation would modernize and minimize the program to make it more user friendly. To the contrary, we note certain provisions that appear to make matters more difficult by adding greater complexity. The Association does have some concerns relative to effective implementation. Some of these provisions pertain to:

New requirements that need to be simplified and reduced.—The cumulative effect of S. 1961's provisions would seriously weaken the effectiveness of the CWSRF. The coordination required between State water quality and State SRF programs will be extensive at many levels. In some instances, we question the necessity of the new requirements, since there is no compelling demonstrated need. Overall, we are concerned that some of the new requirements will lead to extensive bureaucracy, burdensome implementation and oversight, project delay, increased costs and potential litigation. These concerns primarily relate to provisions on:

- Consistency with local land use and other plans,
- The State priority system and intended use plan, and
- Federal requirements for State regulation of local technical, management and fiscal capacity building through CWSRF loan assistance.

The significant increase in State management and administrative burdens that should be addressed.—The additional administrative and regulatory requirements will be very costly unfunded mandates, will slow the program and will yield minimal, if any, water quality improvement.

The need to recognize that the CWSRF is a financing mechanism focused on addressing priority water quality problems.—States are held accountable for pollution abatement and control, yet several provisions in the bill would suggest that the CWSRF become a panacea for solving environmental, management, development and social issues.

Mr. Chairman, we recognize and appreciate the fact that this bill represents the collective work of a lot of fine minds, those who care about clean water. However, unless you are on the front lines of day-to-day CWSRF implementation, it would be difficult to know that the collective impacts of many of these individual provisions would have serious and unintended negative consequences. The CWSRF's competitiveness as an effective tool to accomplish environmental results must not be weakened in any significant way. Unless refinements are made, provisions of S. 1961 will be perceived by a significant number of potential recipients as so onerous as to outweigh the value of CWSRF assistance. Again, we are looking for modernization and streamlining of the existing program.

The Association strongly urges the Committee to consider the enhancements recommended by the State professionals who have the responsibility for the success of the SRF. And, because the States and our ASIWPCA membership have had limited time to review the bill in detail, additional suggestions may be forth coming.

ASIWPCA RECOMMENDATIONS

SRF Authorization Funding: We applaud the Committee for the increased authorization levels and we look to this Committee to work through the appropriation process to secure ultimate approval by Congress for S. 1961's higher levels of funding. Infrastructure needs under the Clean Water Act (the Act) are well in excess of $200 billion and the bill represents a significant move in the right direction.

Eligibilities: We are encouraged that the bill supports coverage of facility siting, related elements and other new coverage. We urge that the Committee also recognize the following:

- The need to support restoring impaired and addressing threatened waters (implementation of TMDLs and watershed protection plans should be broadly eligible).
- States need CWSRF funds to support technical assistance—this workload will increase significantly under S. 1961.
- The need to minimize the distinction between point and nonpoint source projects which inhibits State ability to address priority water quality problems.

There are necessary and worthwhile improvements (such as facilities and best management practices for concentrated animal feeding operations (CAFOs), which should be eligible for CWSRF assistance.

• The State's lead role (e.g., Sections (1)(C and D) should read: "water quality benefits as determined by the State").

• The need to protect the corpus of the fund, (e.g., "Private utility" may be more appropriately changed to "privately owned system").

Maintenance of the Fund: The language in (c)(2)(B) needs to clarify what constitutes "balances in the fund." States are uncertain what the term means.

Loan Terms and Repayments: 40-year loans should be allowable with the same condition, i.e., that the loan term cannot be longer than the project life. Interceptor sewers and collection systems can last 40–50 years.

We recommend that this Section 603(d)(1)(D) on repayments be changed to read "A State shall determine that the recipient of a loan has provided a dedicated source of income, and as appropriate adequate security, for the repayment of the loan." The proposed language in S. 1961 could be read to require septic tank owners to provide security for loans. It also seems to require all private systems to demonstrate security. Further, it restricts the security requirement only to privately owned systems, whereas the intent should be that all loans are adequately secured, as necessary.

Meeting Hardship Community Needs: States strongly support principal forgiveness. We appreciate the Committee's recognition that the definition of disadvantaged community should be a State responsibility.

• States support the goal of addressing hardship needs within larger community jurisdictions. However, we have some concerns relative to the wording in Section 103(c)(8) of S. 1961 on dealing with communities to charge different rates on the basis of user income levels (pockets of hardship). This appears to be an open invitation to litigation. It should be left to each State to decide how to craft an approach to get to this issue under the framework of disadvantaged community.

• We need to be cognizant of the fine line States need to walk between meeting hardship needs, which under S. 1961, could take up to 45 percent of the annual capitalization grant and the importance of protecting the corpus of the Fund.

Administrative Costs: Increasing the percentage of capitalization grants which can be used for State administration of the CWSRF from 4 percent to 5 percent is helpful, but falls short of the amount needed to cover CWSRF administration in the current program. This need would be exacerbated by the new responsibilities S. 1961 imposes on the States. Should capitalization end or be held in abeyance, no funds would be available for administration. Several options should be considered:

• Increase the percentage (e.g., up to 4 percent of the authorization and State match); allow States to use up to ½ percent of the CWSRF's current valuation (the total assistance outstanding plus any funds available for new loans, including State match); or allow States to use up to $400,000 per year—which ever is greater. (However, to the extent that S. 1961 contains new requirements, these levels will need to increase)

The Act should allow fees and surcharges collected by a State for CWSRF administration to be deposited in the fund to help defray administrative costs.

Community Development: Applicants should be able to certify as to consultation/coordination, but shifting the burden to the CWSRF to "ensure" they do so in a certain way is an unreasonable and difficult standard to meet.

• Requirements for clearinghouse review by the local planning agencies already exist. The Act requires coordination with all water quality plans; if land use plans, especially those designed to encourage smart growth, have been prepared—local entities are required to comply. The States question what more is envisioned and what problem this provision is designed to resolve.

• With the addition of a significant number of new requirements, ASIWPCA has concerns about the potential for significant delays in program implementation at the State and Local level.

Priority System Requirements: The proposed changes to the States' priority systems should be minimized, because such a major restructuring will delay project funding, divert staff and resources and, is frankly not necessary.

• The development of the State's priority system and intended use plan already involve extensive public outreach and involvement. The requirement for "significant public outreach" (a new and undefined term for the Act) should be deleted. It implies a level of intensity that will be difficult to achieve and will undoubtedly delay and over complicated the CWSRF program. States feel strongly that the CWSRF should not be held to higher standard than other existing Clean Water Act programs.

• States are required to use ranking criteria that are extensive, well documented and emphasize environmental benefit. The CWSRF is a primarily mechanism States

have to focus limited resources on TMDL implementation in impaired waters and a extensive water quality information feeds into that process. It is reasonable for the CWSRF to consider relevant information in the 305(b) report. States and USEPA are investing significant time and resources integrating the 305(b) report and the 303(d) listing process. S. 1961 should not have the CWSRF move in a different direction, duplicate other efforts or use a different standard with no demonstrable improvement in water quality. (States should not be required to "take into consideration all available water quality data", because this is too ambiguous, differs from how data is considered in the water quality program and invites litigation.)

• Under the proposed S. 1961, there appears to be little to no latitude to consider critically important factors, including readiness to proceed. Is the Senate promoting a strict funding in priority sequence? The bill appears to also be in conflict with the existing statute and the current State priority systems, which are based on water quality contributions, rather than project type. The bill should be modified accordingly. If our national goal is clean water, then programmatic decisions need to be based on water quality improvement.

• It is beneficial to prioritize Section 319 and 320 projects. However, requiring one integrated priority ranking system for Section 319, 320 and 212 projects may, in some States, diminish the ability to fund 319/320 projects, because they may not rank well in such a competitive process. To develop and implement a successful program overall, States need to be able to prioritize 319 projects with other similar projects.

• Requiring States to identify and prioritize each and every Section 319 project upfront (with schedules) in the yearly priority funding list is a major change and is close to impossible to implement, because such details are often not known that far in advance. We question what it means to require States to publish a summary of projects every 2 years and how that differs from the lists currently required. This program needs to be simple, straightforward and unintrusive if we are to expect and secure the participation of the nonpoint source community. It would be desirable for States to accept applications from farmers on a monthly basis.

• S. 1961 in Section (g) (4) should clarify that the determination of "optimum water quality management" is a State decision.

TECHNICAL, MANAGERIAL AND FINANCIAL CAPACITY

We agree with the Committee that there is a need for capacity building. Loan recipients should be required to demonstrate the ability to effectively manage their wastewater system and successfully repay loans. However, ASIWPCA is concerned that S. 1961 goes beyond what is reasonable and realistic. The Association would suggest that this provision be streamlined, because as currently written, it entangles the program in extensive, unnecessary and burdensome bureaucratic process. In addition:

• We question whether the CWSRF is the appropriate tool to accomplish this objective and whether it is fair to hold recipients of CWSRF funds to a higher standard than other facilities, including those funded annually under set asides or site specific appropriations. We also question the equity of placing such requirements on CWSRF loan recipients that own treatment works—while not imposing such mandates on owners of collection systems or interceptor sewers.

• States, under the leadership of the National Governors' Association have consistently raised concerns about Federal unfunded mandates. If S. 1961 were to be enacted, higher levels of funding would be necessary to carry out these provisions.

• ASIWPCA remains concerned about the long-term integrity of the fund corpus. Each requirement has the potential to erode the fund and hence limit the utility of the SRF. To make CWSRF funding attractive, States would need to move to a zero interest rate which further erodes the corpus. Even that may not be sufficient to overcome the added burden of participation.

Strategy.—The provision that States have a strategy in place to assist applicants in their development of financial, managerial and technical capability is laudable and supportable. In the development of such a strategy, the States need latitude to design it to meet their diverse challenges.

• As a house keeping measure, whenever (i) refers to "State" the term should be replaced by "State agency".

• Section (B) should be deleted—as unnecessary and overly prescriptive. In order to develop a meaningful strategy, States do not need to describe or analyze the litany of "institutional, regulatory, financial, tax, or legal factors at the Federal, State, and local levels that encourage or impair the development of technical, managerial, and financial capacity." Requiring States to describe "the manner in which the State

intends to use the authorities and resources of the State" implies more than a strategy and clearly invites litigation that could be misused. Sanctions could apply to successful and effective State programs, if there is a perceived failure to carryout a particular element in precisely a certain way.

• Given the potential for misinterpretation and misuse of this provision, a 20 percent sanction is excessive. In making a determination of failure: (1) USEPA should be required to notify the State of the decision, justification and actions that need to be taken, and (2) States should have at least 1 year to correct the inadequacy before sanctions apply.

• A simplified report every 3–5 years to USEPA on progress made under State strategies is the most efficient and effective means. Annual updates to measure and report on local improvements in technical, management and financial capacity is an undue burden for a CWSRF, especially since trends are difficult to detect and measure annually. The Committee needs to take a step back and generally review reporting requirements under the Act and how they can be most efficient and effective.

Condition for Receipt of Assistance.—States support asset management and it may be workable to have treatment works certify they have needed capacity and make that rationale transparent to the public. However, ASIWPCA urges the Committee to reconsider how best to accomplish the objective, before adding statutory requirements and deadlines. Specifically we would ask the Committee to consider the following:

• Overseeing development and evaluating local technical, managerial and financial capacity and asset management plans will be a substantial workload, and we question the utility of this provision. The provision for States to require treatment works to demonstrate "adequate" capacity will require a fair amount of subjective judgment and new USEPA bureaucracy. This may not yield the desired result.

• States should not be expected to police asset management, unless there is consensus on: (1) The content of the plans with respect to capital replacement, etc. and (2) A clear definition of adequacy.

• If asset management is a good idea, it should be required of all systems, not just those that receive future SRF assistance.

Restructuring.—This section should be deleted and the Committee should consider other avenues. We make this suggestion because (j)(1) (A)-(C) will require: (1) Additional hoops which will result in disincentives to participate in the program, (2) The provision will be accompanied by considerable Federal bureaucracy, (3) The requirements will entail considerable State work load, (4) The policy assumptions are not necessarily valid (e.g., that consolidation, public/private partnerships and nonstructural alternatives are environmentally beneficial) and (5) The focus of the Act should be on clean water and not bureaucratic processes and procedures. Regarding (j)(2):

• Rate structures are not appropriate for regulation under the CWSRF. Other State agencies (public utility commissions) have purview and since the definition of "adequate" is unknown (does it include complete capital replacement, for example), the program would be extremely difficult to implement in the CWSRF. Does the Committee really want to use the CWSRF for this purpose and is the Committee prepared to deal with unintended consequences? How is the CWSRF going deal, for example, with loan recipients that apply an inappropriate burden on certain customers through double and triple rates?

• Making the requirement effective upon enactment seems premature—since the National Academy of Science study is not required until 2 years after enactment. Time should be allotted to thoughtfully consider the results of the congressionally mandated study. Hence, any provisions to address rates at the State and local level in S. 1961 would need to apply at least 30 months (or later) after study completion.

• States question the need for and the workability of applying the requirement to non-traditional needs such as nonpoint sources.

Technical Assistance: States have a long and successful history providing technical assistance to loan recipients. This provision (Section 206) is disturbing in that it seems to presume that States are incapable of, or are not interested in, providing assistance to small systems. This is not an accurate assumption. Furthermore, the provision takes the circuitous route to reach an unspecified goal—e.g., creating a program to fund non-profit entities to provide small community assistance for CWSRF participation. States do not see the need for this provision, especially since it is not clear how the program would operate and relate to the CWSRF and Section 104(b). If there needs to be a grant program, State, Regional and Local initiatives should be eligible. Activities funded should be coordinated with State efforts so they are mutually supportive. S. 1961's reliance on USEPA (the Agency furthest from the point of need) is, at best, an ineffective approach. If this provision is to be included

in national legislation, a State/Local advisory committee should be used to help create, focus and administer the program.

Competition Requirements: Requirements of the old construction grants program (Section 204(a)(6)) should not be reinstated. This is a good example of the bureaucracy and pitfalls that the CWSRF was created to avoid. The Association would ask what documented problem in the loan program is this provision intended to address.

Formula: States have questions about the formula and request additional information relative to how the numbers were derived and the effects of the proposed formula on States' allotments at various appropriation levels. The results of the 2000 Needs Survey should be released as soon as possible, so that States can gage the full impact of proposed changes. And, if the eligibilities are expanded to include CAFOs, etc., the allocation formula should reflect such needs.

Furthermore clarification is needed relative consistency. If the Committee intends that all needs (which are included in the calculation of a State's allocation formula) be eligible under a State's CWSRF program (to receive funds for those needs under Title VI)—the provision needs wordsmithing (i.e. the issue may pertain to not just private utilities).

Clean Water Act/Drinking Water Act Fund Transfers: ASIWPCA is supportive of this provision and suggests that, in addition to providing for the transfer of funds between the Clean Water and Drinking Water SRFs, S. 1961 should also allow for full cross-collateralization between the funds.

Demonstration Program for Water Quality Enhancement: The goals of this effort are at once broad and inclusive of watershed protection of surface and source water, and yet focused on primarily municipal boundaries and wastewater facilities. The ASIWPCA suggests that: (1) Eligibilities go beyond municipalities to include State, regional and watershed based entities—governmental and non-governmental, (2) The list of project types be expanded to include integrated water management, etc. and (3) A advisory group with balanced stakeholder representation be convened to assist in carrying out the intent of Congress.

NAS Rate Study: This study should be carried out in consultation with a balanced group of stakeholders, including a significant number of State and Local government officials responsible for on-the-ground implementation of the Clean Water Act requirements.

Water Resource Planning: State water quality agencies question the need for this provision and are concerned about adverse impacts on other efforts of the US Geologic Survey (USGS). It appears to duplicate what States currently have underway with other Federal agencies, including the Bureau of Reclamation. USGS services are already being reduced and further mandates are counter-productive. For example, the stream-gauging program is critical to the State development of TMDLs. To further divert USGS attention away from its highest priorities to other activities, especially when they are already being performed by other agencies, seems counterintuitive. States need USGS to do what it does best—provide accurate timely water quality data for program implementation and decisionmaking. There may be a role for USGS within the context of the Clean Water Act and Mr. Robert Hersh will be articulating such activities in his testimony. In any event, State Water Quality Agencies must be integral to the creation of any clean water related authorities for USGS. The Department on Interior should be directed to closely coordinate and consult with the State water quality officials and agencies in carrying out the objectives of S. 1961.

Again Mr. Chairman, we applaud the Committee for beginning the discussion on the Clean Water Act SRF reauthorization and we, at ASIWPCA, are eager to work with you and your fine staff to refine legislation that will move this country forward in the pursuit of cleaner water. We thank you for the opportunity to come before you and we are available at any time to meet with you and the members of your staff on the recommendations provided in the statement. Please contact our Executive Director, Robbi Savage, at 202–898–0917. Thanks again for inviting the State Water Program Administrators.

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

INTRODUCTION

The Association of State Drinking Water Administrators (ASDWA) is pleased to provide testimony before the Senate Environment and Public Works Subcommittee on Fisheries, Wildlife, and Water regarding the Water Investment Act of 2002.

ASDWA represents the drinking water programs in each of the fifty states, territories, and the District of Columbia in their efforts to ensure the provision of safe, potable drinking water to all Americans nationwide. ASDWA's primary mission is the protection of public health through the effective management of state drinking water programs that implement the Safe Drinking Water Act. For these reasons, our testimony will focus only on the drinking water-related provisions of S. 1961.

OVERVIEW

States have been implementing the Federal requirements for safe drinking water for more than 25 years. The 1996 amendments to the Safe Drinking Water Act created a host of new program responsibilities including a new Drinking Water State Revolving Loan Fund (DWSRF). The DWSRF was established to offer low cost loans to public water systems to enhance both their infrastructure and compliance capabilities. The Act authorized a total of $9.6 billion in annual appropriations through FY–03. ASDWA appreciates the Committee's interest, through this legislative initiative, in ensuring that this much needed program will continue to receive funding over the next several years and is especially pleased that the authorized funding equals $14.5 billion through FY–07. ASDWA also appreciates the acknowledgement that state drinking water programs must have additional funds to administer the program in an efficient and responsible manner.

TITLE II PROVISIONS

ASDWA endorses the goal of streamlining the DWSRF process to maximize use of Federal funds and encourage efficiency. However, state drinking water programs are concerned that some of the elements contained in this Title will hinder rather than help efforts to achieve the stated goal. One overarching example lies in the legislation's proposal to strengthen activities relating to use of the DWSRF for source water protection, consolidation initiatives, assistance for small and disadvantaged communities, and coordination with other programs such as land use and transportation. However, the authorization to address many of these issues lies in SDWA Section 1452(g). This section requires a dollar-for-dollar match for any state wishing to use additional program administration funds to address technical assistance for source water protection, capacity development, and operator certification initiatives. These are the very programs that get to the heart of the goals for S. 1961. States are hindered in their ability to find dollar-for-dollar match funds over and above the 20 percent match required for the DWSRF program and the 25 percent match required for state public water supply supervision (primacy) grants program. As a result, many states cannot take advantage of these funds now and certainly may not be able to access them when the increased DWSRF authorizations are appropriated. The states ability to administer the DWSRF efficiently will decline, despite increased authorizations, unless the funds can be accessed for the purpose for which they were intended.

Action: ASDWA recommends that the proposed amendment to SD WA Section 1452(g)(2)(A–D) strike the requirement for a dollar-for-dollar match and replace it with language calling for a 25 percent state match for these critical activities.

Section 202

(b) Public Outreach: Since the inception of the DWSRF, state drinking water programs have made significant investments in establishing communication and outreach networks to ensure public participation in the DWSRF process. Since its inception, states have worked to design opportunities for public notice and comment that best respond to the needs, interests, and concerns of their citizenry. States have created advisory boards, held community meetings, and met state statutory requirements that regulatory initiatives relating to DWSRF activities be published in the media as well as the state-level equivalent of the Federal Register. This flexibility has already allowed states to design programs that are responsive and responsible. A call for undefined "significant public outreach" is, therefore, unnecessary for the DWSRF.

Action: ASDWA requests that this additional requirement for "significant public outreach " be removed.

(c) Types of Assistance: Current SDWA language does not address the pressing need for capital improvements related to infrastructure security.

Action: ASDWA recommends that capital improvements for security be specifically added to the list of eligible DWSRF activities.

(c)(F) Types of Assistance: While state drinking water programs, through their capacity development initiatives, have worked with systems to ensure their technical, financial, and managerial capabilities, no drinking water program has the authority

to direct or regulate how any system develops and/or applies its rate structure. As well, state drinking water programs do not possess the expertise required to ensure that a particular rate structure "reflects the actual costs of service." These are local decisions, often politically driven, and are well beyond the authority of drinking water programs to direct or control.

Action: ASDWA requests that the language on setting rates be removed.

(d) Consultation and Coordination with State Agencies: ASDWA is concerned with the requirement that state drinking water programs shall "ensure" that applicants have appropriately "consulted and coordinated" with other regulatory bodies. Rather, this responsibility must fall on the applicant system.

Action: ASDWA recommends that this language be modified to reflect the need for a loan applicant to consult and coordinate with other regulatory bodies and provide the results of that consultation to state programs rather than have states "ensure " that such consultation has occurred.

Section 203

Under the 1996 SDWA Amendments, state drinking water programs received the authority to reserve up to 30 percent of their DWSRF capitalization grants to address the needs of disadvantaged communities. This section proposes that states may reserve an additional 15 percent to address "poverty pockets" in otherwise non-disadvantaged communities. Further, states are directed to ensure that an appropriate "user charge rate system" is in place within the community. ASDWA has two significant concerns with this proposal:

First, reserving up to 45 percent of a state's DWSRF program to address disadvantaged communities may not be the best use of limited resources to address public health protection on a statewide basis and has the real potential to quickly erode the corpus of the loan fund. State drinking water programs must balance the competing needs of all applicants to ensure that the broadest public health protection benefits are derived from the most efficient award of funds.

The second concern with this proposal lies in the requirement for state drinking water programs to ensure the efficacy of any individual user charge rate system as part of an assistance agreement. This level of responsibility goes far beyond state drinking water programs' expertise and mandate to protect public health.

Action: ASDWA requests that this section be modified to add "disadvantaged users " within an otherwise non-disadvantaged community to the existing SDWA Section 1452(d) language, and leave the reservation of funds up to a maximum of 30 percent. In addition, ASDWA requests that the requirement to ensure the efficacy of a user charge rate program be directed toward the applicant rather than the state.

Section 205

(1) Competition Requirements: ASDWA is uncertain of the value of this proposed addition to the SDWA. The language appears to have been taken from the old Clean Water Act construction grants program. It is ASDWA's understanding that the current Clean Water Act no longer contains these provisions and that they were removed due to their complexity and resulting burden placed on state programs and loan applicants alike.

Action: ASDWA requests that this language be removed from the section.

Section 206

(a) Small Public Water Systems Technology Assistance Centers: ASDWA is pleased to see addition of accountability requirements under this section.

Section 207

(3) Reservation for Needs Survey: Under current law, EPA is required to conduct a drinking water needs survey once every 4 years. Yet, the language in this section authorizes the Agency to reserve $1 million annually from the DWSRF to cover their associated costs. Is it the intent of this section to provide $5 million over the course of FY–03 through FY–07 for EPA to conduct one needs survey?

Action: ASDWA requests clarification under this section.

TITLE III PROVISIONS

Section 301

(b)(1) Safe Drinking Water Fund: ASDWA is pleased that this legislation proposes to increase the allowable percentage of DWSRF funds that may be reserved for program administration. However, given the additional responsibilities outlined in this legislation, particularly those directed toward the very large number of very small

systems, ASDWA believes that the percentage reservation for program administration should reflect the true cost of efficient administration.

Action: ASDWA recommends that the level of funding reserved for state DWSRF program administration should be increased to 6 percent.

(b)(2) Transfer of Funds: ASDWA is pleased that this legislation extends the ability of the Governors to transfer funds between the DWSRF and CWSRF.

Section 303

(a) Rate Study: ASDWA is pleased to support the call for a study regarding rate structures. ASDWA is also pleased by the requirement for such a study to be completed within 2 years. However, ASDWA is concerned that the statutory provisions for state drinking water programs to address rate structures and disadvantaged communities take effect upon enactment—without benefit of the information afforded by the rate study and without benefit of the to-be-developed new definition of "disadvantaged community."

Action: ASDWA requests that, in concert with our earlier statements, the troublesome provisions in Sections 202 and 203 affected by this section be removed. However, in the event that the provisions are retained, ASDWA requests that implementation of these provisions be delayed until the results of the study are published and analyzed.

CONCLUSION

ASDWA extends its appreciation to the Committee for taking significant first steps to address the critical need for drinking water infrastructure funding. This legislative proposal also offers some relief to states that must administer these programs. However, ASDWA cautions that several of the proposed refinements to the SDWA will not achieve the stated goals for this legislative initiative. Adding new and more complex requirements to a drinking water utility's DWSRF application will not streamline the process, reduce the burden, or make the program more appealing. Adding additional requirements for state oversight in areas such as ratemaking, designated user charge programs, ensuring consultation and collaboration by systems with other agencies, and the like will not make the program more efficient and will hinder the states' best efforts to award loan funds in a timely manner.

ASDWA would be pleased to work with members of the Committee to address these concerns and ensure successful implementation of the SDWA DWSRF program.

STATEMENT OF VALERIE I. NELSON, PH.D., COALITION FOR ALTERNATIVE WASTEWATER TREATMENT

I appreciate the opportunity to submit testimony to the Subcommittee on Fisheries, Wildlife and Water concerning S. 1961, the Water Investment Act of 2002, which would reauthorize the Clean Water Act and Safe Drinking Water Act State revolving funds (SRFs). I am the Director of the Coalition for Alternative Wastewater Treatment, which was formed 8 years ago to promote reform of Federal, State, and local policies and practices concerning decentralized wastewater treatment. I would also like to present the recommendations for SRF reauthorization developed at a national workshop on integrated water resource management that was held on February 19–20, 2002 in Arlington, VA.

The central recommendation of my testimony is for the Congress to provide incentives in the SRF program for States to fund decentralized wastewater, distributed stormwater, and other non-point source projects. After several decades of investment in wastewater treatment plants and sewer collection systems, progress has been made by the Nation in water quality protection. However, estimates are now that a majority of water quality problems stem from non-point sources. The costs of addressing equivalent amounts of non-point pollution are substantially less than the costs for point-source treatment. And yet, the States are currently directing only 4 percent of SRF loans to non-point source projects. This represents a serious misallocation of Federal resources, and raises the question of how States can be encouraged to utilize SRF funding more cost-effectively. While EPA has issued guidance in recent years allowing States to provide SRF loans for non-point source projects, a majority of States have not broadened their eligibility lists to allow these projects to be funded.

I would suggest that the best approach for the Federal Government to promote a more efficient use of Federal resources by the States is to create a 10 percent setaside of new SRF funding for States to use for non-point source projects. This approach would maintain the flexibility in the use of the SRF which states request,

but at the same time would assure greater accountability by the States to the goals and objectives of the Clean Water Act. States would be eligible to apply to the EPA for 10 percent in additional funds beyond the baseline allotment for the Clean Water SRF capitalization grant. Funds could be used for principal forgiveness, interest subsidies, and other creative financing mechanisms which each State would have the flexibility to develop.

The 10 percent set-aside proposal is modeled on the successful enhancement grant set-aside established in the Intermodal Surface Transportation Efficiency Act of 1991. Because of this initiative, successful environmental enhancements have been constructed throughout the States, and reform of transportation planning and mainstream practice have occurred more generally.

INTEGRATED WATER RESOURCE MANAGEMENT WORKSHOP

On February 19–20, 2002 a group of 35 leaders in water quality protection met in Arlington, Virginia to discuss the future of distributed and natural system approaches to integrated water resources management. Participants included public officials, engineers, academics, and environmental advocates from across the country. In recent years, much progress has been made in the development of decentralized or distributed approaches, including for example: advanced onsite and cluster system technologies and management for wastewater treatment; distributed stormwater remediation, including stream restoration; low impact development practices that retain natural infiltration/treatment zones and distribute infiltration and biorentention best management practices throughout a development; agricultural stream buffers and other best management practices; and "soft path" flood control measures such as parkland stream buffers.

Water resource management in the United States has been dominated in recent decades by "hard path" centralized infrastructure solutions, including sewer collection systems and treatment plants, stormwater collection and underground storage tunnels, centralized water lines and filtration plants, and stream channeling and dams for flood control. And, permitting, funding, and management of these systems have been segregated into separate agencies, rather than integrated into a holistic watershed framework.

The premise of the workshop was that this reliance on centralized solutions constructed without regard to the broader watershed and groundwater forces at work in the ecosystem has cumulatively led to major unintended consequences and environmental damage. Sewer collection systems and point-source discharges, by moving locally supplied water and infiltration/inflow water great distances to point-source discharges have led to depleted aquifers, saltwater intrusion in the coastal zone, and dried-up streambeds. Sewer systems have also promoted growth and development, with large-scale increases in stormwater runoff, and leaking sewer pipes now constitute the single greatest source of drinking water microbial contamination. Channeling to control floods has also led to disruptions in natural systems for water purification. And, finally, failure to fully utilize cost-effective water efficiency and distributed water reuse measures exacerbates the surface and groundwater impacts of water supply systems.

Distributed and natural-system or "soft path" approaches hold great promise to achieve water resource protection at substantially lower cost than traditional centralized technologies, and in particular, entail far fewer adverse impacts to public health and the environment when considered in an integrated framework. The reason is that distributed, "green" solutions to sewage and stormwater treatment rely on and blend into large, natural surface water and groundwater systems that have evolved and stabilized over centuries. Centralized approaches constitute a much larger disruption of these natural systems than decentralized approaches. For example, decentralized wastewater systems, by widely dispersing the release of treated wastewater into the soil, help replenish aquifers. Distributed approaches also provide communities with more options and greater control over development, natural resource protection, and public amenities such as parks and open space.

Workshop participants discussed the range of environmental, economic, and community benefits to decentralized and nonpoint-source approaches to water quality protection and integrated water resource management, and developed recommendations for reform of engineering practice, regulatory structures, management, and research. In addition, recommendations for the SRF reauthorization were discussed, and options from various workshop sub-groups include the following:

1. Nonpoint-source or soft path projects need incentives in the SRF. These would include such approaches as:

a. a 10 percent non-point source set-aside of new SRF funds

b. a reduced match requirement for non-point source or distributed treatment projects

c. a reduced interest rate

d. principal forgiveness

2. Extra funding should be provided for State and local entities to cover the additional administrative costs of developing non-point source projects, as well as integrated water resource plans.

3. Eligibility should also be expanded to include:

a. monitoring costs (as already exists in the Drinking Water SRF)

b. pollutant trading

c. training

4. Funding approval should be tied to consistency with plans:

a. drinking water grants should be tied to source water protection plans

b. wastewater projects should be tied to integrated water resource plans developed by local entities

c. transportation planning links should also be required

5. States should be required to demonstrate that water quality goals are being met cost-effectively. Build assessment and feedback on environmental outcomes and cost-effectiveness into the process.

a. One suggestion was for a focus on GPRA requirements to be imposed on State SRF agreements with EPA.

b. Another suggestion was to revitalize the CWA planning process or 303e. Bring back the better elements of the water resources council that were dropped in the early 80's.

6. Research projects are needed on such topics as: biological integrity before and after projects; lifecycle costs of non-point and soft path approaches; fate and transport of pollutants; analysis of the impediments to integrated water resource management; soft path best management practices; effectiveness of education campaigns, land-use controls, etc.

7. Demonstration projects are needed on: integrated water resource management; regulatory changes needed to implement plans; stormwater decisionmaking; real-time water quality monitoring and technology programs, and community involvement; and others.

STATEMENT OF RODGER D. SIEMS, PRESIDENT, BOARD OF DIRECTORS, EASTERN MUNICIPAL WATER DISTRICT (EMWD)

Good morning Chairman Jefford, Senator Smith, Senator Graham, Senator Crapo, and members of the Committee, my name is Rodger Siems. I am the President of the Board of Directors for Eastern Municipal Water District in Perris, California.

Eastern Municipal Water District (EMWD) supports the purposes of S. 1961, the Water Investment Act of 2002. We believe S. 1961 takes a meaningful first step toward addressing the infrastructure funding gap through the authorization of increased funding for State revolving funds (SRFs). EMWD provides water and wastewater service to a population of 480,000 in the arid west region of the Nation where native water resources are scarce. Due to the lack of plentiful indigenous water sources, EMWD is committed to water conservation and recycled water programs and sustainability of our groundwater resources. EMWD is therefore very pleased that S. 1961 provides funds for water conservation, reuse, reclamation, and/or recycling projects.

EMWD is particularly supportive of the requirement in S. 1961 that loan recipients adopt, in both policy and practice, basic elements of asset management. Water and wastewater infrastructure systems provide services essential to public health. EMWD believes that proficient asset management is core to managing utility operations. Water and wastewater managers must ensure adequate operation of their facilities by using all the tools available to them and asset management is the most effective tool for managing present and future infrastructure. Requiring good asset management as a loan condition helps ensure wise and effective spending.

EMWD also supports the concept of requiring loan recipients to achieve a rate structure that reflects the true cost of service and addresses capital replacement funds. EMWD is concerned that agencies that have not adopted a rate structure that pays for the true cost of their operations are undercharging for their services and are placing a tremendous burden on future ratepayers.

EMWD believes these loan recipient requirements, asset management and rate restructuring, will promote self-sustaining water and wastewater operations and help limit future requests for Federal funding.

Thank you for introducing S. 1961. It is a crucial first step to ensure the needs of America's water and wastewater infrastructure are met.

STATEMENT OF THE AMERICAN COUNCIL OF ENGINEERING COMPANIES

The American Council of Engineering Companies (ACES) is pleased to provide this statement in support of S. 1961, The Wastewater Investment Act of 2002. The Water Investment Act of 2002 would amend and reauthorize the Clean Water Act and the Safe Drinking Water Act to provide substantially greater funding for wastewater and drinking-water facilities. We commend the Committee for taking the lead on the increased authorization for water infrastructure and we applaud this bi-partisan effort.

The American Council of Engineering Companies (ACEC) is the business association of America's engineering industry, representing 6,000 independent engineering companies throughout the United States engaged in the development of America's transportation, environmental, industrial, and other infrastructure. Founded in 1910 and headquartered in Washington, DC, ACEC is a national federation of 51 State and regional organizations.

ACEC is pleased to support passage of S. 1961, the Water Investment Act of 2002. The proposed funding levels in the bill are a far-sighted, responsible attempt to rebuild the nation's aging and failing wastewater and drinking-water facilities and to upgrade their performance to meet the nation's health and security needs in the 21st century. As a founding member of the Water Infrastructure Network (WIN), ACEC has worked with our coalition partners to raise awareness among Members of Congress and the public about the critical gap that exists between our nation's water infrastructure funding needs and what is currently being appropriated.

WIN has released reports that outline a projected shortfall of $23 billion per year over the next 20 years in water infrastructure needs and what is currently being appropriated. The report, Water Infrastructure NOW: Recommendation for Clean and Safe Water in the 21st Century, suggests that the Federal investment for water infrastructure is $57 billion over the next 5 years. Although the authorization in S. 1961 does not reach that goal, it represents a significant commitment on the part of the Federal Government to rectify the problems associated with our nation's water infrastructure. For too long, the Federal Government has relied on States, local governments and utilities to fill essentially all of this funding gap. Administrations have failed to request, and Congress has consistently failed to appropriate, the full authorization of $1 billion for the Safe Drinking Water SRF. With the implementation of S. 1961, the Federal Government is taking a significant step toward fulfilling its obligation.

During his State of the Union speech last month, the President outlined his fiscal priorities of defense and homeland security. These are important priorities, but we should not lose sight of other critical national concerns. Improving the nation's water quality and water systems through infrastructure investment makes good economic sense. For every billion dollars we invest in environmental infrastructure we create over 30,000 jobs. Beyond the creation of thousands of new jobs in the design and construction industry, millions of existing American jobs depend on clean and safe water including those in the $45 billion commercial fishing industry and the $100 billion water recreation industry.

The nation's 54,000 drinking water systems face staggering infrastructure funding needs over the next 20 years. Although America spends billions on infrastructure each year, we estimate that drinking-water systems face an annual shortfall of at least $11 billion to replace aging facilities that are near the end of their useful life and to comply with existing and future Federal water regulations. The existing pipes, bricks and mortar that are holding together our current infrastructure system are severely outdated and in need of repair. States are forced to delay construction projects in order to comply with important health and safety mandates by the EPA. With Federal requirements on TMDLs, combined sewer overflows, SSOs and arsenic removal, States will likely fall further behind in their efforts to repair and replace pipes. Without a significantly enhanced Federal role in providing assistance to drinking water infrastructure, critical investments will not occur. Federal assistance can come in the way of grants, trust funds, loans, and incentives for private investment. The question is not whether the Federal Government should take more responsibility for drinking-water improvements, but how.

ACEC acknowledges the Committee's efforts to streamline the Federal requirements that hampered accessibility to the SRF program. We support the provisions in S. 1961 that broaden the definition of projects and communities that are eligible for Federal assistance through the State revolving funds and the flexibility with which those projects can be implemented.

The Water Investment Act of 2002 could be amended to enhance its effectiveness and improve on its ability to build modern wastewater and drinking-water facilities and protect national security. ACEC strongly encourages the Committee to adopt the following provisions to S. 1961 as it deliberates further on this legislation:

• The bill should expressly authorize the Environmental Protection Agency to use the Clean Water Act SRF Loan Fund and the Safe Drinking Water Act SRF to provide financial assistance for the construction of physical security measures at wastewater and drinking water plants. Certain terrorist groups have made it clear that the destruction of U.S. water-treatment facilities is one of their aims. Federal funds should be made available through the SRFs to deal with specific security needs, including improved building design and construction requirements, fencing and other physical security measures. No funds should be made available to hire security guards, establish private police forces or implement other non-structural protections, which should be addressed through operating funds.

• The bill should require that each contract and subcontract for architectural and engineering design services, program and construction management and other professional services should be awarded in the same manner as contracts that are awarded under title IX of the Federal Property and Administrative Services Act of 1949.

• The bill should give a State the discretion to use the design-build project delivery method for each facility financed under the SRFs. The use of this method should be consistent with State law. Once a State decides that the design-build project delivery system is appropriate for a given project, the recipient should be required to the use of the two-phase competitive source-selection procedures authorized under Section 303M of the Federal Property and Administrative Services Act of 1949.

In conclusion, we would like to reiterate our support for S. 1961 and we thank the four co-sponsors of the legislation, Senators Jeffords, Smith, Crapo and Graham for their leadership on this issue. The engineering community stands ready to help rebuild and replace the aging and failing infrastructure that puts so many communities and citizens at risk.