

COMMEMORATION OF THE 30TH ANNIVERSARY
OF THE CLEAN WATER ACT

HEARING
BEFORE THE
COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE
ONE HUNDRED SEVENTH CONGRESS
SECOND SESSION

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OCTOBER 8, 2002
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Printed for the use of the Committee on Environment and Public Works



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U.S. GOVERNMENT PRINTING OFFICE

83-692 PDF

WASHINGTON : 2004

For sale by the Superintendent of Documents, U.S. Government Printing Office
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ONE HUNDRED SEVENTH CONGRESS
SECOND SESSION

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COMMEMORATING THE 30TH ANNIVERSARY OF THE CLEAN WATER ACT

TUESDAY, OCTOBER 8, 2002

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

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

Present: Senators Jeffords, Bond, Carper, Chafee, Clinton, Voinovich and Wyden.

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

Senator JEFFORDS. The committee will come to order.

I am very pleased to be here today to commemorate the 30th anniversary of the Clean Water Act. This statute was one of the first environmental laws that our Nation adopted, and it has remained a cornerstone of our efforts to protect and preserve our Nation's waters.

I am particularly honored to welcome two members of this body and of the committee who are joining us to celebrate the event—Senator Stafford of Vermont, who will appear, who is already there on the screen. Bob, welcome to our show. It is nice to see you and I am glad you could be with us.

Senator STAFFORD. Thank you very much.

Senator JEFFORDS. Senator Mitchell of Maine. Each of them played a key role in the passage of the 1987 amendments to the Clean Water Act. Senator Stafford, who is joining us by video conference from Vermont, was the chairman of the committee when the amendments were crafted. Senator Mitchell of Maine was the ranking member of the Subcommittee on Environmental Protection during the development of these amendments and was the floor manager of one of the two historic votes which passed these amendments to override President Reagan's veto.

We are truly lucky that these distinguished members are joining us today to speak about their views on the progress we have made with the cleanup of our Nation's waters. Thank you both for being here.

Sadly, the true steward of the 1987 amendments to the Clean Water Act, John Chafee, is of course not with us today. Senator Chafee was one of my closest friends in the Senate. We ate lunch together almost every Wednesday for about 10 years, and his contribution to our Nation cannot be overstated. Senator Chafee's

leadership on the environmental issues as a member and as the chairman of the committee was unparalleled through the last two decades. His fingerprints can be found on virtually every major piece of environmental legislation that became law during those two decades. It was his leadership that brought the bipartisan 1987 Clean Water Amendments through the Senate, through the conference with the House, and passed the Presidential veto and into law. Because of his efforts, our children and grandchildren cannot imagine a world where excess pollution can cause a river to burn.

We are also honored to have Senator Lincoln Chafee here as a member of the committee, continuing his father's important work.

I also want to make two comments about the witness list for this hearing. First, due to unfortunate last minute circumstances, Mr. Tom Morrisey from Connecticut will not be participating in our hearing this morning. He will be available to answer questions for the record. Second, I want to give a warm welcome to our final panel made up of several students participating in the Youth Watershed Conference, which is being held this week in celebration of the anniversary of the Clean Water Act. I particularly want to welcome a fellow Vermonter, Grace Chris from White River Junction, Vermont.

To understand the significance of the Clean Water Act, one has to recall the state of our Nation's waterways in the early 1970s. The fact is, our Nation was faced with a water pollution crisis. The most vivid example was the Cuyahoga River in Ohio, which became so polluted with chemicals and industrial waste that it burst into flames. Toxic materials were routinely dumped into pristine water bodies by industrial polluters. It was standard practice in municipalities to have underground pipes deliver raw sewage from homes directly into rivers and streams without any intervening treatment. Americans began to ask, is this the best we can do?

I can attest to the fact that Vermonters answered with a vehement no. They demanded actions to solve our environmental problems. In 1970, I was the State Attorney General of Vermont. My office worked to create Vermont's Act 252, which enacted the toughest water pollution laws in the country at that time. I had the honor of testifying before the committee during Senator Muskie's chairmanship during the first phases of the debate on the Clean Water Act. Some of the concepts in Act 252 are today part of the Federal water pollution laws.

Congress also answered no to the question, is this the best we can do. Led by the champions like Senator Muskie and Baker, they came together on a bipartisan basis to override President Nixon's veto of the Clean Water Act. Originally enacted in 1948, the 1972 Clean Water Act completely revised the existing statute and created a clean water program that we know today. The Act consists of two major parts—regulations on industries and cities designed to reach a goal of zero discharge of pollutants; and the authorization of Federal financial assistance to wastewater treatment.

We have made progress. Virtually every community served by the publicly owned treatment works is served by a plant that uses secondary treatment. This progress was facilitated by the Federal assistance provided for municipal wastewater treatment plant construction.

Despite progress on these and other issues, it was clear that without an action on other problems such as toxics and non-point source pollution, we would not be able to meet the clean water goals. In 1987, Americans again asked, is this the best we can do? Again, Congress said “no”. Champions like Senator Chafee, Senator Stafford, Senator Mitchell and Senator Bentsen came together in a bipartisan coalition to override President Reagan’s veto in 1987 amendments, and enacted the last major reform to this country’s clean water program.

Many of the key pieces of the 1987 amendments continue to resonate in our clean water debate today, in particular non-point source pollution, storm water, and funding levels. We have made some progress on these issues, building on the strength of the 1987 amendments. However, much remains to be done. Almost half of our Nation’s waters are not safe for fishing, swimming, boating, sources of pollution are responsible for half of our water quality problems. Just last week, Administrator Whitman released the Agency’s gap analysis, which identified an enormous gap between current funding levels and infrastructure needs for the publicly owned treatment works. In Vermont, there are two dozen streams impaired by storm water run-off. These issues represent a real daily threat to public health and to the wildlife that depend on clean water to sustain life.

On this, the 30th anniversary of the Clean Water Act, America again asks, is this the best we can do? The answer is no. Our Nation still faces many important challenges. Today, our actions overseas dominate the debate in Congress and overshadow equally pressing problems here at home. Water pollution continues to be a clear and present problem. It is real and it deserves our attention. We must take action to respond to America’s call for cleaner water. We must squarely address non-point source pollution.

We must also have a strong TMDL program to move States more rapidly toward cleaning up our impaired waterways. It is imperative that the TMDL rulemaking being undertaken by the Administration is a second step in the program, rather than a step backward. We must invest in our Nation’s water infrastructure. In an effort spearheaded by Senator Graham of Florida, the committee took action this year to pass the Water Investment Act. This bill takes a first step toward closing the gap in investment for water infrastructure.

I have worked with Senators Smith and Crapo and Graham in the Appropriations Committee to increase funding to SRF. This year, we succeeded with the first increase in years. I want to thank Senators Bond and Mikulski for their efforts. I believe that we must continue to move forward on controlling storm water and combined sewer outflows. A major element in our ability to combat these problems is funding. In the Water Investment Act, we included a separate authority for EPA to provide assistance to communities in controlling combined sewer overflows. In September, I joined my colleagues on this committee in strongly supporting an amendment to the Clean Water Act proposed by Senator Chafee to ensure that smaller communities covered by the phase two storm water regulations taking effect in March will be able to continue the use of Federal funds to solve storm water problems. It is clear

that if we do not take action to address these issues, progress will stall.

As Americans ask us on the 30th anniversary of the Clean Water Act, is this the best we can do, we must answer no, as our colleagues did in 1972 and 1987. I believe that we are up to the challenge.

I now will turn to Senator Bond and ask for his comments.

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

Senator BOND. Thank you very much, Mr. Chairman. It is a pleasure to join you in welcoming our former colleagues, Senator Stafford and Senator Mitchell, and I am particularly pleased to have the students with us today. I apologize. I am supposed to be on the floor at 9:45 with Senator Bingaman to try to get a bill moving, so I am not going to be able to stay for the testimony. I do want to make my entire statement a part of the record. We are here today because we all know that clean water is something we depend upon for a safe and healthy life. Babies need water, seniors need water, each of them is vulnerable to water problems. Our agricultural crops need water. Businesses need water. Wildlife, with whom we share this beautiful land, needs water. Our boats need water. As a sometime would-be fisherman, we need clean water for the fish.

We have come a long way in improving the quality of water, but unfortunately, as you have indicated, Mr. Chairman, we still have a long way to go. We worked hard in the Appropriations Committee to try to get the money from very tight budgets. Working with Senator Mikulski this year, we succeeded in increasing the money for the clean water State revolving fund by \$100 million over last year's level, to \$1.45 billion. We increased the drinking water state revolving fund \$25 million over last year, to \$875 million. Over the last 4 years, we have increased funding for section 319 non-point source grants by 20 percent and increased State water pollution control programs grants by 66 percent.

I was also proud to introduce a Senate resolution, joined by many of my colleagues here, to commemorate the 30th anniversary of the Clean Water Act, but we must do more. The chairman has already cited a gap analysis which shows about \$500 billion in unfunded water needs, which is too much of a burden for local towns and cities to bear alone. We are going to have to do better.

Let me say that I am sorry that this committee passed up the opportunity this year to contribute constructively to our Nation's drinking water and clean water funding needs. I was particularly disappointed that we reported out a water infrastructure reauthorization measure with absolutely no chance of passage. In the face of \$500 billion in unfunded water infrastructure needs, the bill, S. 1961, would actually have cut water infrastructure funding in many States. Under current spending levels, the bill would cut water infrastructure funds for New York, Maryland and Missouri by as much as 50 percent. Frankly, that dog won't hunt. We need more water dollars, not less.

The proposed infrastructure bill also stripped consideration of non-point source needs from the funding formulas. Non-point

source problems, such as you have indicated, Mr. Chairman, like run-off storm water management and pollution from large livestock operations, are probably one of the greatest challenges we face now. It is not just in agricultural States like mine. We have agriculture. We have cities with shopping center run-offs. The non-point source pollution can even come from lawns in heavily populated residential areas. Any water infrastructure bill, to be a good one to pass Congress, is going to need to include both non-point source needs and funding increases for the States.

As we continue the commemoration of the Clean Water Act, I hope we will soon take action that such an anniversary, as well as our waters deserve. I thank you very much for holding the hearing.

Senator JEFFORDS. Thank you for an excellent statement and all the work that you have done to help this committee to bring reality to the appropriation process.

Senator BOND. It's tough.

Senator JEFFORDS. I know.

Senator Clinton.

**OPENING STATEMENT OF HON. HILLARY RODHAM CLINTON,
U.S. SENATOR FROM THE STATE OF NEW YORK**

Senator CLINTON. Thank you, Mr. Chairman. I will submit my complete statement for the record, but I want to thank you for holding this hearing to commemorate the 30th anniversary of the Clean Water Act. I am delighted to see by satellite Senator Stafford, and particularly pleased to see Senator Mitchell here. I also want to acknowledge and thank one of the staunchest defenders of our Nation's waterways, Robert Kennedy, Jr., who serves as the chief prosecuting attorney for the Hudson Riverkeepers and is the senior attorney for the Natural Resources Defense Council. He has led the fight to protect New York City's water supply. As many of you know, his reputation as a defender of the environment stems from his work on the Hudson River and the Long Island Sound. We are very grateful for that. As we hold this hearing, many of us are concerned that the Clean Water Act, which has done so much to clean up the waters in our country, is under attack. There is too much evidence of the Administration attempting to roll back regulations, undermine their enforcement, and generally undo the work that was started 30 years ago by people such as Senators Mitchell, Stafford and wonderful Senator Chafee as well.

I hope, Mr. Chairman, that we celebrate this with the appropriate recognition of all that we have accomplished, but frankly with a bit of a concern and challenge that we do everything we can to prevent the importance of the Clean Water Act on its 30th anniversary from being undermined by this Administration and its policies.

I look forward to working with you. I, too, unfortunately am going to have to excuse myself before all of the witnesses appear, but I have read their testimony and I look forward to working with you, Mr. Chairman.

Senator JEFFORDS. Thank you very much, Senator.

Senator Chafee.

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

Senator CHAFEE. Thank you, Mr. Chairman.

I would like to recognize Rhode Islander Paul Pinault here, who is executive director of the Narragansett Bay Commission and is a member of the third panel. Also it is a pleasure to welcome the authors of the 1987 amendments, Senator Mitchell and Senator Stafford, who worked with my dad to successfully override two vetoes—no easy task. I look forward to the testimony.

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 really appreciate your conducting this hearing to commemorate the 30th anniversary of the Clean Water Act. I am pleased to join the board of Governors for the era of clean water, and to cosponsor Senator Bond's resolution.

The law and the amendments to it—I am pleased that Senator Stafford and Senator Mitchell are here—and the early 75/25 money that was made available has been very important to Ohio and has helped us make a real impact on improving water quality and restoration of Ohio's waters, particularly Lake Erie, our Great Lake. Over 30 years ago, I think you mentioned in your testimony in your opening statement, Mr. Chairman, Lake Erie was dying and the Cuyahoga River, which was the major river flowing into Lake Erie, caught on fire as a result of an oil slick. That decline of the lake became an international symbol of pollution and environmental degradation. I remember BBC coming to Cleveland to do a program on the dying lake. I remember Bill Ruckelshaus asking me to go out as a member of the State legislature to Cheyenne, Wyoming to talk to Rocky Mountain legislators about the importance of clean air and clean water, and not to sacrifice their economy on the altar of degrading their air and water.

In the late 1960s, my district, my northern boundary was Lake Erie. I made up my mind that I would go to the State legislature and was committed to what I refer to as fighting the second battle of Lake Erie, and that was to bring the lake back and reclaim it. I worked to amend our air and water pollution legislation. Senator Clinton, we helped stop the drilling for oil in the bed of Lake Erie. Michigan, Ohio, New York were all hell-bent to go forward and do it. We got the Governors to stop it and worked with legislators from four States to develop the contours of a Environmental Protection Agency legislation, and was the prime mover in getting that done in Ohio. At that time, it was interesting, it was moving across the country and the executive branches of government, frankly, were not helping us. It is very interesting.

Today, Lake Erie has improved substantially. Because I was concerned that we had not established baseline information, before I left the Governor's office, we released the Lake Erie quality index to kind of quantify what we had done during a 25-year period to then when the next one would come out, measure whether or not we had improved it or not. There were 10 indicators—water qual-

ity, pollution sources, habitat, biological, coastal recreation, boating, fishing, beaches, tourism and shipping. We measured that. That measure showed that significant progress had been made in most areas. I am hoping that when the next index is published that we will show that we have continued to make progress in those areas that need improvement.

Whether that happens—I think we should recognize—is in our hands. The Federal Clean Water Act and State water pollution control laws have contributed to the progress that we have made. It has been the cooperation between the State and Federal Governments that have made the difference. I think if you think about, what was the purpose of the Act, the objectives were the restoration and maintenance of the chemical, physical and biological integrity of our waterways. We have made progress.

Unfortunately, members of this committee know that we have not provided enough money to get the job done. It is interesting that President Nixon vetoed this legislation initially over money, and I am sure that Senator Mitchell may testify that I think President Reagan vetoed it over money again. There used to be a song, “love and marriage, love and marriage, you can’t have one without the other, it’s like a horse and carriage.” The trouble lately is we have had a lot of love, but not enough marriage and not enough money—

[Laughter.]

Senator VOINOVICH [continuing]. Being spent here today. Mr. Chairman, as you know, we tried to deal with that problem this year, and a lot of folks were optimistic that we would increase the money for the State Revolving Loan Fund. It fell apart because, frankly, many people, including the folks that implement the laws, felt that we were trying to be too prescriptive, too much mandating on them. They knew that a lot more money would not be forthcoming, so they ended up with a lot more mandates and prescription, and no money. Then we also had difficulties because of Davis-Bacon and some other issues.

Senator Mitchell, I am going to be interested in hearing how you and Senator Stafford got together and worked things out. We have really—if you study what we have been doing the last year and a half—have spent a time on a lot of legislation that would cleanup the environment, but we have gotten very little done. It seems that the reason why we have not is we have not been able to sit down and figure out how we can compromise and work together to make progress.

Mr. Chairman, I appreciate all of the time you have spent this year in trying to improve the environment. I am hopeful that regardless of who is in leadership in the Senate that somehow next year all of us on this committee and the people who are represented and the organizations can sit down at the table and try and figure out how we can compromise and move forward on some of these areas that are so important to the future of our country.

Thank you, Mr. Chairman.

[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, for conducting this hearing to commemorate the 30th anniversary of the Clean Water Act. In celebration of this anniversary, I am proud to join the Board of Governors for the "Year of Clean Water" and to cosponsor Senator Bond's resolution marking the 30th anniversary of the Act. I am also pleased that Senator Stafford and Senator Mitchell are able to join us today, and I look forward to their comments.

The law, its amendments, and the early 75/25 money that was made available has been very important to Ohio and has helped us make a real impact on improving water quality and restoration of Ohio's waters, particularly Lake Erie, our Great Lake.

Over 30 years ago, Lake Erie was dying and the Cuyahoga River, which is a major river flowing into Lake Erie, caught on fire as a result of an oil slick. Lake Erie's decline was heavily covered by the media and became an international symbol of pollution and environmental degradation. I remember the British Broadcasting Company—the BBC—even sending a film crew to make a documentary about it.

In the late 1960's, the northern boundary of my district was Lake Erie. I made up my mind that I would go to the State legislature and fight what I refer to as the second battle of Lake Erie—to bring the lake back and reclaim it. I worked to amend our air and water pollution legislation. I remember Bill Ruckelshaus asking me to go out as a member of the State legislature to Cheyenne, Wyoming to talk to Rocky Mountain legislators about the importance of clean air and clean water, and not to sacrifice their economy on the altar of degrading air and water.

I also worked with legislators from four States to develop Environmental Protection Agency legislation, and I was the prime mover in getting that done in Ohio. Michigan, Ohio, New York all wanted to drill for oil in the bed of Lake Erie, but I worked to get the Governors to stop it.

Throughout my career, I have continued to fight for Lake Erie—as County Commissioner, Mayor of Cleveland, Governor of Ohio, and United States Senator.

Today, Lake Erie has improved substantially. Because I was concerned that we had not established baseline information to document where we started or to track the progress we had made, one of my last actions as Governor in 1998 was to release the *Lake Erie Quality Index* to quantify the results of our efforts over the previous 25 years to clean up the Lake.

Ten indicators were developed: water quality, pollution sources, habitat, biological, coastal recreation, boating, fishing, beaches, tourism, and shipping. These indicators measured environmental, economic, and recreational conditions related to the quality of life enjoyed by those living near or using the waters of Lake Erie. *The Lake Erie Quality Index* demonstrates that we have made significant progress in all these areas. At the same time, it identifies the challenges for the future.

When the next *Lake Erie Quality Index* is published in 2004, I am hopeful that we will have made progress in all areas that need improvement. Whether and when that happens is in our hands. The Federal Clean Water Act and State water pollution control laws have contributed greatly to the progress that has been made to improve Lake Erie and other waterways throughout the United States. Due to the cooperative efforts between the Federal Government and the States during the last three decades, our waterways are once again safe for fishing and swimming. Unfortunately, members of this committee know that we have not provided enough money to get the job done. It is interesting that President Nixon and President Reagan both vetoed clean water legislation over money.

Mr. Chairman, as you know, we tried to deal with that problem this year, and a lot of folks were optimistic that we would increase the money for the State Revolving Loan Fund programs. It fell apart because many people, including the folks that implement the laws, felt that we were too prescriptive. They also knew that a lot more money would not be forthcoming, and they would be left with more mandates and no money. Also, there are a number of outstanding issues we ought to be compromising on, such as Davis-Bacon.

I am very interested in hearing from Senator Mitchell and Senator Stafford on how they got together and worked things out. We have spent a lot of time in the last year and a half on legislation that would cleanup our water and the environment, but we have gotten very little done. It seems that the reason for this inaction is because we have not been able to sit down, compromise, and work together to make progress.

Mr. Chairman, I appreciate all of the time you have spent this year in trying to improve the environment. I am hopeful that regardless of who is in leadership in the Senate next year, all of us on this committee will sit down at the table with

all interested parties to figure out how we can compromise and move forward on some of these areas that are so important to the future of our country.

Thank you, Mr. Chairman.

Senator JEFFORDS. Thank you. You have been invaluable in your help on this committee and I appreciate your leadership in a number of areas, and look forward to continuing to work with you.

Now to give us all the answers, we will move back in history a little bit to our two honored guests here that have come to be with us today. I will first go to my good friend from Vermont, Senator Stafford, who is with us by virtue of the modern methods and technology to bring us together. Bob, it is a pleasure to have you with us. Just coincidentally, he and I grew up about 150 yards apart—not the same years—so we have many stories to tell about growing up there on Kingsley Avenue and Main Street. I had also the challenge of my life, which was following in your footsteps. I have wandered off a few times and stumbled a few times, but I have always looked to you to bring me back in the right direction and you have been successful in many cases in doing that. Bob, why don't you tell us how you got it done?

**STATEMENT OF HON. ROBERT STAFFORD, A RETIRED
U.S. SENATOR FROM THE STATE OF VERMONT**

Senator STAFFORD [testifying by means of video-conferencing technology from Rutland, VT]. Jim, it is a real pleasure to be here in front of this committee which you now chair, as I appreciate this chance to speak with you and your members and whatever the public may hear as to what I have to say.

We have come a long way, I think, since 1972. It is almost impossible to imagine there was a time in Vermont when rivers were turned the color of the dye used in the woolen mills and when untreated human sewage flowed directly into the waters of our State. That is part of history. Certainly, the students with you today do not know the time, Mr. Chairman, and I hope they never will know that experience we had back then.

The Clean Water Act changed the national attitude toward our rivers and instructed us on how to manage our waste. Passage of the Clean Water Act in 1987 was the culmination of the greatest bipartisan—let me underscore bipartisan, because I think that is the key to making progress in the future, putting aside partisanship and working purely for the good of the country is the key. It was in my day. I think it still is.

Passage of the Clean Water Act in 1987 was the culmination of the greatest bipartisan environmental issue and effort of my tenure as chairman of this committee. It took 4 years of grueling work, hearings, negotiations and compromise—and compromise, negotiations and hearings and so on and so on. It survived, as has been pointed out, two Presidential vetoes. The result is a law at the heart of our national environmental framework.

There is one man who has been mentioned already—a dear friend of mine, as well as the chairman's and others—and that is Senator John Chafee of Rhode Island, whose son is sitting on the committee today. It was Senator Chafee who presided over the hearings on this issue. It was Senator Chafee who led the conference committee to produce a package that passed, believe it or

not, unanimously in both the House and the Senate. It was Senator Chafee who championed the cause and the Nation is better for his service. I was proud to serve with him on this committee and proud to count him as a friend. His work and dedication must not be and will not be forgotten.

It is a very special honor for me to testify today before John's son, Senator Lincoln Chafee, who as I pointed out is now a member of this committee, and whom I am pleased to see continuing his father's legacy of environmental protection.

The 1987 amendments took several main steps to reduce water pollution. Funding was the main point of debate in 1987. We reached a compromise that year to phaseout Federal funding for the construction grants program and to create a financing mechanism called the State Revolving Fund, or SRF. At the time, we thought it was a modest down payment on the investment we were making in the States, cities and municipalities across this Nation over the next decade. It turns out that the Federal investment in the SRF has not ended, and the funding needs for wastewater treatment facilities have grown. I am aware that the Environmental Protection Agency recently released a report citing, "a gap of \$270 billion in funds available for clean water needs." This is a huge gap. It deserves the attention of this committee and this Congress.

I understand, Mr. Chairman, you and Senator Graham of Florida led the committee's efforts to pass S.1961, the Water Investment Act. I commend your efforts and I urge the full Senate to take action to provide additional financial support for clean water needs.

In my comments upon the final passage of H.R.1, the Water Quality Act, I highlighted the portion of the bill dealing with non-point source pollution. This was one of the key gaps in the 1972 Act that we sought to fill in 1987. We authorized a new program to develop best management practices to control nonpoint sources of pollution that often prevent the attainable—that is, fishable, swimmable, water quality. Since that time, Congress has provided close to \$1.8 billion to combat non-point source pollution. Yet, this remains a major challenge for this Nation for the future of the Clean Water Act. I understand EPA estimates the nonpoint pollution is responsible for close to 50 percent of our current water quality growth problems. It must be addressed if we are to take the next step in cleaning up our waters.

At this time, as the committee looks to the future, I ask you not to forget the days of color dyes in our waters and the seemingly insurmountable challenge that the 92d Congress faced when enacting the Clean Water Act. They took the challenge, and the results speak for themselves. In 1987, we confronted another challenge and the results are likewise quantifiable. Today, this committee and this Congress have a similar opportunity. I urge you to reauthorize this important Federal program to bring us closer to the day when all our rivers and streams are swimmable and fishable.

I urge you, if I may, to follow the same bipartisan approach to these problems that we did in 1972 and again in 1987. I think tasks and the results that we need are more important than any partisanship in this Congress, and I hope that is the way it will be played.

Thank you very much, Mr. Chairman, for allowing me to come back and be with you for a moment on this committee.

Senator JEFFORDS. Thank you very much.

[Applause.]

Senator JEFFORDS. I must say, you are some act to follow, Bob. I have tried to fit into your footsteps, but they always seemed a little bit big for me. I also just want to remind the members that not only was it clean water and other areas that Senator Stafford enacted, but I found out that in this year of this horrible event that we had on September 11 as I became chairman 2 weeks before that, I opened the book to find out what we should do, and it was the Stafford Act, relative to taking care of the emergency situations and the creation of FEMA. You have left many, many footprints. It is a challenge for me, but anytime I am in trouble I just take a look to see what you did.

Thank you very much.

Now, we turn to another great, one of our past Senators who has done so much for this Nation, and still even takes care of the baseball and all the other problems of the world. It is a pleasure to have you with us, Senator Mitchell. Please proceed.

**STATEMENT OF HON. GEORGE MITCHELL, A RETIRED
U.S. SENATOR FROM THE STATE OF MAINE**

Senator MITCHELL. Thank you very much, Mr. Chairman, and members of the committee. I appreciate the opportunity to join you today on the 30th anniversary of the passage of the Clean Water Act, especially in the company of my friend and colleague, Senator Stafford.

We have made progress since 1972 in meeting the goal of the Act, which is, as Senator Voinovich noted, to restore and maintain the chemical, physical and biological integrity of the Nation's waters. Our Nation has invested nearly \$75 billion to construct municipal sewage treatment facilities, nearly doubling the number of people served with secondary treatment to almost 150 million. However, there is much more to be done. The EPA's Assistant Administrator for Water said recently that about 40 percent of our Nation's waters do not meet fishable, swimmable standards. That bears repeating. After 30 years of implementing the Clean Water Act, 40 percent of our Nation's waters remain impaired. Clearly, we must intensify our efforts.

I would like first, Mr. Chairman, to recognize the contribution of one of our Nation's great pioneers in environmental legislation, my friend and mentor, Senator Edmund Muskie. Senator Muskie was the greatest public figure in Maine's history and one of the great legislators in our Nation's history. He was the principal author of the 1972 Clean Water Act, which is a cornerstone of our Nation's environmental law. He appeared before this committee in 1992 in celebration of the Clean Water Act on its 20th anniversary, and I am honored again to follow in his footsteps.

I will focus my remarks today on our progress on the issues that were addressed in the 1987 amendments to the Clean Water Act. As chairman of the Subcommittee on Environmental Protection in that year, I was privileged to manage the bill on the floor of the Senate. As Senator Stafford has noted, that legislation was a heart-

ening example of bipartisan cooperation. This committee put it together over a 4-year period. Senator Stafford and Senator Quentin Burdick of North Dakota led the committee during that time. I had the pleasure of working on the bill throughout those 4 years with Senator Dave Durenberger of Minnesota and with Senator John Chafee of Rhode Island. Senator Chafee in 1986 was chairman of the subcommittee and I served as ranking member.

It is clear beyond doubt that without bipartisan cooperation, the bill would never have become law. I want to join others in especially recognizing Senator Chafee's role as a principal author of what became the Water Quality Act of 1987. I congratulated him on that day 15 years ago and I would like to repeat those words today. Senator Chafee is the architect of this legislation. He chaired the hearings, he managed the bill on the Senate floor, he spoke for the Senate conferees during the long and intense conference with the House. The high quality of this legislation is largely due to his efforts. It is, of course, gratifying that Senator Lincoln Chafee is here today as a member of this committee to continue his father's legacy.

As I prepared my testimony for this hearing, I was struck by the similarity in the debate over clean water in 1972, 1987 and today. In those early years, we debated the appropriate roles of the Federal Government and the State Governments. We faced opposition to pollution control requirements and implementation schedules. We struggled to find the appropriate level of Federal financial commitment, and we worked to ensure that the Clean Water Act remained relevant to current pollution issues. Each of those concerns remains a vibrant part of today's debate.

The 1987 amendments can fairly be described as gap-filling measures. We looked at the 1972 law, identified areas where additional action was needed, and sought to create the legal infrastructure needed to further the clean-up of our Nation's waterways. Two key issues in 1987 included funding level and addressing non-point source pollution. There were, of course, many other actions taken in that legislation, such as the creation of the National Estuary Program, the Chesapeake Bay Program, the Great Lakes Program. We reinvigorated the Toxics Program by among other things requiring numerical standards for priority pollutants. We increased the penalties for violations under the Clean Water Act, and we established the first permit program for control of storm water discharges.

Because time does not permit a discussion of all of these subjects, I will focus today on the key issue of funding. Mr. Chairman, I would ask that the full text of my statement be placed in the record.

Senator JEFFORDS. Without objection.

Senator MITCHELL. In 1972, Congress chose to significantly increase Federal participation in clean water programs. It peaked at \$5 billion in 1979 and 1980. In 1981, President Reagan proposed the elimination of all funding for clean water unless Congress reduced the size and scope of the program. The Congress attempted to respond to the President's demand. Clean water funding was reduced from \$5 billion a year to \$2.4 billion a year. We reduced the types and numbers of projects that were eligible for Federal fund-

ing, and we reduced the Federal share of the cost for construction projects from 75 percent to 55 percent.

A further step to reform Federal involvement was the adoption of a transition strategy to move the country away from construction grants toward what was then seen as an innovative mechanism called the State Revolving Fund. The 1987 amendments authorized almost \$10 billion over 5 years for the phase-out of the construction grants program and \$8.4 billion over 5 years for the SRF. We knew at that time that this level of funding was inadequate to fully meet our Nation's clean water needs, which then were estimated at between \$75 billion and \$100 billion. This was a compromise struck between those who favored and those who opposed any Federal investment in clean water. Regrettably, despite our efforts, President Reagan vetoed the bill in 1986. In 1987, the Congress reenacted the bill. The President vetoed it again, but this time Congress overrode the veto and the Water Quality Act became law.

In 1987, we envisioned a situation where after the initial 5-year period of Federal investment, the SRF would begin to revolve on its own and the Federal investment in clean water programs would no longer be necessary. That was not the first choice of many of us, but it was necessary to get some legislation enacted to keep the process moving. Mr. Chairman, as you and the members of the committee know, Federal funding has continued, now at an annual rate of about \$1.3 billion a year. I understand that the debate continues over the level of and the mechanism and the formula for distribution of the Federal investment in clean water. There is much debate on that, but there is little or no debate on the need. Just last week, Administrator Whitman announced the results of the EPA's gap analysis, which indicates a gap of over \$270 billion for our clean water needs.

The role of Federal funding in protecting our Nation's waters was at the center of the debate in 1987. It remains there today. In 1987, we knew that we could not possibly fund all that was needed to clean our waters. That is still true. We provided all that we could in 1987 under the circumstances which then existed. You must do so again, because unfortunately, despite all of our efforts, the estimated gap is larger today than it was then. The infrastructure is that much older. Much of it is nearing the end of its useful life, and failure to replace it could threaten public health and our economy.

I believe the conclusion is clear. Although to act on it will, as always be difficult, there must be an increase in funding for clean water if our Nation is to continue its progress in implementing the goals of the Clean Water Act.

In 1972 and in 1987, the bills survived Presidential vetoes. In each case, cost was a significant issue. In each case, the Nation's desire for clean water overshadowed all other issues. I believe that is still the case. The words that Senator Muskie used in 1972 in urging passage of the original Clean Water Act apply to today's challenges, and I would like to quote them for you briefly. Senator Muskie said,

"Can we afford clean water? Can we afford rivers and lakes and streams and oceans which continue to make life possible on this planet? Can we afford life itself? The answers are the same. Those questions were never asked as we de-

stroyed the waters of our Nation, and they deserve no answers as we finally move to restore and renew them. The questions answer themselves. We have reached a point in our struggle against water pollution, as we say in New England, 'we must either fish or cut bait.' If we are serious about restoring the quality of our Nation's waters to a level that will support life in the future, then we ought to be prepared to make some sacrifices in that effort now."

Mr. Chairman and members of the committee, I conclude by saying that in 1972 and in 1987 the Nation and the Congress rose to meet the challenge. I hope they will do so again.

Thank you, Mr. Chairman, and I will be pleased to answer any questions you may have.

Senator JEFFORDS. Thank you so much, Senator Mitchell. It is wonderful to have you here. The message you have given us is one of challenge and one which I certainly believe we should heed and should match your requests.

I want to thank you for coming, and I want to state that working with you all these years, and having the chance on clean air when you were a real hero on that score, when we needed an upgrading of our air situation, it was one of the most wonderful moments of my life—it wasn't moments; it was weeks, I guess.

Senator MITCHELL. The outcome was wonderful. The process was not, Senator.

Senator JEFFORDS. Yes. That was a tough one. It sure was.

I am just glad to have you here and to reminisce. I am sure Bob Stafford who has been listening—Bob, would you like to say a word to Senator Mitchell?

Senator STAFFORD. It was a delight to listen to Senator Mitchell, and I treasured the years we worked together in Washington on environmental issues and other issues of interest. I see he is as eloquent as ever and it is a great pleasure to be here with you. I do not want to take up your time with reminiscence, but I will. I remember once somebody offered an amendment to the Clean Water Act that I disapproved of, so when the member sat down I spoke against it. The member rose in some anger and spoke to me about the amendment and my attitude, and at that point Senator Muskie arose, and I had told the author of the amendment when he said, would I support it, I had said, "no". Muskie got up and said, after a brief pause, "When the Senator from Vermont says no, he means no." That was the end of that particular amendment and I never have forgotten that.

I do want to wish you much luck in the days ahead, and as the theme that has been developed already is what I think will lead to success now and in the future, and that is when members on important matters that affect the welfare of this Nation like clean air and clean water come up, it is time to forget partisanship and work together for the good of the Nation. That is how we got the Clean Water Act as far as we did, and that is how we will get it further along.

Thank you.

Senator JEFFORDS. Thank you, Bob.

Senator Mitchell, do you want to say anything for Bob?

[Laughter.]

Senator MITCHELL. Well, Mr. Chairman, Senator Stafford, it was a great pleasure to work with you while you served as chairman of the committee. I appreciate very much the great contributions

you made to this and much other important environmental legislation. Of course, we are all pleased that your successor is now serving as chairman of the committee, carrying on your legacy.

Senator JEFFORDS. Let me ask you a question, Senator Mitchell.

Senator MITCHELL. Yes.

Senator JEFFORDS. In your testimony, you stated very clearly that we need to substantially increase funding for the clean water program if we are to realize the goal of fishable and swimmable waters. You mentioned that back in 1987, Americans accepted the financial sacrifice of having clean water. Do you think Americans are still willing to make that sacrifice and increase the funding?

Senator MITCHELL. I believe even more so, Mr. Chairman. There has been since 1972 a dramatic change in the attitude of the American people toward protection of the environment, fueled by a growing awareness of the threat to the environment that had accumulated over many years prior to that time. I find that when the issues are explained clearly to the American people, the choice of the vast majority is to strongly support protection of our environment and the clean-up of our air and our water. I emphasize again, I do not think this is a partisan issue. I think the majorities hold largely true across all political, geographic, social and other categories. I believe the American people by overwhelming majorities strongly support the need for the protection of our environment. I can tell you in my own experience in my own State, as Senator Stafford mentioned in Vermont, that the changes that have occurred in the past 30 years have been dramatic, positive, and the people do not want to go back to the days before the Federal Clean Water Act.

Senator JEFFORDS. Senator Chafee. Again, it is always great to have you on this committee. I have such fond memories of your dad, and you are a chip off the old block, I tell you.

Senator CHAFEE. Mr. Chairman, I thank the two Senators for their kind words. I know my father greatly enjoyed working with you both over the years. It seems like the recurring themes of your testimony are the need for bipartisanship, and that is how we are going to get success on these important issues, and then, of course, also working on the difficult issues of funding. Those are the challenges in front of us. Thank you very much.

Senator JEFFORDS. Senator Voinovich.

Senator VOINOVICH. Senator Mitchell, the issue of how people feel about the Clean Water Act I think has a lot to do with their perception of some of the regulations and rules that are being required by the Federal Government. Several years ago, we revisited the Safe Drinking Water Act and made some changes in it. At that time, many communities were being required every 3 years to add 25 new pollutants to their work, and a lot of smaller communities just did not have the money to do the job that was needed, and there was some revisiting about the technology that they needed to install because in some instances they required the highest and best technology, when a cheaper technology got the job done.

The problem that seems to be today is that you talk to farmers and other people today that, you know, in the old days were really behind it, now it is starting to impact on them. Based on your experience over the years, how would you go about putting something

in place that could garner the support of the American people, and at the same time perhaps set up some type of grant program based on local participation? In other words, how do you get everybody to the table?

Senator MITCHELL. The process that was established initially by Senator Muskie and followed in the 1987 amendments contemplated always a Federal investment and a substantial State role in implementation, with a fairly high level of flexibility at the State level to deal with whatever problems of implementation occurred. I think that one of the factors that has created difficulty is, as you have suggested, the establishment of national standards that go beyond the basic necessities and attempt to resolve every issue in advance, which I think cannot be done in a country of the size, diversity and competing interests as large as this one.

Now, that is an easy formulation to state and very difficult to implement because in the minds of each of us here, what is or is not essential as a Federal standard may differ, and how much flexibility for the State and local governments will also differ in the minds of each person. It is in that area that I believe the greatest contribution can come from members of this committee. When we did this in 1987, as both Senator Stafford and I have noted, it took 4 years. John Chafee, Dave Durenberger, Bob Stafford, myself, Quentin Burdick and a few other members of the committee worked at it over a very long period of time through debate, discussion, trial, error—trying to find the right process of formulation.

We encountered a difficulty that I hope you do not encounter, and that was, of course, the President's demand for a complete end of the program. We struggled to keep the program alive in a way that we hoped would meet the President's approval, even though we believed it ought to be much more than it was at the time. I do not think anyone can—I know I cannot, and I am not sure anyone can be more precise than that in response to the question—but on the Safe Drinking Water Act, Senator, I come from Maine where many small towns had precisely that problem. What we found was—in dealing with it in Maine—is that there had to be a substantial degree of flexibility in dealing with particular problems because so much of this depends upon local circumstance.

It is, as I repeat now, the greatest contribution this committee can make is in finding the appropriate balance between a broad Federal mandate supported by substantial Federal investment, and a sufficiently high degree of flexibility at the State and local level so you do not get decisions that appear to ordinary American citizens as contrary to common sense, which is what happened in the case of some of the application of the Safe Drinking Water Act and in other areas of environmental regulation. I think it all has to pass in the minds of the average American a common sense test. I think you will agree, and I think it is clear beyond dispute, that there is a broad reservoir of support in this country for meaningful, sensible environmental legislation to protect and to enhance our Nation's waters and air.

Senator VOINOVICH. Our problem this year is that we had this bill that increased the SRF, and all of the local people that were administering the program rose up and just said, this is just more command and control and prescriptiveness. I suspect that they

might have been more willing to accept it, but they knew that the amount of money coming from Congress probably would not be very much more, if anything. In terms of that, do you think it would be wise for us to try and set up some kind of a—we have the 75/25 program, if we are looking at a grant program of setting down some specifics as to identifying what the role, percentage of the Federal Government ought to be? Then maybe use the carrot approach to saying, “if you want this money, you are going to have to come up with it locally?” Because local officials—I think when I was mayor, we increased water rates 300 percent I think—that is a lot of money. Of course, the rates were lower, very low. What do you think about that?

Senator MITCHELL. The only reason we reduced the Federal share initially and narrowed the criteria for eligibility was to try to meet the demands of the President. Most of the members of the committee at the time would not, on their own initiative, have proposed such a reduction in funding and a narrowing of the scope. We talked quite a bit at the time. Senator Chafee and I had many long personal discussions about trying to figure out a way to have a varying level of Federal investment, depending upon the nature of the criteria, but we finally concluded that it would create complexity of implementation that would probably do more harm than good. That is, it could not be successfully implemented.

You, of course, continue the same problem, which will always exist in these Federal programs, of the formula by which funds are distributed. The same committee, of course, handled the transportation legislation and it is more acute there, at least it was more acute every time we had a transportation bill and we got into the formula distribution process because there is so much more money involved and it is so important to States. I think that you might want to revisit that subject. We thought about it at the time, having 50 percent for some, 60 or 75 percent, depending upon whether or not you could provide flexible criteria. As I said, we finally abandoned the effort. It may be that over the passage of time, enough information has become available and it might be a way of helping you solve some of your formula problems, but it does go against the grain of simplicity that I think also is a desirable objective.

Senator VOINOVICH. One last question, and that is, I think that it would be worth our while—I know a couple of years ago, I asked GAO to do a report on the infrastructure needs of the country. It wasn't that in-detail, but it seems to me that if the country realized the infrastructure challenges that we have and it were put on a chart and we started looking at it and, one, you are talking about highways funds. We need more money for highways, and right now we are using all the trust fund and we are borrowing money for it. To just go to the people and say, “here is the situation and how do we go about doing it?” To try and do it on a bigger level, rather than just looking at this area and then looking at this area, but to get the comprehensive picture. What would you think of an approach like that that was done really good and then sold on the basis of the facts, and then say, “what are we going to do about this, or how do we come to grips with it?”

Senator MITCHELL. I think it would be invaluable, Senator, for the reason you suggested and for other reasons as well. For exam-

ple, when the Nation goes into recession, there is always some pressure to increase public investment or Federal spending as a counterweight in terms of economic policy. Whenever that occurs, there is a hastily drawn list of things that could be done, almost invariably including many proposals not as significant, not as readily supported by the public as this type of infrastructure program. I think that the American people are prepared to make the necessary investment if they can be presented with the facts in a clear and understandable way. I think the suggestion you have made would be invaluable for the reasons both of us have suggested, and probably for others that do not come into my mind now or that have not been spoken. I think it is a very important thing to do.

Senator VOINOVICH. Thank you.

Senator JEFFORDS. Thank you, Senator.

Senator Mitchell, thank you so much. You have been extremely helpful and gave us a lot to think about.

Senator MITCHELL. Thank you, Mr. Chairman.

Senator JEFFORDS. Thank you very much for coming.

Senator MITCHELL. Thank you, Mr. Chairman, and I thank all the members of the committee for your courtesy.

[Applause.]

Senator JEFFORDS. We have another panel who will be speaking. Bob, I see you are still listening. We are happy to have you join us. We are going to go and have some more witnesses. I want to thank you again for being with us today. It has been extremely helpful.

The next panel is Mr. Tracey Mehan, Assistant Administrator for Water, Environmental Protection Agency of Washington, DC.; also, Thomas A. Weber, Associate Chief, Natural Resources Conversation Service, U.S. Department of Agriculture, Washington, DC.

Mr. Mehan, ready to go?

Mr. MEHAN. I am, Senator, Thank you.

STATEMENT OF G. TRACEY MEHAN, ASSISTANT ADMINISTRATOR FOR WATER, ENVIRONMENTAL PROTECTION AGENCY

Mr. MEHAN. Good morning, Mr. Chairman, members of the committee. I am Tracey Mehan, Assistant Administrator for Water at USEPA. I want to first of all congratulate the chairman and the members of the committee for this tremendous opportunity to celebrate the last 30 years of successes under the Clean Water Act, as well as reflecting on the challenges ahead. As somebody who is in the water business, this is an invaluable contribution to elevating and showcasing these issues, not just for the Washington arena, but for the Nation as a whole.

I certainly appreciate this opportunity to join in this celebration. October 18, 2002 will mark the 30th anniversary of the Clean Water Act, and thanks in no small part to this landmark legislation and the amendments, we have accomplished so much over these 30 years. I will not recount the horror stories that are always mentioned regarding the state of our waters 30 years ago. The fact was, many of our Nation's waterways were little more than open sewers. The 1972 Clean Water Act sharply increased the number of waterways that are once again safe for fishing and swimming.

It enabled us to improve water quality all across the Nation, while experiencing record economic growth and sizable expansion of our population.

The law included new controls over point-source discharges, the traditional pipe in the water, including the setting of strong Federal standards to control both municipal and industrial pollution sources, as well as a major investment by the Federal Government to help communities build sewage treatment plants, and of course support for State efforts to reduce polluted run-off. It established the National Pollutant Discharge Elimination System—the NPDES program—to ensure that those standards were put into place by cities and industries. Municipal sewage treatment plants were required to upgrade to secondary or advanced levels of treatment. To help local governments with this effort, the Federal Government, as has been noted at great length in this hearing today, provided over \$80 billion in wastewater assistance to municipalities over these three decades. This was through both grants, and then of course the evolution into the State revolving loan funds, or SRFs.

The SRFs were designed to provide a national financial resource for clean water that would be matched and managed by States and provide a funding source at the time, it was thought, in perpetuity. Now, because of the revolving nature of these funds, dollars invested in the SRFs provide, at least on the basis of our calculations, four times the purchasing power over 20 years, compared to what would occur if the funds were distributed directly to municipalities as grants. We get quite a bit of bang for the buck through the SRFs program.

As a result, pollution from industrial sources and municipal sewage treatment plants plummeted. By any measure, pounds of pollution abated, stream segments improved, fisheries restored, tremendous load reductions from point sources occurred, resulting in significant improvements in water quality across the Nation. In 1968, only 86 million people were served by secondary or advanced treatment facilities. Today, of the 207 million served by wastewater facilities, more than 97 percent, about 201 million people, far more than double the pre-Clean Water Act number, are now served by secondary or better treatment.

The news, however, is not universally good. As indicated by many of our improved monitoring techniques which enable us to monitor more water bodies, it naturally gives rise to the question on the part of many citizens, what have you done for me lately? National water quality monitoring data reported by the States in the year 2000 shows that approximately 45 percent of waters assessed by States are not clean enough to meet basic uses such as fishing or swimming. In other words, they do not meet the water quality standards as set up under the Clean Water Act regime.

The remaining problems impacting water quality are not easily remedied. They come not just from pipes—the traditional discharge pipes, the point sources—but from diffuse sources of run-off such as farming and forestry operations, construction sites, urban streets, automobiles, atmospheric deposition, and even suburban homes and yards. While some of these diffuse sources are considered nonpoint sources under the Act, others are regulated as point sources as in the current NPDES storm water program. It is im-

mensely challenging to manage these sources using traditional regulatory tools because they are not well-suited to end-of-pipe treatment, and the sources are so numerous and widespread, reflecting all the myriad uses that human beings make of the land which surrounds the waters.

Nor are the great variety of pollution sources just chemical in nature. There are physical and biological threats to our Nation's waters that we must address as well if we are to truly achieve the stated goal of the Clean Water Act, "to restore and maintain the chemical, physical and biological integrity of the Nation's waters." Physical integrity can have numerous dimensions, again, just affecting the physical boundaries of the stream, the quality of the riparian zone, the elimination of vegetation cover and erosion, the overall erosion that can result basically in putting a stream in a concrete box, which has so often been the way we have dealt with some of the storm water issues.

Invasive species are an example of a real and growing threat to the biological well-being of our Nation's aquatic, as well as our terrestrial resources, as well as to the health of our economy. For example, more than 160 invasive aquatic organisms of all types—plants, fish, algae, and mollusks—have become established in the Great Lakes since the 1800s. The U.S. Fish and Wildlife Service estimates that the potential economic impacts of one of these species, the zebra mussel, will be \$5 billion over the next 10 years to the United States and Canadian water users within the Great Lakes region.

The past decade has seen a shift toward an emphasis on what is commonly referred to as the watershed approach—certainly not a new approach, but hopefully one that is becoming more widespread. EPA has been promoting, and many have been practicing, a watershed approach in their work, which encourages a holistic take or view on identifying problems and implementing the integrated solutions that are needed to overcome multiple causes of water quality. EPA views the watershed as the basic unit to define and gauge the Nation's water qualities, and we try to gauge all our actions, however imperfectly, toward this end.

Now, there are several specific tools I would like to mention that we can bring to bear to address the more complicated nature of these water quality problems relating to nonpoint source, broadly defined. One of these is the total maximum daily load, or TMDL program. In enacting the Clean Water Act, Congress retained a water quality-based strategy for waters that remained impaired after the application of technology-based standards—the technology-based standards being the first wave of regulation under the Clean Water Act. The TMDL program contained in section 303(d) essentially tells States to establish a water quality clean-up budget for such waters. EPA has been encouraging States to develop and implement TMDLs on a watershed basis. Our hope is that this approach will greatly increase collaboration and support for needed pollutant controls.

TMDLs are water quality based, not technology based. They are information based, requiring widespread and systematic monitoring to identify and characterize problems and priorities, and to track progress in solving them. Public involvement can contribute to this

information process both directly and through increased visibility for problem solving in the watershed. It will help make sure that TMDLs get translated from allocations into action, because information brought before the public is itself a driver of action.

Now, TMDLs and watershed approaches will provide additional opportunities to take advantage of other programs, including the non-point source grants under 319 of the Clean Water Act, as well as the conservation provisions of the newly reauthorized Farm bill, an absolutely huge addition to our resources to deal with run-off, as well as the source water assessment requirements of the Safe Drinking Water Act and many other Federal, State and local programs.

Non-point source 319 grants are a fundamental tool to address impairments because they can be targeted as part of a TMDL prioritization and thus can be used as part of a State's cumulative strategy to clean up impaired waters. Farm bill funds are a broad resource and need to be capitalized and targeted consistent with the TMDL, as are 319 funds. Finally, we are also looking forward under the Safe Drinking Water Act to the source water assessments that will be completed in 2003 to see how these mesh with the concept of watersheds and TMDLs generally.

Maintaining high environmental standards and sustaining a healthy economy require that we optimize costs and conserve our natural resources. Economic incentives can be an important tool to help meet this challenge. We must take advantage of market forces to provide incentives for voluntary reductions, emerging technology, and greater regulatory flexibility. We believe water quality trading, for example, holds great promise as a market-based tool for addressing water pollution. Trading is an innovative way for water quality agencies and community stakeholders, including State and local governments, point-source dischargers, contributors to non-point source pollution, citizens groups or other agencies, and the public at large to develop common sense, cost-effective solutions for water quality problems in their watersheds. Trading is a tool communities can use to grow and prosper, while retaining their commitment to water quality.

Mr. Chairman, it is time for a shift in focus from an exclusively point-source oriented program to a non-point-source centered one; from relying largely on technology-based standards to complementing past progress by a water quality-based approach; and finally, from emphasizing inputs to focusing on environmental outcomes. These tools I have described are some of the means to make this shift. We must build on the older programs, but go beyond them.

I should say a word about the funding gap that has been a topic of some discussion today. Because the infrastructure and the aging of the infrastructure is such a huge issue, we have of course moved forward and issued the recent gap report. Again, much has been said on that already. I just want to say that the methods and data used in the analysis were subject to peer review by a diverse panel of external reviewers drawn from academia, industry and think tanks, as well as a robust interagency review process. The analysis focused on a no-revenue growth scenario, which is useful to understand the extent to which spending might need to increase relative

to the status quo. This scenario estimates a total capital payments gap of \$122 billion, or about \$6 billion per year for clean water. The clean water O&M, or operation and maintenance gap, is estimated at \$148 billion, or \$7 billion per year. It is important to recognize that the funding gaps would occur only if capital and O&M spending do not increase from present levels.

In reality, increasing needs likely will prompt increased spending and thus hopefully a smaller funding gap. Thus, if one assumes that spending on clean water infrastructure increases at 3 percent annually over and above the rate of inflation, and I realize that is a big if, but anyway if you assume that revenue growth scenario, the capital gap then becomes \$21 billion or about \$1 billion per year, and the O&M gap is estimated at \$10 billion, or \$500 million per year. This revenue growth scenario makes no assumptions about who would provide the additional revenues, but it is included in the gap report to illustrate further dimensions of the fiscal challenge ahead.

Both scenarios look at the supply side of infrastructure financing, that is how to pay for needs, but ignore the demand side—how to reduce infrastructure costs and make the most efficient use of our capital facilities. Demand-side measures adopted by some utilities include asset management and administrative restructuring to reduce capital and O&M costs, as well as rate structures that better reflect the cost of service.

Senator JEFFORDS. Are you about to complete?

Mr. MEHAN. I am, Senator.

Basically, we look forward to convening a forum on this in January to look at innovative approaches. I would just conclude, Senator, that these are exciting times. These are challenges that can be met and they are significant challenges, but the ones that I know we at EPA look forward to working with you and the committee in meeting.

Senator JEFFORDS. Thank you, Mr. Mehan.

Mr. Weber.

STATEMENT OF THOMAS A. WEBER, ASSOCIATE CHIEF, NATURAL RESOURCE CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. WEBER. Mr. Chairman and members of the committee, I am pleased to be here today before you to present the Department of Agriculture's perspective on the Clean Water Act.

As we celebrate the past 30 years, we also are reflecting on USDA's natural resource conservation heritage, and upon that significant work ahead of us as we enter into the new century. We at the USDA Natural Resources Conservation Service are proud of our efforts and those of our State and local partners, including conservation districts.

I would like to begin by placing the Clean Water Act in a larger perspective of soil and water conservation on private land. USDA has played a key role in the management of non-point source pollution for nearly a century, long before the word "nonpoint" was part of our vocabulary. In the 1920s and 1930s, Congress responded to natural resource degradation and formed the Soil Erosion Service, later named the Soil Conservation Service, and now called the Nat-

ural Resources Conservation Service, and enacted a national conservation program. Many of the new initiatives were in response to the devastation caused by drought and poor land management resulting in the dust bowl. For more than 60 years since, USDA, in cooperation with State and local partners, have made significant gains in soil and water conservation on private land.

When the Clean Water Act was passed in 1972, it triggered a new national emphasis on the problems created by poor land and water management. Congress appropriately recognized the differences between point and nonpoint sources of pollution, and established differing approaches to solving these distinct problems. New emphasis on water quality concerns also occurred at USDA. It has been of critical importance to our work ever since. This work, performed in partnership with local soil and water conservation districts, State and Federal agencies, and owners and operators on our land, have been instrumental in protecting our soil and water resources. Indeed, on working cropland, soil erosion caused by wind and water has been cut by 38 percent since 1982. Reduced erosion means cleaner water, improved fish and wildlife habitat, and more fertile and productive soils.

On the subject of conservation buffers, since 1997 over 1.2 million miles of conservation buffers—about 4 million acres—have been established nationally on farms and ranches to protect water resources and establish wildlife habitat. Locally, in the Chesapeake Bay watershed for instance, the goal of establishing 2,000 miles of conservation buffers by the year 2010 will be completed this year, 8 years ahead of target. In addition, I would add that farmers and ranchers have reduced the rate of wetland conversion from agriculture to nearly zero, while restoring over 1 million acres of wetlands under the Wetland Reserve Program. The 2002 Farm bill will result in another 1.25 million acres being restored, an area roughly the size of Delaware.

I would like to shift gears now for a moment and look toward the path ahead. Last September, Secretary Veneman released the Department's policy document for food and agriculture. This document provided guidance on future agriculture policy, and identified emerging challenges facing farmers and ranchers across the Nation. A key component dealt with the environment and natural resources, and highlighted policy options for meeting a breadth of conservation challenges, including water quality and quantity. A central aspect of the conservation portion of that document was that solutions should be developed and implemented as a means to achieve conservation goals. The document also pointed out that farmers and ranchers need voluntary conservation opportunities commensurate with the regulatory challenges they face.

Congress responded this year with the 2002 Farm bill that provides for significant program authorities and funding levels, and a portfolio approach to conservation, including cost-share, incentive, land retirement and easement programs. In closing, I believe we have made and continue to make impressive gains with respect to soil and water quality. We are optimistic about the future and believe that the 2002 Farm bill will result in one of the largest conservation efforts on private lands in this Nation's history. We must

continue striving to achieve the high aspiration of our clean water goals, and to continue to help the public adopt a sound land ethic.

Thank you again, Mr. Chairman and members of the committee for inviting USDA to participate in today's hearing.

Senator JEFFORDS. Thank you, Mr. Weber. I think I will start with you for questions.

According to the latest water quality inventory report from EPA, non-point source pollution is identified as the largest cause of water quality impairment with agriculture, identified as the largest cause of non-point source pollution. What is USDA doing to help farmers address the non-point source pollution?

Mr. WEBER. Thank you, Mr. Chairman.

USDA is aggressively working with landowners, farmers and ranchers, using many of the tools in the former Farm bill, as well as the 2002 Farm bill, to improve water quality on the landowner's property, including conservation reserve program and buffers; including the Environmental Quality Incentives Program and all of the water quality provisions in that program to address water quality issues, including conservation buffers, including diversions, water waste systems for animal waste operations, and distribution systems to keep pollutants away from the water systems. It is a tremendous investment—two of many tools that the Department has and will continue to use in its work.

Senator JEFFORDS. Thank you.

Mr. Mehan, in your recently released gap report, EPA estimated a capital funding gap of \$122 billion for the next 20 years, or around \$6 billion per year if funding levels do not go up. The report's conclusion states,

“The gap analysis concludes that clean water and drinking water systems will need to use some combination of increased spending and innovative management practices to meet the projected needs.”

However, when your colleague Ben Grumbles testified before this committee on S. 1961, a bill to increase the funding levels to \$20 billion over the next 5 years, he stated that EPA did not support an increase in funding for clean water. Is the Administration now ready to support increasing our financial commitment to clean water to the levels addressed in the gap report?

Mr. MEHAN. Mr. Chairman, the gap report, you are right, is somewhat agnostic as to ways to solve the problem. Its main function was to inform the public dialog so that we had an adequate grasp of what the challenge was ahead, whether it be achieved by private capital, governmental spending, State and local government, demand-side management, et cetera. At this point, the Administration has not revisited its position so there is no change, especially in light of the present exigencies dealing with the war on terrorism and of course the current economic challenges we face.

At this point, we are standing on our request, which is a record request for the 2003 budget in terms of the SRF funds generally, but no change since Mr. Grumbles has testified.

Senator JEFFORDS. Senator Voinovich.

Senator VOINOVICH. This clean water and drinking water infrastructure gap analysis—you have got capital, 122; operation and maintenance, 148; total 271; and drinking water comes out to be

263. Do you think that these—was a lot of work put into arriving at these numbers? How accurate do you think they are?

Mr. MEHAN. Well, the basic data for it is derived first of all from the needs surveys that have been done by the Agency before, and then as I say, there was a robust peer review process. Generally, there is some variation between the various other studies that have been done, but I think they are all working off the same formulas and the same equations, if you will, sometimes plugging in different assumptions. Generally, the reception we are getting—the Administrator announced this at the Water Environment Federation meeting in Chicago—and from the other stakeholders, we are not getting, at least I am not getting yet any push-back that we are off the mark here. Admittedly, you can plug in different assumptions and take it a different way, but I think all of us are on the same page. I personally feel very good about the work that our staff has done, especially in light of the positive peer review process that we went through.

Senator VOINOVICH. Well, I share Senator Jeffords' concern. What are you going to come back with in terms of a recommendation on how to deal with the problem? There is a problem there and I think it is a responsibility to figure out a way to deal with it.

Mr. MEHAN. Well, I can tell you that on the occasion of the release of the report, Governor Whitman stated her intention to convene a stakeholders forum probably in January—we think we will be able to get it on, that will focus on the whole raft of responses to this report. Hopefully, a number of these will be in the realm of innovation, whether it is technology, use of private finance, consolidation of systems, asset management. No doubt, stakeholders will want to engage on the subject of what is the appropriate governmental response, be it local, State or Federal. My charge is to move forward with that forum right now so that we at EPA and the Governor in particular can have the benefit of that input in response to this gap report.

Senator VOINOVICH. You also talk about one of the innovations—“water quality trading holds great promise as a market-based tool for addressing water pollution.” Could you explain to the committee what the thinking is in that regard?

Mr. MEHAN. The references there are primarily in the context of watersheds and non-point source pollution. There are certainly places, say, on Long Island Sound where point-to-point source trading has been very successful and continues to be a contribution. The key thing is that in the area of non-point source pollution, there is a huge cost differential between, say, controlling phosphorus through best management practices on the land, as opposed to building a big black box at the end of the pipe. Because of that cost differential, it opens up a situation where, say, a point source to meet its water quality permit needs or a community that wanted to invest in water controls can get tremendous economies by looking at the non-point source side, the best management practices, whether it is vegetation strips, contour farming, fencing animals out of the stream, reforestation—whatever it may be. Those can be a fraction of the cost of building a huge wastewater treatment plant.

We feel that this has advantages both in terms of achieving water quality standards, which is our performance-based outcome under the Clean Water Act, similar to the NAAQ standards under the Clean Air Act, as well as preserving water quality where it exists now, but allowing for economic growth, which will come inevitably, at least in any vibrant community. Essentially it is taking advantage of that huge cost differential between reducing pollution from nonpoint sources versus the point sources.

Senator VOINOVICH. Do you have any good role models in terms of watershed approach that we could—

Mr. MEHAN. There are maybe a dozen around the country in various ways, and sometimes it was put in place and other solutions were found—but Dillon Reservoir and Cherry Creek in Colorado; Tar-Pamlico in North Carolina; the Lower Boise in Idaho. We have seen selenium trading in California that looks very good. The Long Island Sound, again, that is point-to-point sources, but that is a very good example of sort of generically how trading works. We think that next year we will be able to announce another 10 or so pilots where we think we are going to have more success at this.

It is a great opportunity, but again it is just going to be one tool in the toolbox. It will not fit—it is not going to be the tool for every problem, but given the thousands of watersheds, given the thousands of TMDLs to be done, we think it is a tool that probably bears more use than it has to date.

Senator JEFFORDS. Thank you both for very helpful testimony.

Our third panel is Mr. Robert F. Kennedy, Jr., senior counsel to the Natural Resources Defense Council, Washington, DC.; Mr. Paul Pinault, the president of the Association of Metropolitan Sewerage Agencies and director of the Narragansett Bay Commission, Providence, RI.

Mr. Kennedy, nice to have you here. Please proceed.

**STATEMENT OF ROBERT F. KENNEDY, JR., SENIOR COUNSEL,
NATURAL RESOURCES DEFENSE COUNCIL**

Mr. KENNEDY. I am very happy to see you, too, Senator. I want to thank you for holding this hearing, for your leadership on environmental issues. I took part in the battle during the Gingrich Congress to stop the assault on our environmental laws, and your leadership during that period was absolutely critical to the success we ultimately had. Your home State of Vermont is regarded by environmentalists as the State with the finest environmental commitment, and I am proud of you for upholding that commitment. Vermont also is famous for its great cheeses, its milks and its outstanding women, one of whom I have married, and my brother married another one. My wife is from the Northeast Kingdom, so I commend you for all of your commitment to that sense of community in Vermont.

Today, as we approach the 30th anniversary of the Clean Water Act, it is not a cause for celebration. It is not a cause for self-congratulations. It is a cause for great concern. This Administration has declared war on the Clean Water Act. It is our most important, most successful environmental statute. This week, we received disturbing news that the EPA's annual water quality assessment for the first time in the 30-year history of the Act shows a dramatic

decline in national water quality. There are more degraded streams, more degraded miles of lakes and waterways that are degraded. The trajectory of that trend appears very, very disturbing.

I represent on behalf of the Natural Resources Defense Council and Riverkeepers, I represent and have done so for 20 years, fishermen, commercial fishermen and recreational fishermen. They run the range of the political spectrum from right-wing Republican to left-wing Democrat, but without exception they see the initiatives that are now coming out of the White House, which I have described in my written testimony, as the gravest threat not only to their livelihoods, but to their sense of values, their sense of community, their sense of citizenship and what it means to be a resident and a citizen of this country.

If the current initiatives that are being promoted by this Administration, particularly the four that go to the core values of the Clean Water Act, are actually enacted—one of them already has passed the regulatory process—we will effectively have no Clean Water Act left in this country. That is not exaggeration. That is not hyperbole. That is a fact. Our law, the beautiful language of the law and the aspirations of the law will remain on the books, but the law itself will be unenforceable, and it will be like Mexico, which has these wonderful environmental laws, with beautiful poetic language, but nobody knows about them and nobody complies with them because they cannot be enforced.

If you ask the people who are promoting these kind of initiatives, why are you doing this, what they invariably say is this, “well, the time has come where we have to now direct our economic resources toward fighting terrorism and we have to choose now between economic prosperity at home and environmental protection.” That is a false choice. In 100 percent of the situations, good environmental policy is identical to good economic policy. If we want to measure our economy, and this is how we ought to be measuring it, based upon how it produces jobs and prosperous, dignified communities over the generations, prosperity over the long term; if on the other hand, we want to do what the White House is now asking us to do, which is to treat the planet as if it were a business in liquidation, to convert out waterways to cash as quickly as possible, to have a few years of pollution-based prosperity, we can generate an instantaneous cash-flow and the illusion of a prosperous economy because we are going into capital. Our children are going to pay for our joyride, and they are going to pay for it with denuded landscapes and poor health and huge cleanup costs and degraded water bodies. Those costs are going to amplify over time and they are never going to be able to pay them.

The environmental injury and water pollution particularly is deficit spending. It is a way of loading the cost of our generation's prosperity onto the backs of our children. Let me give you one example of that from my experience on the Hudson River. I represent people on the Hudson River whose livelihoods—some of the fishermen I represent come from families that have been fishing the river continuously since Dutch colonial times. It is a traditional, sustainable fishery. They got together back in the 1960s in an American Legion hall. Almost all of them were former Marines. They were combat veterans from World War II and Korea. They

started talking about blowing up pipes on the Hudson River because they had been to the government agencies that are supposed to protect Americans from pollution, and they were given the bum's rush by the Corps of Engineers and the Conservation Department and the Coast Guard. They thought that the only way they could reclaim the river for themselves is if they confronted polluters directly. The Clean Water Act, which was passed in 1972, gave them the ability to do that. Today, as a result of their work and as a result of that Act, the Hudson River, which was a national joke in 1966—it was dead water for 20 miles stretches north of New York City, south of Albany; it turned colors sometimes two or three times a week, depending on what color they were painting the trucks at the GM plant in Tarrytown—today that waterway is an international model for ecosystem protection. It is the richest water body in the North Atlantic. It produces more pounds of fish per acre, more biomass per gallon than any other waterway in the Atlantic Ocean, and it is the last major river system left on both sides of the Atlantic that still has strong spawning stocks of all of its historical species of fish.

The people who are trying to dismantle the law that allowed this to happen will say to you, “well, we have got to get rid of the Federal laws and we will return control to the States.” After all, that is local control, community control and the States are in the best position to patrol and protect and police their own environment. The real outcome of that devolution will not be local control, it will be corporate control, because these large corporations can so easily dominate the State political landscapes. We remember in the Hudson Valley the 1960s version of community control before Earth Day and before the Clean Water Act, when the General Electric Company—and this tale can be told 10,000 times across this Nation—came into these poverty-stricken upstate towns like Fort Edward and Hudson Falls, NY, and said to the town fathers,

“We are going to build you a spanking new factory; we are going to bring in 1,500 new jobs; we are going to raise your tax base. All you have to do is waive your environmental laws and let us dump our toxic PCBs into the Hudson and persuade the State of New York to write us a permit to do it. If you don't do it, we will move to New Jersey, across the river, and we will do it from over there, and they will get the taxes and they will get the jobs, and you will still get the PCBs.”

Fort Edward and Hudson Falls took the bait, and two decades later General Electric closed those factories and they fired the workers and they left town with their pockets stuffed with cash, the richest corporation on earth. They left behind a \$2 billion cleanup bill that nobody in the Hudson Valley can afford.

I have 1,000 commercial fishermen—my clients—who are now permanently out of work because although the Hudson is loaded with fish, the fish are still loaded with General Electric's PCBs and they are too toxic to legally sell in the marketplace. The barge traffic on the upper river has dried up because the shipping channels are too toxic to dredge. All of that beautiful shoreline property that was occupied by General Electric's factory, with tax breaks from the grateful localities, is now permanently off the tax rolls, robbed from those communities as a source of revenue and recreation, and every woman between Oswego, NY and Albany has elevated levels

of PCB in her breast milk, and everybody in the Hudson Valley has General Electric's PCBs in our flesh and in our organs.

What the Federal Clean Water Act was meant to do was to put and end to that kind of corporate blackmail and to stop these corporations from coming in and whipsawing one community in New York against another in New Jersey, or one in Vermont against another in Massachusetts, to get them to race to bottom, to lower their environmental standards, to recruit these filthy industries in exchange for the promise of a few years of pollution-based prosperity, and to ransom our children's futures in the process.

I would just say one other point, which is this. There are people out there now who say we have to choose between economic prosperity. An investment in our environment does not diminish our Nation's wealth. It is an investment in infrastructure, the same as investing in telecommunications, in road construction. It is an investment we have to make if we want to ensure the economic prosperity of our generation and the next generation.

There is no stronger advocate for free-market capitalism than myself. I believe that the free market is the most efficient and democratic way to distribute the goods of the land. In a true free-market economy, you cannot make yourself rich without making your neighbors rich, and without enriching your community. What polluters do is they make themselves rich by making everybody else poor. They raise standards of living for themselves by lower quality of life for everybody else. They do it by cheating the free market, by forcing the public to pay their production costs, by unloading it on the public waterways which we own. The Governor does not own the Hudson River. The legislature does not own the Hudson River. The U.S. Senate does not own it and General Electric does not own it. We own it. That is what the constitution of New York State says. The people of the State own that waterway. Everybody has the right to use it. Nobody has the right to use it in a way that will diminish and injure its use and enjoyment by others.

When they dump this stuff in the river, it is an act of theft. They are stealing something from the public, and it has always been wrong and it has always been a theft, and thank God that the Senate and the Congress overrode President Nixon's veto in 1972 and gave these rights back to the American people. Thank God they were here again in 1987 when President Reagan tried to overrule it again. Thank God they were here in 1995 when the Gingrich Congress tried to dismantle with their dirty water bill the Federal Clean Water Act from the outside congressionally.

Today, what you have is something much more insidious and dangerous—an Administration that is absolutely committed to eroding, eviscerating this wonderful, wonderful successful Act from the inside.

Senator JEFFORDS. Thank you very much.
Mr. Pinault.

STATEMENT OF PAUL PINAULT, PRESIDENT, ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES, AND DIRECTOR, NARRAGANSETT BAY COMMISSION

Mr. PINAULT. Good morning, Chairman Jeffords and Senator Voinovich. It is a pleasure to be here this morning to represent AMSA's membership of 280 publicly owned treatment works across the country.

As environmental practitioners, we treat more than 18 billion gallons of wastewater each day and service the majority of the U.S. population. The success of the Clean Water Act is due in large part to the hard work, ingenuity and dedication of local wastewater treatment officials. In fact, it has been 32 years since a group of public wastewater officials banded together and founded AMSA.

From the early 1900s, municipal governments have provided the majority of financial support for water pollution control. In the early days, cities financed and built collection systems that conveyed wastewater to primary treatment facilities. Eventually, outbreaks of cholera and typhoid and the decline of fish populations led to the passage of the 1948 Water Pollution Control Act and the first Federal funding program that would help cities address the enormous challenge of treating of billions of gallons of wastewater each day.

Then on June 22, 1969, Ohio's Cuyahoga River became engulfed in flames, a sign that the country's water quality was in crisis. This and other environmental problems resulted in enactment of the Clean Water Act of 1972. Mr. Chairman, America's greatest water quality improvements were made during the 1970s and the 1980s when Congress boldly authorized and funded the Construction Grants Program, providing more than \$60 billion for the construction of publicly owned treatment works, pumping stations and collection and interceptor sewers. The Construction Grants Program was directly responsible for the improvement of water quality in thousands of rivers, lakes and streams nationwide.

As our waters once again became fishable and swimmable, recreation and tourism brought jobs and revenue to local economies. Unfortunately, the Federal commitment to fund continued water quality improvements declined drastically with the end of the grants program and the implementation of the 1987 amendments to the Clean Water Act. As Federal funds dramatically declined in the 1990s, the complexities of our challenges and the cost of implementing regulations continue to rise exponentially. Over the past year, the committee has received substantial testimony that has documented the coming funding crisis in the wastewater industry.

As the measurable gap between projected clean water investment needs and current levels of spending continues to grow, local ratepayers will be unable to foot the bill for the costs associated with increasingly stringent requirements of the Clean Water Act. In the report entitled "The Clean Water and Drinking Water Infrastructure Gap Analysis" that was released last week, EPA estimated the 20-year gap for clean water could be as high as \$442 billion, depending upon the assumptions made.

At the Narragansett Bay Commission, an estimated \$471 million is needed for projects that are ongoing right now. Our average cash expenditures are expected to be \$100 million annually. We antici-

pate receiving approximately \$60 million from the Rhode Island State revolving fund, leaving an annual gap for us of \$40 million a year for at least the next 5 years.

Mr. Chairman, Senator Voinovich, I would like to take this opportunity to thank you for working with AMSA this year on important legislation that would significantly increase the authorized levels of funding under the Clean Water Act. Unfortunately, the world has changed significantly from when this process began with the series of hearings in 2001. At that time, AMSA had targeted the Federal budget surplus as the logical source of funding to increase the Federal investment in wastewater infrastructure. In light of our current budget deficit and the continued costs associated with our Nation's defense, we believe that the authorized levels of funding proposed in S. 1961 and S. 2813 would not be available to appropriators out of the general revenue for many years to come.

As a result, AMSA is exploring alternative dedicated sources of revenue to fund future water quality improvements. Our municipal wastewater treatment systems are critical pieces of national infrastructure, and as such should be financed through a long-term sustainable and reliable source of Federal funds. Although operating efficiencies and rate increases can provide some relief, they cannot and will not be able to fund the current backlog of capital projects, plus the treatment upgrades that will be required in the years to come. Federal support for wastewater infrastructure is critical to safeguard the environmental progress made during the past 30 years under the Clean Water Act. As water pollution control solutions move beyond political jurisdictions to a broader watershed approach, and as we address a wider array of pollutants and pollution sources, the national benefit of improved water quality will more than justify the larger Federal contribution.

As we look to the future, we see that the challenges facing the leaders of today's wastewater treatment agencies include polluted run-off from every source imaginable. Non-point source pollution, along with the challenges posed by combined and sanitary sewer overflows and storm water system discharges are going to cost this country billions of dollars and take several decades to control.

On behalf of AMSA's members, we look forward to working with you to solve these problems together. The bipartisan nature of the committee over the 30-year history of the Clean Water Act has undoubtedly contributed to the Act's success.

Thank you for this opportunity to present our views, and we look forward to participating in the celebration of the 30th anniversary and continuing to work with you in the future.

Senator JEFFORDS. Thank you, Mr. Pinault.

Mr. Kennedy, the environmental community has expressed significant concern over the draft rule to change the TMDL program. Can you elaborate on those concerns?

Mr. KENNEDY. The TMDL program is—the way that the Clean Water Act is structured is that it is based upon—the primary front-line mechanism for controlling pollution is point-source pollution, through effluent guidelines and industrial standards that are set by EPA in order to establish technological controls for the various kinds of pollution. Sometimes that does not work because if you

have 20 pipes going into a small tributary or if you have a lot of point-source discharges going into that tributary, the point-source control on that one factory is not going to solve the problems of degradation in that creek.

There was a backup mechanism put in the Clean Water Act that is called the total maximum daily load that says to the States when there is a degraded water body, you have to measure it; find out what pollutants are in it; figure out under the natural process how much pollution that stream can assimilate; and then come back and establish caps on all of the pollution that is going into that stream. This is absolutely critical. We still have half the stream miles in this country that are still degraded, even with the point-source controls. You have got to have TMDLs. What the Administration is doing now is it has established or it has proposed an initiative that will essentially or effectively get rid of the TMDL program. This is at a time when water quality is now declining in our country for the first time in 30 years. We should be strengthening and implementing that program, which has never been done.

The Clean Water Act is such a wonderful statute. If it were actually enforced, we would have clean water in this country. The Clean Water Act promises in its introduction to eliminate all point-source discharges of pollution by 1985. That never happened. The Act simply has not been enforced, and the TMDL part of the Act has never been enforced whatsoever. The EPA now, because of a series of lawsuits, is being forced to enforce that section. What the Administration is doing now is getting rid of that section of the Act so it will never be enforced and we will never have clean water in this country.

Senator JEFFORDS. Mr. Pinault, in your testimony you recommended that the Federal Government consider a dedicated funding source to address the capital funding gap for water infrastructure. If such a system were adopted, it would likely function as many other Federal trust funds where certain products and services related to the area of concern are taxed. In such a system, it is probable that the wastewater treatment works would be charged in some way to generate the funds. Do you believe the municipal wastewater community would be willing to accept such a charge in order to generate those funds?

Mr. PINAULT. I think it would depend on the specifics of the program. When I became President of AMSA in May, one of the first things I did was put together an infrastructure funding task force, which is being chaired by Bill Schatz from the city of Cleveland, Northeast Ohio Regional Sewer District. We met last week in Chicago as part of the WEF conference. We are working very hard to put together some money that is being raised by our members to come up with solutions to the problem; to come up with a dedicated source of revenue. We will look at all viable options, including options that you just mentioned. Hopefully, after the first of the year, we will be in a position to start discussing the specifics of our findings with your staff.

Senator JEFFORDS. We will follow up with you on that.

Senator Voinovich.

Senator VOINOVICH. First of all, Mr. Kennedy, I would like to say to you that thank God things are not as bad in Ohio as they are

where you described on the Hudson. I never thought I would see the day when I could catch a steelhead on a fly in Ohio. Today, we have some of the best steelhead fishing anywhere in the country. Euclid Creek, that I walked by this past weekend, was terribly polluted. Today, we have steelhead in that creek. We have seen some significant improvement in the water quality of Lake Erie in terms of fishery. We have seen tremendous development along the lake because it is now not the dirty lake anymore, it is the clean lake. It has just been fantastic for our State.

In terms of business's involvement, one of the things I did when I was in the legislature was create the Ohio Water Development Authority that issues revenue bonds to help businesses cleanup their effluent. We have seen significant improvement in that regard.

The problem that I see is somehow reaching some level of compromise in terms of where we are going. Mr. Pinault, your Association I think really cares about dealing with waste treatment, and yet were strongly opposed to the prescriptiveness in S. 1961. Obviously, from the chairman's point of view, there must have been some organizations pushing him that this prescriptive language be in this reauthorization of the State revolving loan fund. It just appears that there is not any area where we can get compromise. Your Association should be fully behind increasing the amount of money for the State revolving loan fund. Your group should be fully behind grants to help communities meet the requirements of the law. There is a disconnect here, and I would like you to comment on that from your perspective.

Mr. Kennedy is talking about total maximum daily load. There seems to be some real concern among people in your business in my State that are concerned about fully implementing that, because they feel in some instances it defies common sense. Where is the compromise that we can reach so that we can get on with this?

Mr. PINAULT. Unfortunately, all of these topics are extremely complicated and there are many issues involving each of them. When it comes to the specific mandates that were included in S. 1961, it differed from the House bill which basically had similar issues, but they required the applicants for the SRF to certify these mandates, versus how they were handled in the Senate bill. Asset management alone will not solve the problem. I think many people think that has been the new buzz word in the last year or so, that asset management will control and eliminate the gap. Well, we have been doing asset management for years. We did not call it that, but we have controlled our assets and managed them and done a good job at it. We also have reduced our operating costs.

In the meantime, infrastructure is aging. There are new Federal requirements. Ten years ago, we had to put in at least two milligrams per liter of chlorine to disinfect our effluent and still meet coliform levels. Now it is no more than .65 micrograms per liter, which you cannot even measure, which means we have to add chlorine and then take it out. This was something that we did not think about 5 years ago. It cost us \$15 million to design and build it. We were given 9 months to do it.

There are a lot of issues, and we have tried to work with your staff on both sides to try and come up with a compromise. We are willing to do that in the future.

Senator VOINOVICH. Well, it seems to me that we ought to get back to the table again to see if that cannot be worked out. I will be very interested in your recommendations on these dedicated sources of revenue. I think part of the problem where we have seen in some areas some degradation is the fact that local communities have not had the dollars to expend to get the job done. Storm flow overflow and some of the other things that are being required to do is just a matter of the local capacity to deal with it. Some communities refuse to do it, but I think most communities—I know from my experience as mayor in tackling water and sewage treatment, that if you make the case, people are willing to pay for it in terms of increased rates, but not to the extent that it is astronomical an increase. There has got to be some—and I would be interested in recommendations about what percentage of this do you think the Federal Government should be willing to pick up.

Mr. PINAULT. I would think, based on what happened in the early days, 50 percent would not be unreasonable if you want to try and achieve the water quality improvements that we have been talking about. In our case, we are raising our rates 25 percent a year. We raised them 25 percent in January of 2001; 24.8 percent in June of this year; November 1, we will be applying for another rate increase. That is just to pay off the SRF loans, which still are inadequate because they cannot meet all of our needs, so we have to go to the open market to obtain funding.

One of the problems we have is 60 percent of our customers are in the older urban cities, and they have the least ability to pay. Over 40 percent of our accounts receivable are in the urban cities, and they are struggling now to pay those rates and they are going up at 25 percent a year. That does not include the additional O&M cost to operate the new facilities once they come on-line. It is a problem. The rating agencies that rate us, Standard & Poor's and Moody's, have warned us that it is going to get to the point where our rating could be affected, which means if they downgrade our rating the amount of money that we pay in interest will go up, which just aggravates the situation further. We are committed, and my board is committed to putting in the CSO control measures and upgrading our treatment facilities to meet our requirements, but it is a problem.

Senator VOINOVICH. Mr. Kennedy, would you like to respond? My time is up.

Senator JEFFORDS. Go right ahead.

Senator VOINOVICH. Would you like to comment about how we can try to—the organization that you represent has been a very responsible organization. I dealt with them when I was Governor and we were dealing with them in regard to a couple of projects with the Great Lakes Governors Association in terms of some of the paper mills that were polluting the lake. Is there some way where we can kind of reconcile some of these differences and reach a common ground so that we can go forward?

Mr. KENNEDY. I think that those decisions were made when the Clean Water Act was passed in 1972. Congress said then—it was

a visionary Act that said the waters belong to the people. You do not have a right to pollute them. What we are going to do is we are going to get rid of all pollution of waterways, but we are going to do it over a period of time, which is going to take 13 years, until 1985, and by then there is not going to be pollution anymore. That is what Congress said, and I still think that that goal is a legitimate goal and we should not be thinking of ways to get out of the goal by rolling back the Act. We should be thinking of ways of funding communities who need the money to comply with it, which is what Congress originally did. We rolled back that funding, and if you look at our other national priorities for where funding is going, I do not think you can find a national priority that has more to do with our national security, our national prosperity than clean water, than investing in this kind of infrastructure.

I do not think that the solution is to roll back the Act and just pretend that the problem does not exist, but to say, "OK, this is our objective; it is an objective that as a Nation we have to be able to afford." There is no—look what the Israelis pay for their water. They pay thousands of times more than we do because it is a precious commodity. We undervalue it, and we ought to be recognizing that really it has a lot to do with our national security, our national health, our quality of life, and our prosperity in this country, and not be scared of continuing to persist for those objectives that these visionary leaders set out back in 1972.

Senator VOINOVICH. Well, I think that part of the problem is that just this legislation that I am talking about, trying to reconcile the differences. We have problems here, for example, that come up like Davis-Bacon becomes a big issue. I tried to get a compromise that says on the first loan, that is Davis-Bacon, then when it gets into the revolving loan fund, it does not require Davis-Bacon. Some people around here bring the bill down over Davis-Bacon. It seems to me that groups like yours and others that are interested should be standing up and saying, "can't you guys work out a compromise?" It may not be perfect, but there just seems that one group says, "this is the way it is going to be, and if it is not this way, then by golly, it is not going to happen."

Then we have people in our State like the woman who is the mayor of a little town, Mansfield, OH, who is going to have her rates increased 100 percent because she is being required to take this holding tank that she has where she holds water and returns it to the stream at a higher quality than what the stream is, she is being told that she has got to increase that even more than what she is doing. She is putting in this enormous investment to make that possible. She thinks this kind of defies common sense, and so does the people in her community.

Then you start to develop a resistance for people to improve some of the requirements because they feel that some of them do not make sense. It just, as I said, there seems to be some disconnect here. Maybe we ought to revisit this, Mr. Chairman, as we did the Clean Water Act, or the Safe Drinking Water Act, several years ago. We came up with I thought a reasonable approach to it.

I can remember when we got started with it, many in the environmental community accused the Senate and House and some of us being at the White House when President Clinton signed that

bill, and talked about it as being a responsible piece of legislation. There were some people that were not happy with it, but the fact was it was a compromise. Again, I am going to reiterate this. I am hoping that as we move forward into this next year—we are not going to get anything done this year—but I think as we go on. I mean, it was interesting to me, it gave me some hope. They worked on this for 4 years, didn't they—the 1987 amendments. I am hoping that somewhere along the line we can get people in the room and start to move on this, and do not allow one group who takes a position and maybe has a very strong lobbying effort to say, “by golly, it does not meet our standards and therefore we are opposed to this”; that those of us in the Senate and some of the reasonable groups that are out there can kind of try to move toward the center and try to figure out how we can—what are the things that bring us together, rather than trying to find those things that divide us. That is key.

Then the other is, we have got to find the money. We have got to find the money. If you do not have the money, you are not going to be able to get the job done. That is another reason we are not doing what we should be doing, is we are not spending the money. I think your point, Mr. Kennedy, is well taken. I do not think we do value water enough. We ought to be spending more money locally and in terms of our Federal Government.

Senator JEFFORDS. Thank you, Senator.

Senator WYDEN.

Senator WYDEN. Thank you, Mr. Chairman. I had to be late because of the Intelligence Committee's meeting this morning, but I particularly wanted to come to have a chance to introduce Jordan Chin in a moment, who is here from Oregon, but to spend just a quick moment with Robert Kennedy, and to tell you now much I appreciate all that your leadership and your willingness to speak out on these clean water issues. I will tell you that at home in Oregon prior to the last year and a half or so, where it seems that the machete has come out for the Clean Water Act, people in Oregon thought this statute worked very well, and thought that it struck a reasonable balance between the Federal Government in effect saying we are not going to compromise on our waters; we are not going to compromise on our precious treasures. Where a State is capable like ours in showing that it can carry out these Federal rules and comply with the type of strict criteria we want to have to protect water bodies, the States would be given a wide berth.

My sense is, you very much agree with that. I just would like to get on the record your thoughts on this kind of Federal-State balance. My understanding is you have got no problem at all with a State when they are willing, like Oregon, to follow the Federal rules, follow the strictures that are set out in the statute, having the wide berth to do it. What troubles you, and frankly it troubles me very much, is that some of what is going on now in terms of States rights is really a back-door attempt to hotwire a rollback in the law and give these powerful interests a chance to do it far away from Washington, DC. where they can have a broader way over it. Is that something resembling you view?

Mr. KENNEDY. Yes, if the Clean Water Act were enforced, we would have clean water in this country today. It is a wonderful

statute. The issue is, who is enforcing it? The enforcement was divided between the States and the Federal Government, and both of them have dual responsibility for enforcing the Act, but the States have primary responsibility. What we saw beginning in 1995 was that many of the State governments simply stopped funding Clean Water Act enforcement. In my own State, Governor Pataki came in, who has very strong environmental bona fides, but he cut down immediately by 50 percent the enforcement moneys available to the Department of Environmental Conservation in the State.

In States like Virginia, that year there was a single ticket issued to a polluter in the entire State of Virginia in 1996, and it is the third most water-polluted State in the country. I could take you on a walk anywhere in Virginia within 20 minutes from here and show you people who are violating the Clean Water Act. These are criminals. These people should be prosecuted, but the State simply stopped prosecuting them in order to recruit polluters to the State. In Senator Voinovich's State, there is a polluter, Buckeye Farms, that has been violating the law openly for 20 years and has destroyed a river system there which is dead for 20 miles, and his State has almost completely stopped enforcing the environmental laws.

I had a cop in my office the other day, an environmental police officer, and he had just issued a ticket to a used car dealer who was cleaning toxics off imported Japanese cars and dumping them into a trout stream, causing fish kills. That trout stream feeds into the New York City reservoir system that is drunk by 10.5 million people. He came to me and he said that the district attorney of Westchester County refused to take the case; that the State attorney general—this is when Vaca was attorney general—refused to take the case. He said, "anybody in this country, any prosecutor—if a kid throws a rock through a window or steals a car, any prosecutor in this country will prosecute them because it is recognized as a crime. If you dump pollution into a waterway, you cannot get anybody to prosecute them because they do not look at it as real crime."

In fact, when you put toxics in the water supply for 10.5 million people, that is assault and battery, and when children drink that water, that is child abuse. You are stealing something that belongs to the public, and that is theft. These people ought to be treated as thieves. Yet what we have is, we have regulatory agencies at the State level—not in your State, because your State is famous for having cleaned up the Tualatin and the Willamette and the other rivers, and having that commitment out there—but in many States, the priority is recruiting polluters to the States for short-term prosperity that is going to pose these long-term costs on the people of the State.

Senator WYDEN. My time is up. I only want to say, Mr. Kennedy, I very much share your view, and the only reason for my asking the question is I want us to be able to say, because I think you are championing exactly what needs to be said right now. I think there really is a significant effort underway by the executive branch to roll back this Act, and I just want our message to be that when a State like mine is willing to make the tough calls and to protect the Clean Water Act, I want it understood that the advocates, par-

ticularly people like you who put so much into this, are willing to give those States an opportunity to really carry out these laws. When they are not, then we ought to come down with hobnail boots and make sure, just as you say, that the laws are enforced and we take whatever steps are necessary.

Mr. KENNEDY. You know, it puts Oregon at a disadvantage, a competitive disadvantage—

Senator WYDEN. You bet.

Mr. KENNEDY [continuing]. If they are the only ones enforcing the law. That is not fair. We ought to have a uniform law across the country, have a level playing field, and have everybody playing on it, and nobody cheating the free-market economy.

Senator WYDEN. Thank you for the work you do.

Senator JEFFORDS. Let me intercede here. Vermont does not cede to you that you are the best.

[Laughter.]

Senator WYDEN. Fair enough. We will get the rest of the country to follow the Vermont–Oregon axis, and as Mr. Kennedy has correctly pointed out, when States are not willing to do it, we have to have tough Federal enforcement. I look forward to working with my chairman, as always.

Senator JEFFORDS. We have had fun with Oregon to race to see who is doing the most, the best. We both disagree on the answer to that, but thank you very much for very, very helpful testimony.

Mr. KENNEDY. Thank you, Senator.

Senator JEFFORDS. We now have our final panel. I understand that the Senator from Oregon would like to introduce a member of the panel.

Senator WYDEN. Thank you very much, Mr. Chairman. Again, I am sorry that I had to be late, but this a real privilege for me to be able to introduce a special member of the generation that is going to inherit the responsibility of protecting our Nation's waters. Jordan Chin, who is a student from my hometown of Portland—she was selected to appoint this week's National Youth Watershed Summit and is truly an exceptional 16-year-old. She is a straight-A student, a professional singer, active in political and environmental causes, and somehow is still able to find time during what must be few waking hours to take university-level courses in Mandarin and political philosophy. Jordan, we are very glad you are here.

As you could tell from the discussion that I just had with Mr. Kennedy, we are very proud in Oregon of the Clean Water Act and the fact that we really see this as an opportunity to work with the Federal Government, to address what is most on the minds of Oregonians in natural resources, and that is to protect our treasures, and particularly our clean water. Pollution control efforts began in 1938, which was well before I was born, certainly before you were born, and pre-dated the Clean Water Act by 10 years. As you could see with the little discussion with my good friend the chairman, we take special pride in the fact that Vermont and Oregon consistently lead the country in terms of cleaning up polluted run-off and meeting water quality standards.

Mr. Chairman, I am grateful to you for holding this hearing and for all of the vigilance that you have had all these years to pro-

tecting the Clean Water Act. I think we are going to see in Jordan Chin, and I expect the other young people who will be testifying this morning, we can feel good that we are handing the reins over to your generation that I know is going to pick up on the Oregon-Vermont traditions.

I thank you, Mr. Chairman, for the chance to make this introduction.

Senator JEFFORDS. Thank you.

I want to welcome our final panel. We are so pleased to have students from around the country who are attending the Clean Water Foundation's Youth Watershed Summit, here to share their thoughts on clean water and issues, and describe the results of the watershed studies that they have completed. I, of course, want to specially recognize Grace Chris from the good State of Vermont. I hope you and Ms. Chin will work hard to convince the rest of your panel to be as good as your States. Thank you.

Our first witness is Ms. Savage.

STATEMENT OF ROBERTA H. SAVAGE, PRESIDENT, AMERICA'S CLEAN WATER FOUNDATION

Ms. SAVAGE. Thank you, Mr. Chairman.

My name is Robbi Savage. I am the president of America's Clean Water Foundation. I am also, as you know, the executive director of the Association of State and Interstate Water Pollution Control Administrators.

Sitting here listening to the debate about States, there is a part of me that wishes I was here representing ASWPCA because I have a few things to say about those issues. Today, we are here to talk about the 30th anniversary of the Clean Water Act.

Our Foundation was created in 1989. I created it for the purpose of celebrating the 20th anniversary, and I was so pleased to go to Mr. Howard Baker and Mr. Ed Muskie and Bill Harsha and John Blatnik who were the House and Senate floor managers of the 1972 bill who were willing to serve as our original Board of Governors. Two of those gentlemen have since passed, and on our Board of Governors for the 30th anniversary, I thank you, Mr. Chairman, for being a member of our Board of Governors, as is Mr. Voinovich and Mr. Bond. Mr. Stafford, by the way, was very involved in those days as well, as you know, and Mr. Chafee, Mr. Carper. Mr. Baker, who is now the Ambassador to Japan, is chairing our Board of Governors to celebrate the 30th anniversary.

One of the important components of the Year of Clean Water—and the Foundation is serving as the national coordinator for the 30th anniversary—is our Youth Watershed Summit. We have four major activities taking place this month. We start with the Youth Watershed Summit that is being coordinated and sponsored by our Foundation and the Smithsonian Environmental Research Center out at SERC. We are all kind of here today in our camp clothes, Mr. Chairman. We apologize for not being in suits and ties, but we are having a lot of fun and they would not necessarily go with the rest of our colleagues.

There are 250 students that were appointed by their Governors to come to the Summit. They all brought a teacher, and I would like to introduce Ms. Chris, Grace's mother. She is also from

Vermont and she came as an adviser to our group. We have all these students that are out at the Smithsonian Environmental Research Center. They are not only learning about clean water, taking them out into the Chesapeake Bay, taking them up in cranes above the canopy so they can see what the water line is all about. We took them to the National Aquarium last night for the dolphin show, and to see the seahorses. We have an astronaut coming, Roger Crouch, tonight to talk to them about NASA's work in looking at water quality from space, and what we can do in that regard. Then we will be meeting in the morning with you, Mr. Chairman, and Mr. Bond, on the Capitol steps for a picture. Then we will go to the Smithsonian to meet with the Administrator of EPA, the Deputy Administrator, Deputy Secretary of USDA, NOAA, U.S. Geological Survey and the Corps of Engineers, so they can get a broad understanding of what is involved in trying to keep our waters clean.

From there, we are going to go to National Water Quality Monitoring Day, and I see the Tracey provided you with one of our kits. We are delighted. What we are asking is that citizens across the country on the 18th of October test for turbidity, temperature, dissolved oxygen and pH. As you know, there are not enough government monitors in this country to tell us if our water is clean enough, and we need the help of students like these, as well as citizens all across the Nation to help us. This will be our first annual, so we hope we can come back in 10 years and have 10 years of documentation.

Then we go into the Senior Watershed Summit. Ten years ago when we did the 20th anniversary, I never would have thought of a Senior Summit, but now that I am one, I am delighted to work with the Environmental Alliance for Senior Involvement for the Senior Watershed Summit. They have 250,000 volunteers across this Nation—seniors that are in the water taking samples and working for clean water.

Then we will summarize and culminate our activities the last week in October for the World Watershed Summit here in Washington, DC. We have invited the President and all the leaders of the major agencies to be there and participate, and a number of your staff will be here. I suspect you will be out of town at that time.

We have a number of activities that are taking place across the country. In addition to what we are doing, Governors, communities, local groups, public organizations are sponsoring cleanups and festivals, competitions, video programs all across this country. It is just amazing. You can go to www.yearofcleanwater.org and see the incredible work that people are doing to celebrate the 30th anniversary.

I thank you very much, Mr. Chairman, for inviting us here today, for sponsoring this hearing. We talked a little bit in the beginning about the wonderful work of the Senators. I would like to at least recognize Mr. Bob Roe, who was the floor manager on the House side for the 1987 amendments and the wonderful staff—Leon Billings, who staffed Mr. Muskie in the 1972 bill, and Bob Hurley that staffed Senator Chafee. They did a wonderful job, and

of course, without excellent staff a lot of the work does not get done.

It is a wonderful opportunity and I would like to then turn it back to you so that you can introduce the students.

Thank you very much.

Senator JEFFORDS. I cannot thank you enough for what you are doing, and especially to help the young people of this country become leaders and tell us what to do. We have got a lot of improvements to make.

Ms. SAVAGE. I have been with these girls for the last several days, and Mr. Senator, I think they will tell you what to do.

[Laughter.]

Senator JEFFORDS. I hope so.

This is a question for all three of the students. First of all, I am going to let you testify, and then I will ask you a question.

Ms. Chris, would you like to start?

**STATEMENT OF GRACE CHRIS, STUDENT, WHITE RIVER
JUNCTION, VT**

Ms. CHRIS. Good morning, and thank you, Senators, for allowing me to speak about clean water before this committee while I am attending the Youth Watershed Summit.

My name is Grace Chris and I am 13 years old and I live in Vermont. I am both very honored and very, very nervous this morning.

I came here from the State of Vermont, also known as the Green Mountain State for the beautiful hills that cross the State north to south. Throughout the Green Mountains and its adjacent lowlands are miles of streams and rivers and acres of ponds and lakes. These waterways nurse the green of the mountains and in turn support the wildlife, farm life and human life whose habitat is the State of Vermont. The fall foliage for which Vermont is famous draws water from Vermont earth and creates jobs for Vermonters involved in the tourist industry. The sweet maple syrup from the Vermont sugar maple trees starts out as clean water in many Vermont watersheds. Cows drink the Vermont water and give us world famous Cabot cheese and Ben and Jerry's ice cream.

Agriculture, hunting and fishing, trees and tourists, recreation, business and industry, and daily Vermont quality of life all depend on maintaining the abundance and cleanness of Vermont waters. My classmates and I and all the other kids attending the Youth Watershed Summit are doing something back home to protect the waters that bring life to our States. This week in Maryland, we have all come together to share evidence of our efforts to protect our water. We already know that 30 years ago you did something very important by creating the Clean Water Act. For 30 years, Americans have benefited from that important legislative accomplishment.

My teacher was a senior in high school when you passed the Clean Water Act in 1972. This week, he is here with me and other students and teachers at the Summit to share in the celebration of what the Senate helped create 30 years ago. We are hoping to demonstrate that the effort to protect the world's waters continues through us and the work we do back home.

I am an eighth grade student at Hartford Memorial Middle School in White River Junction, VT. My school is located about 1.5 miles from the point where the White River flows into the Connecticut River. Upstream from us, the White River watershed collects rain and runoff from the many, many tributaries that flow through the forests, farmlands and towns of Bethel, Randolph, Rochester, Stockbridge and Sharon, and many, many other beautiful small villages of Central Vermont. The activities we conduct and allow along these waterways determine the present and future health and abundance of these waters. The work of our State and Federal employees and many local volunteers is very important in protecting the White River watershed. My classmates and I are part of that group effort, and I am here to tell you a little about what we are doing to fulfill the Clean Water Act's goals.

As water flows through my watershed, it is drawn out for various uses and then returned in various states of contamination. Also, rainwater and snow melt carry manure, road salt and many other chemicals from fields and roads and parking lots into the watershed through non-point source pollution. Business, industry, breweries and cider mills, sewage treatment plants, schools, hospitals, private homes and vacation homes often add materials and chemicals to the waterways through identifiable pipes or point-source pollution. The disease-causing bacteria, *E. coli*, cancer-causing heavy metals, poisonous industrial waste and road salts all contribute to changes in the water quality in my watershed.

Fish and other animal populations drink water sources, and favorite swimming holes benefit or suffer from what you and I and others do or fail to do around our waterways. Most of the water uses are necessary and very important and need to continue. Volunteers and professionals follow the fate of these waters through water quality monitoring programs and stream bank restoration programs. Small towns pass budgets to upgrade sewage treatment plant facilities or adopt low-salt policies for their roads. Students collect tires and trash from streams and ponds during Vermont's Green Up Day on the first Saturday in May. Together, we use and sometimes abuse our watershed through our daily activities. Together, we have a responsibility to undo the damage that our waters are subjected to every day. The Clean Water Act gives us the authority to clean up our waters, but it is we individuals who must put forth the effort to repair, restore and maintain our watershed water quality.

I want to thank you for all you do as Federal leaders and lawmakers, and I want to tell you about what we are doing. My school is a pioneer in the use of Geographic Information System, or GIS, and Global Positioning Systems, or GPS, technologies in Vermont. We are learning how to collect data and display it in spatial or map formats. We can take fish collection data, *E. coli* population data, soil type and land use data, or pH and water temperature data collected in our watershed and show it as a map. We can ask important questions about relationships among these water quality factors, and then display those relationships in multi-colored maps.

The spatial display of these data may reveal patterns that better explain what is going on in the watershed. Right now, my group's work has been to look for relationships among the land use on the

shores and streams of the riverbanks, the soil types on the shorelines, and the *E. coli* populations in the downstream waters. We found that the *E. coli* populations are higher in water that has less forest vegetation along the shoreline. However, we do not see a clear relationship between prime agricultural soils on the shoreline and high *E. coli* populations in the nearby water. Our GIS analysis has begun to reveal some relationships among our water quality factors in our watershed, and it has created some new questions for us to investigate in the future. What we expected to find was not exactly what we found, and we want to know why, so we will keep on working at it and training other kids how to do this work.

We are just young people, but young people with an interest in our watershed. We have been lucky to work with groups like the Vermont Institute of Natural Science, the White River Partnership, and Vermont Fish and Wildlife. They have taught us about GIS and shared their water quality data with us. Together we are creating a community mapping program to help local community leaders use GIS technologies to plan for their community's future and manage its resources wisely. Our teacher has received training from groups associated with NASA and the Environmental Protection Agency. Now, we would like to count on continued support from you, the U.S. Senate, through thoughtful legislation, and help my school and other schools protect the White River Watershed and every other watershed in every other State. I hope my testimony here contributes to that goal.

Again, I am very honored to have been invited to talk to you about clean water. Together, I hope we will continue to be responsible citizens and support the 1972 Clean Water Act for at least another 30 years.

Thank you very much.

Senator JEFFORDS. Thank you very much. That is a very excellent statement and we appreciate your being here today.

Ms. CHRIS. I also have a shirt for you.

Senator JEFFORDS. Oh, all right. Afterwards, I will come down.

Senator WYDEN. Only one T-shirt?

Ms. SAVAGE. It is the Youth Summit T-shirt.

Senator WYDEN. The story of my life.

[Laughter.]

Ms. SAVAGE. We will get you one, Senator.

Senator JEFFORDS. Thank you very, very much.

Ms. SAVAGE. We will get shirts for the whole committee.

Senator JEFFORDS. Wow. Clean water everywhere for everyone. Very, very good. Thank you.

Ms. Chin.

STATEMENT OF JORDAN CHIN, STUDENT, PORTLAND, OR

Ms. CHIN. Mr. Chairman and members of the committee, I wanted to express my appreciation for you listening to our testimonies today. Thank you, Senator Wyden, for introducing me.

My name is Jordan Chin and I am 16 years old. I attend the Metropolitan Learning Center in Portland, OR. I am here today, Mr. Chairman, as one of the Oregon representatives for the Youth Watershed Summit, which is being hosted by America's Clean

Water Foundation, the Smithsonian Environmental Research Center, and the Environmental Protection Agency.

When I was invited to attend the Youth Watershed Summit, I jumped at the opportunity. I have always believed that youth involvement in our society would create new visions for this country. This convention of some 250 students selected by their Governors from 50 States is an outstanding chance for me and my fellow students to learn to share and to carry the clean water message home to our respective States.

I believe that information about our environment is something that everyone in this country should be more aware of. Awareness and involvement are the keys to bringing about a positive change in our society and its attitudes about our fragile environment. Water is what we are made of. It is the source of life. I think that youth involvement in education is an exceptional beginning to that process.

Because I believe in bringing the need for cleaner water to the attention of young people, I am one of the actors who will this evening be performing *The Murky Water Caper: A Real Fish Story*, written for the ACWF by Deborah Rodney Pex. I have these books to pass out to you later on so that you can see.

Senator JEFFORDS. Thank you. We will get it.

Ms. CHIN. My character is Detective Michelle Tuesday, who is an inquisitive private investigator with a passion for justice and the desire to ensure the well-being of creatures and spaces around her. Ms. Tuesday helps the fish who have retained her to find the cause of the pollution that is contaminating their homes. Cheesy jokes and all, I am very excited and very proud to be a member of the cast.

I understand, Mr. Chairman, that some of your members of the committee staff may be joining us at the YMCA Camp Letts to see just how the *Murky Water Caper* can be an inspiring and fun way to educate people of all ages who care about their ways of life. Because this play is packed with information, I would like your permission to present each member of the committee with a copy of the *Murky Water Caper*.

Senator JEFFORDS. Thank you. You may do that. Thank you.

Ms. CHIN. It was recently published by America's Clean Water Foundation.

I am here today to say thank you to those who were so wise as to give our country the Clean Water Act back in 1972, and to say that I know the future of the water's quality rests in our hands, as well as yours. As a young person, I want to be very informed about the ways I affect the environment and I want to share that information with my peers.

I am currently enrolled in an ecology class at my school back home in Portland. One of my personal projects in class is to find ways to recycle eco-friendly clothing and used clothing. I like knowing that my wardrobe matches my commitment to the environment and I like the idea that I am providing such ideas to my fellow students. Even small things like buying clothes have huge impacts on our environment and a lot of people are not aware of those impacts.

Although all this is public information, I am hard-pressed to find more than a handful of people outside of my classroom that are

aware of the things that are going on in the environment, that are aware of the resources we are draining and the negative impacts we are having on our planet by the way we live our lives each day.

Mr. Chairman and members of the committee, there is one thing in particular that I want to leave with you. I hope to share my hope that one day the citizens of this country will be more informed of the fact that the environment is deteriorating and being largely neglected every day by virtually every person that lives on this planet. I want them to know that this affects them personally.

This neglect is not just in the other countries or other States that are far away from where we live. It is not just the rain forests down in South America that we have never been to, or the wetlands in the other States that we hear about. It is the groundwater and the surface water that we drink and the fruits and vegetables that we eat every day. It is really important that people are aware that this is not just something that is outside of them. This is, you know, this is them.

I am but one student in a small State on the other side of this Nation, but I know that every citizen in this country needs to be more aware of how important it is for us all to protect our water. They need to know about how polluted water affects the health of their parents and children, of our friends, and it affects our relatives and people that we have never met. In protecting the earth, we are protecting ourselves and people everywhere, all animals, and all the vegetation that sustains us. We will be taking care of each other.

I sincerely hope that my testimony before you this morning has shown you, the guardians of this country, that even though we sometimes do not speak up and are often not heard, teenagers do care. We are drinking in the information provided for us at the Youth Watershed Summit and we are thirsty for more. We need for you to inform us and we need to see that you care. We want a healthy planet to grow up in, to go to college in, and to raise our families in.

Everyone on this committee and everyone in this room has the power to protect our water. You are the environmental leaders of this country and I would ask you that you use your power to help bring about a more informed society and to reauthorize the Clean Water Act for our protection and for the protection of the generations to come.

I personally am asking you to take care of the people that you were sent here to protect. I want to thank you so much for your time.

Senator JEFFORDS. Thank you very much.

Ms. Hoeft.

STATEMENT OF KRISTEN HOEFT, STUDENT, EAGAN, MN

Ms. HOEFT. Mr. Chairman and members of the committee, good morning and thank you so much for inviting me to talk to you about the Clean Water Act. My name is Kristen Hoeft. I come before the committee as a representative of the Youth Watershed Summit and as a citizen of a land of 11,842 lakes, the great State of Minnesota. I am currently a senior at the School of Environmental Studies in Apple Valley, MN.

Mr. Chairman, I am very honored to be appearing before you today and I want to share my thoughts about growing up in Minnesota, a State that has water virtually everywhere. I have been able to experience some of our State's beautiful lakes and rivers from canoeing the Boundary Waters in northern Minnesota, hiking along the shores of Lake Superior, or boating on the Mississippi and St. Croix Rivers. My parents felt it was very important for me to know how to swim and learn boating safety, because we spend most of our summers along the Mississippi and St. Croix Rivers. I look back and realize the important foundation that my parents gave me because not only do I enjoy the recreational aspect of the water we have in Minnesota, but I have also come to appreciate water ecology, the need to educate people about shore erosion, and the reduction of chemical pollution in our lakes, rivers and streams.

Over the years, I have seen the Minnesota and Mississippi Rivers flood many times, where farmers have lost crops and precious topsoil. This erosion has not only hurt the farmers, it adds to the pollution of the Minnesota and eventually the Mississippi River. I have come to understand that it is not only topsoil that is eroding our stream and lake waters, it is also the variety of chemicals used in the farming process.

I have always thought that if our country's pollution problems were really important, the adults would take care of finding a solution to the pollution problems, but I have come to realize that it is not always going to be this way. In my junior year of high school, I decided to attend the School of Environmental Studies because it is a much smaller setting than the traditional high school. From the four main high schools in our district, 200 juniors and 200 seniors are selected to attend. SES, as it is known, has an innovative way of teaching the basic subjects of English, social studies, and science by collecting data, analyzing it, and recording the information, blending all three subjects together with an environmental theme. The mission statement of SES reads, "a community of leaders learning to enhance the relationships between people and their environments."

The first project of my junior year started with the Pond Profiles. This is an activity that the city of Eagan helps us with a great deal. We were given a course in identifying water plants and organisms, as well as land plants and running chemical tests. We were then sent out with a teacher to a specific lake or pond in the city of Eagan. While at the pond or lake, we were required to identify organisms found in and around the water and conduct several water quality tests such as the Secchi disk and to determine the clarity of the water, and chemical tests such as pH and dissolved oxygen. All of this data is collected and then presented to the city of Eagan water officials and put on permanent record in Eagan. We provide this service because with over 1,000 ponds, lakes and wetlands in the watershed, city officials do not have time to collect such data. This is the first of many projects that SES does for the city of Eagan, Apple Valley and surrounding areas.

This is a gratifying way to expand the learning process beyond the classroom and I enjoy it thoroughly. Learning environmental science with a hands-on experience is much more interesting than

just reading out of a textbook. That is why we at SES are excited about participating in America's Clean Water Foundation and its many co-sponsors and the National Water Monitoring Day. On October 18, 2002, student seniors, professionals and those who just want to help protect water quality are coming together to sample water quality throughout the Nation. I am so excited to think that hundreds of thousands of people will join together on the actual 30th anniversary of the Clean Water Act to test for pH, DO, temperature and turbidity.

Another experience I have regarding the environment is that I frequently walk my dog around the lake of the park across the street from my home. It is a small lake that is enjoyed by many people in the area. Anytime of the year, you will see many people fishing in the lake. In the spring when the snow and ice have melted, the lake is beautiful. It appears to be clean and clear, but looks can be deceiving because by early summer, the growth of algae is so thick that it would appear as if you could walk across the lake. The city then comes in with a large machine that harvests the weeds and rids the lake of most algae.

I wish that the same people that enjoy the lake year-round would take some time to think about the chemicals they dump on their lawns to make their lawns lush and green at the expense of water quality in the lakes of our watershed district. The city of Eagan is attempting to combat the phosphorus chemicals found in fertilizer used by many people, and has recently started to add a chemical called Alum that removes the phosphorus in the water and should eventually lessen the amount of algae growth in the lake.

Mr. Chairman, I would like to see legislation and education to maintain water quality so that my neighborhood lake and the thousand other lakes and rivers in Minnesota can be clean for future generations.

For the past four summers, I have worked as a nanny for a family with three girls. One day last summer, the girls and I decided to go for a bike ride on the trail that overlooks the confluence of the Minnesota and Mississippi Rivers. It was a clear bright day. We stopped where the rivers come together and I decided to point out some interesting river ecology facts to the girls. The first thing I asked the girls was to tell me which river they thought was the Minnesota and which one was the Mississippi. Because it was a very bright day, one river looked very clean and the other very dirty. The girls were amazed to learn that it was actually the Minnesota River that appeared very dirty. They found this hard to believe because everyone seems to think of the Mississippi as the Muddy Mississippi. The fact remains that the farm chemicals, livestock runoff and silt that pollutes the Minnesota River are adding to the problem. When the two rivers join, you can see the line of suspended solids from the Minnesota River blending into the Mississippi, so it is actually the Minnesota River that gives the Mississippi a bad reputation in our part of the Nation.

In 1819, Fort Snelling was settled because of its location between the two rivers. The Native Americans in the area believed that the land near the confluence was the origin of all life. It is said today that we do not think it is important enough to try and improve the

quality of these rivers and are slow to do anything to fix the problems.

I have come to realize that although some people are aware of the problems regarding water quality, it will be the responsibility of my generation, through awareness and education, to clean and protect the environment. That is why I wanted to come to the Youth Watershed Summit. I wanted to learn as much as I can about water quality, pollution, and the various ways to remedy pollution problems in other States. I know that the problems we face in Minnesota are not Minnesota's alone. They are the problems of our Nation. It will be necessary to work together to clean up and restore lakes, rivers and oceans. I say let's make America even greater by setting an example to the rest of the world that clean water is an important issue for everyone.

While I know that there have been significant improvements over the past three decades, I also know that I want clean water for my generation and the generations to follow. I want clean water for my children and the children of my children. When I was looking at the Year of Clean Water website, I was surprised to notice that the last time the Congress reauthorized the Act was in 1987. Through my studies, I know that there have been many changes over the past 15 years, and also know that water detection and protection has become far more complex. Now, advanced technology should be translated into the clean water law.

I must ask you, Mr. Chairman and members of the committee, to begin the process of the reauthorization to assure that our country can provide clean, fresh water for all of us for many generations to come.

Thank you for allowing me to appear before you today.

Senator JEFFORDS. I want to thank all of you for the excellent statements. We are proud of you, Ms. Savage, for the effort that you have put in to make sure that these young people would be here, as well as what you are doing throughout this Nation. I certainly want to commend you, too.

Yes, Senator Wyden.

Senator WYDEN. Thank you, Mr. Chairman.

I just have one question, because I think all of you are great. If you could each ask us to do one thing, just one thing, to promote clean water, what would it be? Maybe start with you, Ms. Chin.

Ms. CHIN. OK. Well, I think that awareness and involvement, like I said in my testimony, are the key pieces to bringing about a positive change in our environment and in our society in general. When we are speaking about the Clean Water Act that was an issue beforehand and it is still an issue in these testimonies, I do not think that protecting our homes and protecting ourselves should be an issue that is up for debate at all. As I understand it, the Clean Water Act that was reauthorized last time in 1987, in the bill it was said that it needed to be reauthorized every 4 years. The fact that the last time we did was about 30 years ago is a huge indicating factor that we have a serious lack in our society right now. I think that lack would be filled by a positively informed society. I do not think that this would have been an issue if people knew what was going on.

As a young person, I am very lucky to have the advantage of a more international understanding of the water issues, being that my father is the Chief of Protocol currently for the Government of Singapore. Right now, they are supplying the public with recycled water that has been purified by reverse osmosis. I think that this is evidence that there is always something to be done. I believe that all students should have the opportunity to know what is going on in the world and in the environment internationally, as well as at home. I think that these opportunities should be provided in public schools, and I think that they should be supported.

We already have a lot of information that the teachers are giving us, but I do not think that it is stressed enough the importance of our environment. I think that if you believe that this country is great, then I think that you should take advantage of the potential, as well as the students and the citizens of this country, advantage of the potential that we have because we can make huge advancements in the well-being of our society and of the societies around us.

Senator JEFFORDS. Thank you very, very much.

I am trying to figure out just how to work this out, but what was the first State in this country to pass an all-pervasive water pollution law? It was before 1972. Actually, it was 1972.

Ms. HOEFT. Was it Minnesota?

Senator JEFFORDS. No.

Ms. SAVAGE. There are two of you left.

Ms. HOEFT. Vermont.

Senator JEFFORDS. Yes, very good.

[Laughter.]

Senator JEFFORDS. In fact, it was one of the most wonderful times. Vermont had an onslaught at that time of people who suddenly discovered us and came piling into the State and there were no regulations whatsoever, and we had strong problems with water pollution and all. I was Attorney General at the time, as you might guess before this is all over, but we came down here to testify before the Muskie committee, which we heard mentioned earlier, which established the U.S. standards. Because we had had so many problems, we must have said there will be no pollution. You literally could not throw a stone into the brook or spit in the brook or anything else without being in violation of the law. That was our start.

It just gave me the incentive to continue to work on environmental issues all those years. Oregon was right behind us. Oregon was right there. They also—I do not know when their first start was, but it was very early, and I worked with them all over. They beat us on some standards like bottles and bottle returns and keeping the streets cleaned or whatever. In just about everything—air pollution and all those things—it was Oregon. Minnesota was, too. Minnesota was right up there. It is quite appropriate that you three are here today because you represent the cleanest States, in my mind.

Ms. SAVAGE, I appreciate all you do.

Ms. SAVAGE. Thank you very much. We did invite a friend of yours, Tex LaRosa, who helps you with the implementation of the Clean Water Act of Vermont. Tex and his wife are not feeling well.

As you know, they are up in Montpelier. He sends his regrets, but also his great admiration for you.

Senator JEFFORDS. Thank you.

Ms. SAVAGE. I am delighted that these three ladies, and we have 246 more out at Camp Letts that are as outstanding as these three.

Senator JEFFORDS. Thank you all—wonderful help. It gives me great hopes for your future and my future and our future. Thank you all for your testimony.

Now, it is all over.

[Whereupon, at 12:24 p.m., the committee was adjourned to reconvene at the call of the chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. ROBERT STAFFORD, FORMER U.S. SENATOR
FROM THE STATE OF VERMONT

Mr. Chairman and members of the committee. I appreciate the opportunity to speak with you today to celebrate the 30th anniversary of the Clean Water Act. We have come a long way since 1972. It is almost impossible for me to believe that there was a time in Vermont when stories about “dead” rivers and streams were commonplace, when rivers turned the color of the dye used by woolen mills, and when untreated human sewage flowed directly into our waters. It is the Clean Water Act that has made that scenario almost impossible to believe.

The passage of the Clean Water Act in 1987 was the culmination of one of the greatest bi-partisan efforts to enact legislation to protect our nation’s environment during my tenure as chairman of this committee. Over the course of 4 years—1982 to 1986—we held hearings, negotiated the finer points of this legislation, and compromised with each other to produce the last significant reform to the Clean Water program. It survived two Presidential vetoes. The result is a piece of legislation that remains a critical element of our nation’s framework of environmental protection.

The man who deserves the most credit for the passage of this legislation is Senator John Chafee. It was Senator Chafee who presided over our subcommittee hearings on this issue. It was Senator Chafee who led the conference committee to produce a package that passed both the House and Senate unanimously at one point. His tireless work and dedication to this issue should not be forgotten. I was proud to serve with him on this committee. We are all lucky that he was here to lead the way to clean water. It is very special to have Senator Lincoln Chafee here as a member of this committee, continuing his father’s legacy of environmental protection.

The 1987 amendments took several main steps to address water pollution. Funding was the main point of debate in 1987. We reached a compromise in that year to phase-out Federal funding for the construction grants program and to create a new financing mechanism called the State Revolving Fund, or SRF. At the time, we thought that it was a modest down payment on the investment we were asking the States, cities, and municipalities to make over the next decade.

It turns out that the Federal investment in the SRF has not ended, and the funding needs for wastewater treatment facilities have grown. I am aware that the Environmental Protection Agency recently released a report citing a “gap” of \$270 billion in funds available for clean water needs. This is a huge gap that deserves the attention of this committee and this Congress. I understand, Mr. Chairman, that you and Senator Graham of Florida led this committee’s efforts to pass S. 1961, the Water Investment Act. I commend your efforts, and I urge the full Senate to take action to provide additional financial support for clean water needs.

In my comments upon final passage of H.R. 1, the Water Quality Act of 1987, I highlighted the portions of the bill dealing with non-point source pollution. This was one of the key gaps in the 1972 law that we sought to fill in 1987. We authorized a new program to develop best management practices to control nonpoint sources of pollution that often prevent the attainment of the fishable, swimmable goal for water quality. Since that time, the Congress has provided close to \$1.8 billion to combat non-point source pollution. Yet, this remains a major challenge for the future of the Clean Water Act. I understand that EPA estimates that non-point source pollution is responsible for close to 50 percent of our current water quality problems. It must be addressed if we are to take the next step in cleaning our waters.

As this committee looks to the future, I would ask you to recall the days of multi-colored waterways and the seemingly insurmountable challenge that the 92d Con-

gress faced when enacting the Clean Water Act. They took that challenge and met it. The results speak for themselves. In 1987, we decided that we had an opportunity to move another step toward clean waters. Today, you have a similar opportunity. Our waters are cleaner than they have been in years, but we have lingering problems that prevent us from reaching the "fishable, swimmable" goal. You have the opportunity to address these lingering issues. I urge you to take action by re-authorizing Federal assistance for clean water and by taking another step forward on non-point source pollution.

STATEMENT OF HON. GEORGE MITCHELL, FORMER U.S. SENATOR
FROM THE STATE OF MAINE

Mr. Chairman and members of the committee. I appreciate the opportunity to join you today on the 30th anniversary of the passage of the Clean Water Act.

We have made progress since 1972 in meeting the goal of the Act which is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Our nation has invested nearly \$75 billion to construct municipal sewage treatment facilities, nearly doubling the number of people served with secondary treatment to almost 150 million.

However, there is much more to be done. The EPA's Assistant Administrator for Water said recently that about 40 percent of our nation's waters do not meet fishable swimmable standards. That bears repeating: after 30 years of implementation of the Clean Water Act 40 percent of our nation's waters remain impaired. Clearly, we must intensify our efforts.

Ms. Chairman, it is appropriate to recognize the contribution of one of our nation's great pioneers in environmental legislation, my friend and mentor, Senator Edmund Muskie. Senator Muskie remains the greatest public figure in Maine's history and one of the great legislators in our nation's history. He was the principal author of the 1972 Clean Water Act, which is a cornerstone of our environmental law. He appeared before this committee in 1992 in celebration of the 20th anniversary of the Clean Water Act, and I am honored to again follow in his footsteps.

I will focus my remarks today on our progress on the issues that were addressed in the 1987 amendments to the Clean Water Act. I was fortunate enough to manage that bill on the floor of the Senate in 1987, as chairman of the Subcommittee on Environmental Protection, when it was passed over a Presidential veto.

The legislation was a heartening example of bi-partisan cooperation. This committee put it together over a 4-year period. Senator Robert Stafford of Vermont and Senator Quentin Burdick of North Dakota led the committee during that time. I had the pleasure of working on the details of this legislation with Senator Dave Durenberger of Minnesota and with Senator John Chafee of Rhode Island, who was at that time chairman of the Subcommittee. Without bi-partisan cooperation on this committee the bill would never have become law.

I especially want to recognize Senator Chafee's role as a principal author of the Water Quality Act of 1987. I congratulated him then, and my words bear repeating today:

Senator Chafee . . . is the architect of this legislation. He chaired the hearings we held on clean water in the Environment Committee. He managed the bill on the Senate floor. He spoke for the Senate conferees during the long and intense conference with the House on this legislation. The high quality of this legislation is largely due to his efforts.

Today, our nation's waters are cleaner because of Senator Chafee. It is gratifying that Senator Lincoln Chafee is here today as a member of this committee to continue his father's legacy.

As I prepared my testimony for this hearing, I was struck by the similarities in the debates over the Clean Water Act in 1972, 1987, and today. In those early years we debated the role of the Federal Government versus State governments. We faced opposition to pollution control requirements and implementation schedules. We struggled to find the appropriate level of Federal financial commitment to clean water. We worked to ensure that the Clean Water Act remains relevant to current water pollution issues. Each of these concerns remains a vibrant part of today's debate.

The 1987 amendments to the Clean Water Act could be described as "gap filling measures". We looked at the 1972 law, identified areas where additional action was needed, and sought to create the legal infrastructure needed to further the cleanup of our nation's waterways. Two key issues in 1987 included funding levels and addressing non-point source pollution. There were, of course, numerous other important actions taken such as the creation of the National Estuary Program, the Ches-

peake Bay Program, and the Great Lakes Program. We reinvigorated the toxics program in the Clean Water Act by, among other things, requiring numerical standards for priority pollutants. We increased the penalties for violations under the Clean Water Act, and we established the first permit program for the control of stormwater discharges. Because time does not permit a discussion of all of these subjects, I will focus today on the key issue of funding.

In 1972, Congress chose to significantly increase Federal participation in clean water programs. It peaked at \$5 billion in 1979 and 1980. As a result, Americans in the 1980's, and today, assume that our nation's waters are clean—available for swimming, fishing and providing habitat for a host of wildlife species.

In 1981, President Reagan proposed the elimination of funding for clean water unless Congress reduced the size and scope of the program. Congress responded to the President's demand. Clean Water funding was reduced from \$5 billion a year to \$2.4 billion a year. We reduced the types and numbers of projects that were eligible for Federal funding, and we reduced the Federal share of the cost for construction projects from 75 to 55 percent.

The Water Quality Act of 1987 took further steps to reform the Federal involvement in the Clean Water Act by adopting a transition strategy to move the country away from construction grants toward an innovative mechanism called the State Revolving Fund or SRF. The 1987 amendments authorized almost \$10 billion over 5 years for the phase-out of the construction grants program and \$8.4 billion over 5 years for the SRF.

We knew at that time that this level of funding was inadequate to fully meet our nation's clean water needs, which at that time were estimated at between \$75 and \$100 billion. But this was a compromise struck at the time with those who opposed any continued Federal investment in clean water.

Despite this compromise, President Reagan vetoed the bill in 1986 over this issue. In 1987 the Congress re-enacted the bill. The President vetoed it again. But this time Congress overrode his veto and the Water Quality Act became law.

In 1987, we envisioned a situation where after the initial 5-year period of Federal investment, the SRF would begin to revolve on its own and the Federal investment in clean water programs would no longer be necessary. However, this has not come to pass, and I understand that the debate continues over the level of and mechanism for Federal investment in clean water.

Yet there is little or no debate on the need. Just last week, Administrator Whitman announced the results of the EPA's gap analysis, which indicates a gap of over \$270 billion for clean water needs.

In my home State of Maine, the Androscoggin River is a relevant case study of our progress on clean water. In the 1960's it was ranked in the top ten of the most polluted rivers in the Nation. The 1972 Clean Water Act resulted in the removal of more than 90 percent of the waste from point sources like paper mills and municipal wastewater systems. Recreational use has increased dramatically. However, the river still suffers from discharges from combined sewer overflows and stormwater non-point source discharges. During these events, bacteria counts skyrocket. Across the country, as on the Androscoggin, we have come far, but we have much further to go.

This committee took action earlier this year to pass S.1961 which would authorize the SRF for \$20 billion over 5 years. The House Transportation and Infrastructure committee passed a similar bill, which also authorizes \$20 billion over 5 years. I know that the leadership on this committee has worked in a bi-partisan manner with the Senate Appropriations Committee to increase funding for the SRF. As a result there is an increase of \$100 million for the Clean Water SRF in the VA-HUD appropriations bill. I commend you for your leadership on this issue, Mr. Chairman, and I urge the Senate to continue forward progress.

The role of Federal funding in protecting our nation's waters was at the center of the debate in 1987. It remains there today. In 1987 we knew we could not possibly fund all that was needed to clean our waters. That is still true. We provided all that we could in 1987. You must do so again because, unfortunately, despite all our efforts, the estimated gap is larger today than it was then.

And the infrastructure is that much older. Much of it is nearing the end of its useful life. Failure to replace it could threaten public health and our economy.

The conclusion is clear, although to act on it will, as always, be difficult. There must be an increase in funding for the clean water SRF if our nation is to continue its progress in implementing the Clean Water Act.

In 1972, and in 1987 the bill survived Presidential vetoes. In each case, cost was a significant issue. In each case, the nation's desire for a clean environment overshadowed all other issues. That is still the case. The words that Senator Muskie

used in 1972 in urging the passage of the original Clean Water Act apply to today's challenges:

Can we afford clean water? Can we afford rivers and lakes and streams and oceans which continue to make life possible on this planet? Can we afford life itself? The answers are the same. Those questions were never asked as we destroyed the waters of our Nation, and they deserve no answers as we finally move to restore and renew them. These questions answer themselves—we have reached a point in our struggle against water pollution where as we say in New England—we must either “fish or cut bait”. If we are serious about restoring the quality of our Nation's waters to a level that will support life in the future, then we ought to be prepared to make some sacrifices in that effort now.

In 1972 and 1987 the Nation and the Congress rose to meet the challenge. I hope they will do so again.

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

INTRODUCTION

Good morning, Mr. Chairman and members of the committee. I am Tracy Mehan, Assistant Administrator for Water at the U.S. Environmental Protection Agency (EPA). I appreciate and welcome this opportunity to celebrate three decades of progress in improving the quality of our Nation's rivers, lakes, streams, wetlands and estuaries under the Clean Water Act (CWA), and to consider the continuing challenges ahead to protect water quality, human health and the environment. October 18, 2002, will mark the 30th anniversary of the Clean Water Act. Thanks in no small part to this landmark legislation, we have accomplished a great deal over the past 30 years in improving and maintaining water quality in our country. While challenges remain, we have better mechanisms in place today, including improved Federal and State partnerships, to tackle those issues and accomplish further improvements in the quality of our nation's waters.

WHAT WE HAVE ACHIEVED

We are all familiar with the horror stories about where we started from 30 years ago. As we entered the 1970's, the Nation's waters were in crisis—the Potomac River was too polluted for swimming, Lake Erie was dying, and the Cuyahoga River had burst into flames. Many of the Nation's waterways were little more than open sewers.

The 1972 Clean Water Act has sharply increased the number of waterways that are once again safe for fishing and swimming. The Act launched an all-out assault on water pollution, and it worked well. It enabled us to improve water quality all across the Nation while experiencing record economic growth and a sizable expansion of our population.

It included new controls over point source dischargers, including the setting of strong Federal standards to control both municipal and industrial pollution sources, a major investment by the Federal Government to help communities build sewage treatment plants, and support for State efforts to reduce polluted runoff. It established the National Pollutant Discharge Elimination System (NPDES) program to ensure that those standards were put into place by cities and industries. And it spurred the creation of strong partnerships with the States, as the level of government principally responsible under the Act to implement its provisions on the ground.

Municipal sewage treatment plants were required to upgrade to secondary or advanced levels of treatment, depending on the characteristics and quality of the receiving water bodies. To help local governments with this effort, the Federal Government has provided over \$80 billion in wastewater assistance to municipalities over these three decades. These investments—made through grants to wastewater utilities into the late 1980's, and after the passage of the 1987 Clean Water Act Amendments, mainly through grants to States to capitalize State Revolving Loan funds (SRFs)—have dramatically increased the number of Americans enjoying better water quality.

The SRFs were designed to provide a national financial resource for clean water that would be matched and managed by States, and provide a funding resource “in perpetuity.” These important goals are being achieved. Because of the revolving nature of the funds, dollars invested in the SRFs provide about four times the purchasing power over 20 years compared to what would occur if the funds were distributed directly to municipalities as grants. Other Federal, State, and private sec-

tor funding sources are also available for community water infrastructure investments

As a result, pollution from industrial sources and municipal sewage treatment plants plummeted. By any measure—pounds of pollution abated, stream segments improved, fisheries restored—tremendous load reductions from point sources occurred, resulting in significant improvements in water quality across the Nation. The dramatic progress made in improving the quality of wastewater treatment since the 1970's is a national success. In 1968, only 86 million people were served by secondary or advanced treatment facilities. Today, of the 190 million people served by wastewater treatment facilities, more than 87 percent—about 165 million people (double the pre-CWA number)—are served by secondary or better treatment.

Thirty years ago, wetlands losses were estimated at about 460,000 acres annually. Now, according to recent studies, we estimate that we have significantly reduced wetlands losses, although we are not yet at “no net loss.”

During the past decade, the U.S. has preserved, restored and/or created hundreds of thousands of acres of habitat nationwide as part of the National Estuary Program. The program focuses not just on improving water quality in an estuary, but on maintaining the integrity of the whole system—its chemical, physical, and biological properties, as well as its economic, recreational, and aesthetic values. Some of the mechanisms used to protect habitats include land acquisition, conservation easements, and deed restrictions.

Since passage of the Clean Water Act in 1972, water pollution problems are being addressed by hard-working partnerships among government, private institutions and individual citizens. There are myriad success stories:

- renewed fishing in the Androscoggin (ME), Connecticut (CT), Potomac (VA/MD), the Illinois (IL) and many other rivers.
- Improved shellfishing in Narragansett Bay (RI).
- Healthier and more abundant sea grasses in Tampa Bay (FL), Galveston Bay (TX), and the Chesapeake Bay (DE/MD/VA).
- The rejuvenation of the Chicago River (IL) and the Cuyahoga River (OH), from “virtual sewers” to places where people can recreate and where they want to be.
- Restoration of a world-class Walleye fishery in Lake Erie.
- The transformation of Oregon's Willamette River, from, in the early 1960's, a water body overburdened with pollutants that killed salmon, posed threats to public health, and stopped river-based recreation to one where boating, skiing, swimming, and fishing are flourishing once again.
- Over the past decade, EPA has witnessed a groundswell of support for locally driven watershed protection and restoration efforts. In many communities, such as those along the Charles River in Massachusetts, citizen groups, government agencies, non-profit organizations, and businesses have come together and created long-term goals and innovative solutions to clean up their watersheds and promote more sustainable uses of their water resources.

REMAINING CHALLENGES

The news, however, is not universally good, as indicated by our improved monitoring techniques, which enable us to monitor more water bodies. National water quality monitoring data reported by the States in the year 2000 shows that approximately 45 percent of waters assessed by States are not clean enough to meet basic uses such as fishing or swimming; e.g., they do not meet water quality standards. (I should emphasize that this change from previous years is likely due to changes in how we and the States monitor, analyze, and report water quality, not necessarily declines in water quality.) The 2000 National Water Quality Report indicates that 39 percent of assessed rivers and streams and 39 percent of assessed lakes are not safe for fish consumption. The estimates for non-attainment of swimming were 32 percent and 30 percent; for drinking water, 16 percent and 21 percent.

The remaining problems impacting water quality are not easily remedied—they come not just from pipes, but from diffuse sources such as farming and forestry operations, construction sites, urban streets, automobiles, atmospheric deposition, and even suburban homes and yards. While some of these diffuse sources are considered non-point sources under the Act, others are regulated as point sources, as in the current NPDES storm water program. It is immensely challenging to manage these sources using traditional regulatory tools, because they are not well suited to end-of-pipe treatment, and the sources are so numerous and widespread. State and local water quality managers are still learning what kinds of management practices work best for different kinds of sources. This learning process will require us all to aggregate their collective experience if we are to better understand the water quality benefits of different practices under varied conditions.

Nor are the great variety of pollution sources just chemical in nature. There are physical and biological threats to our nation's waters that we must address as well if we are to truly achieve the stated goal of the Clean Water Act to "restore and maintain the chemical, *physical and biological* integrity of the Nation's waters".

Physical integrity can have numerous dimensions. For instance, some human activities in the riparian zone can themselves be a source of water quality impairment, both through erosion and through reducing or eliminating the riparian vegetation that can buffer our waters against detrimental effects of upland human activities. Similarly, States are increasingly taking action, through a variety of programs, to ensure adequate instream flows to support water quality for drinking water, habitat, and recreation uses.

Invasive species are an example of a real and growing threat to the biological well-being of our nation's aquatic and terrestrial resources, as well as to the health of our economy. For example, more than 160 invasive aquatic organisms of all types—including plants, fish, algae and mollusks—have become established in the Great Lakes since the 1800's. The U.S. Fish & Wildlife Service estimates that the potential economic impacts of one of these species—the zebra mussel—will be \$5 billion over the next 10 years to U.S. and Canadian water users within the Great Lakes region.

Tools for Cleaning Up Impaired Waters

Meanwhile, EPA will continue to implement those programs already underway that aim to ensure the quality of the nation's water. The past decade has seen a shift toward an emphasis on what is now commonly referred to as the watershed approach. EPA has been promoting, and many governments have been practicing, a "watershed approach" in their work, which encourages a holistic take on identifying problems and implementing the integrated solutions that are needed to overcome multiple causes of water quality impairment. Increasingly, States, Tribes, watershed groups and others are recognizing the value of implementing watershed protection approaches, and are using them as the organizing frameworks for their protection and restoration activities.

EPA views watersheds as the basic unit to define and gauge the nation's water quality. Our actions to restore America's streams, lakes, and rivers must be based upon improving the watersheds which unite not just our rivers and streams, but our communities, and thereby bind together our lives with our environment. The watershed approach enables us to address the problems of greatest concern in a comprehensive, effective manner, and through cooperation with affected stakeholders to maximize our results with limited resources.

In addition to the watershed approach, there are several specific tools I would like to mention that we can bring to bear to address the more complicated water quality problems we are now facing. One of these tools is the Total Maximum Daily Load, or TMDL, Program. In enacting the CWA, Congress retained a water quality-based strategy for waters that remained polluted after the application of technology-based standards. The TMDL Program, contained in section 303(d), essentially tells States to establish a water quality cleanup budget for such waters. This part of the CWA was kept on the back burner for about 20 years while other aspects of the CWA were emphasized, particularly implementation of minimum levels of treatment for industrial and municipal dischargers. The authors of the 1972 Clean Water Act created the TMDL Program as a resource to ensure the availability of essential information for cleaning up water bodies that were not protected or restored under the general pollution control programs of the Clean Water Act.

EPA has been encouraging States to develop and implement TMDLs on a watershed basis. Our hope is that this approach will greatly increase collaboration and support for the needed pollutant controls. Increased public involvement is vital in several respects. Because TMDLs are water-quality based, they are information-intensive, requiring widespread and systematic monitoring to identify and characterize problems and priorities, and to track progress in solving them. Public involvement can contribute to this information process both directly and through increased visibility for problem-solving. And it will help make sure that TMDLs get translated from allocations into action, because information brought before the public is itself a driver for action.

Opening the deliberations to all stakeholders and allowing time for innovation also will provide additional opportunities to take advantage of other programs, including Nonpoint Source grants under section 319 of the Clean Water Act, the conservation provisions of the newly reauthorized Farm Bill, the source water assessment requirements of the Safe Drinking Water Act (SDWA), and other Federal, State and local programs. Greater inclusiveness and time in the process are especially important because these programs are diverse and require a substantial

amount of coordination among agencies, levels of government and different program characteristics. Non-point source 319 grants are a fundamental tool to address impairments because they can be targeted as a part of TMDL prioritization, and thus can be used as part of States' cumulative strategies to clean up impaired waters. Farm Bill funds are a broad resource to help farmers implement practices that could protect water quality generally, including by maintaining water quality or complementing 319 funds in impaired waters. We are looking forward to States completing their source water assessments under SDWA next year (2003) so that we can have a clearer picture of the threats to source waters at both the State and national level.

The TMDL program continues to evolve to meet the challenges of cleaning up our nation's waters, and several changes to the TMDL program currently are under consideration. One of the key changes would reinvigorate the States' continuing planning process under Section 303(e) of the CWA. This section of the Act calls for States to have a Continuing Planning Process (CPP), which describes how all the pieces of the States' programs, including TMDLs, work together to achieve water quality goals. While all States already have some form of CPP, we will be encouraging States to enhance their CPP programs. We also are encouraging that TMDL implementation be done as part of revitalized State continuing planning processes, where States would use their own approaches and programs to clean up their waters. We believe that this is good government and puts implementation where it ought to be—at the State level.

Maintaining high environmental standards and sustaining a healthy economy require that we optimize costs and conserve our natural resources. Economic incentives can be an important tool to help meet this challenge. We must take advantage of market forces to provide incentives for voluntary reductions, emerging technology and greater regulatory flexibility.

Water quality trading, for example, holds great promise as a market-based tool for addressing water pollution. Trading is an innovative way for water quality agencies and community stakeholders, including State and local governments, point source dischargers, contributors to non-point source pollution, citizen groups, other Federal agencies, and the public at large, to develop common-sense, cost-effective solutions for water quality problems in their watersheds. Trading is a tool communities can use to grow and prosper while retaining their commitment to water quality.

These are not a random set of improvements. They are all important elements of the shift in paradigms that is necessary to make further progress in cleaning up America's waters. It is time, not so much for a change in course as a shift in focus: from a point source-oriented program to a non-point centered one; from relying largely on technology-based standards to complementing past progress by a water quality-based approach, and from emphasizing inputs to focusing on environmental outcomes. These tools I have described are the means to make this shift.

Closing The Funding "Gap"

Because infrastructure replacement needs largely echo demographic trends across the country, communities will be challenged in the coming years as they face needs to increase spending to address replacement of aging infrastructure built in the 1950-60's, and current demands fueled by population growth. Several groups have conducted studies to evaluate whether a funding gap will develop between projected investment needs and current levels of spending in drinking water and wastewater infrastructure over the next 20 years. Reports released by these groups, which include the Water Infrastructure Network and Congressional Budget Office, have estimated a significant capital funding gap.

Over the past year, in order to gain a better understanding of the future challenges for infrastructure to secure clean and safe water, EPA has conducted its own Gap Analysis study. The study used results from EPA's needs survey, adjusted for under-reporting of capital needs, as the starting point for calculating capital and operations and maintenance investment needs. We then used several alternative assumptions to generate scenarios for estimating the capital and O&M gaps. The methods and data used in the analysis were subjected to peer review by a diverse panel of external reviewers drawn from academia, industry and think tanks. Overall, the reviewers commended EPA for making a credible effort to quantify the gap given limitations in available data, and made several recommendations for changes which were incorporated into revisions of the Analysis.

The Analysis included two scenarios—a "no revenue growth" scenario and a "revenue growth" scenario. The "no revenue growth" scenario is useful to understand the extent to which spending might need to increase relative to the status quo. This scenario estimates a total capital payments gap of \$122 billion, or about \$6 billion per year, for clean water. The clean water O&M gap is estimated at \$148 billion,

or \$7 billion per year. It is important to recognize that the funding gaps would occur only if capital and O&M spending do not increase from present levels.

In reality, increasing needs likely will prompt increased spending and thus a smaller funding gap. Thus, if one assumes that spending on clean water infrastructure increases at 3 percent annually above the rate of inflation—a “revenue growth” scenario—the capital gap is \$21 billion, or about \$1 billion per year, and the O&M gap is estimated at \$10 billion, or \$0.5 billion per year. This “revenue growth” scenario shows the size of the gap if revenue and spending keep pace with the long-term growth rate expected for the economy as a whole.

Moreover, both scenarios look at the supply side of infrastructure financing (how to pay for needs) but ignore the demand side (how to reduce infrastructure costs and make the most efficient use of our capital facilities). Demand side measures adopted by some utilities include: asset management and administrative restructuring (including consolidation and/ or privatization), which can reduce capital and O&M costs; and, rate structures that better reflect the cost of service and encourage conservation. However, the Analysis is very important, because it presents a dramatic indication of the funding gap that will result if we ignore the challenges posed by an aging infrastructure network—a significant portion of which is beginning to reach the end of its useful design life.

During the current session, Congress has been paying attention to water infrastructure. As we stated in our testimony on S. 1961 earlier this year, the Administration does not support the authorization levels as they do not reflect the President’s priorities of defense and homeland security. However, there are elements of the bills that we do support, such as new loan conditions tied to utilities’ fiscal sustainability. At the same time, we continue to state that 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.

Most infrastructure investment has been, and will continue to be, derived from local sources, be they ratepayers or taxpayers. To meet these future challenges, we believe our strategy should be fiscally responsible and sustainable. While some of the goals and principles we have stated are reflected in legislation before Congress, some represent actions that can be taken administratively. Thus, EPA will convene a forum of stakeholders to address the infrastructure challenge in new and innovative ways. Ensuring that our infrastructure needs are addressed will require a shared commitment on the part of the Federal, State, and local governments, private business, and consumers.

Water Conservation

While the traditional focus of the EPA and local officials responsible for water programs has been on water quality, I maintain that both today and in the future, we must pay much closer attention to understanding and managing our demands for clean water. Water is truly the staple of our existence.

This summer of drought is harshly reminding many Americans of the need to appreciate clean water as the scarce and invaluable resource it is. As our population increases, the need for clean water supplies continues to grow dramatically and puts additional stress on our limited water resources. I truly believe that efficient water use needs to be an essential part of our daily lives. The local, State, and Tribal officials who are leading the way in our communities in implementing water efficiency measures are not only saving water, but also are forestalling the need to build new, expensive water and wastewater treatment plants. Administrator Christine Todd Whitman has recently recognized the critically important work of these officials, and asked the American people to join her in accepting the challenge to conserve our water.

CONCLUSION

We have made tremendous progress in cleaning up our waters over the past three decades—an achievement that is even more remarkable in coming alongside substantial increases in our population growth and often-dramatic economic growth. As a Nation, we can be proud of how far we’ve come, and of the partnerships among all levels of government, the private sector and America’s citizens that enabled us to get there. Those remarkable achievements should strengthen our resolve to persist in facing the tough work still before us, and to continue and enhance the cooperation and the working relationships that are essential to reach our goal of clean water for everyone, all across the Nation. We at EPA appreciate your support and commitment to these vital goals, and look forward to blazing a path toward them together.

This concludes my prepared remarks. I would be happy to address any questions you may have at this time.

RESPONSES OF G. TRACEY MEHAN TO ADDITIONAL QUESTIONS
FROM SENATOR JEFFORDS

Question 1. Mr. Mehan, as I know you are aware, EPA released its annual water quality inventory report. The report tells us what many here today will say over and over. We have made progress, but our water is still not clean.

The report states that of those assessed, almost 40 percent of rivers, 45 percent of lakes, and more than half of our shorelines are still polluted. The report notes that non-point source pollution remains the largest cause of pollution in the country.

Currently, the Section 319 program of the Clean Water Act is the principle program to mitigate non-point pollution.

Is that program, as structured, strong enough to significantly reduce non-point source pollution?

Response. Not only is non-point source pollution (NPS) the largest cause of pollution in the country, but its solution presents unique challenges that have not been faced, or have been faced only to a lesser extent, by other pollution control programs administered by EPA. The non-point source pollution program established in Section 319, essentially a grant program, provides States the authority to design programs to include a balance, as each State sees fit, of regulatory programs, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects.

Congressional appropriations for Section 319 were \$238 million in fiscal year 2002. These funds have enabled States to implement a significant number of watershed projects that demonstrate the ability to address a broad variety of non-point source problems and thereby to improve water quality. EPA guidelines direct that \$100 million of these funds be focused upon the remediation of impaired waters listed by States under Section 303(d) of the Clean Water Act.

The new Farm Bill enacted by Congress in fiscal year 2002 provides a significant addition of funding resources that, if used wisely, can help restore a significant number of waterbodies that are currently impaired by agricultural sources of NPS pollution. Section 319, along with appropriately targeted USDA programs such as the Environmental Quality Incentives Program and the Conservation Reserve Enhancement Program (a component of the CRP) can make a significant contribution to reducing our nation's NPS pollution.

Question 2. What is EPA doing to ensure that remaining non-point source pollution problems are eliminated?

Response. EPA's fiscal year 2002 and 2003 guidelines direct that \$100 million of the Section 319 funds be focused upon the remediation of impaired waters listed by States under Section 303(d) of the Clean Water Act. Additionally in fiscal year 2003, up to 20 percent of the funds can be used to develop non-point source (NPS) TMDLs and watershed-based plans to implement NPS TMDLs; develop watershed-based plans in the absence of or prior to completion of TMDLs; develop watershed-based plans that focus on the protection of threatened waters or other unimpaired waters; and conduct other NPS monitoring and program assessment/development activities.

States are encouraged to develop watershed-based plans that contain nine components that are critical to ensuring that the projects succeed in their efforts to restore water quality. These include the identification of the pollutants causing water quality impairments; the sources of those pollutants; the management measures and practices that will be needed to address those sources appropriately; the financial, legal, and/or other tools that will be relied upon to assure implementation; a process to involve local citizens in helping implement the project; and a monitoring and feedback loop, resulting in any necessary changes to the project.

EPA has also significantly improved, and is continuing to, improve its accountability system to assure that State progress is tracked. Beginning in fiscal year 2002, we have required States to report on the pollutant load reductions (for phosphorus, nitrogen, and sediment) that are achieved in each project. Moreover, we have created a computer-based mapping system that enables us to display on a map each waterbody that is impaired and to also display the watersheds where States spend 319 funds; we will thus be able to map the impact that State 319 implementation has over time on those impaired waterbodies by "changing their color" on the map. We will be working with the States to also develop this year a set of rigorous short-term and long-term goals that will motivate targeted implementation activities to restore water quality.

In addition to these activities, EPA is working closely with USDA to promote the use of Farm Bill funds to address water quality, as explained in response to Question 1 above. We believe that effective use of Farm Bill funds will be critical to our national efforts to eliminate non-point source pollution problems.

Question 3. The report also underscores the need for EPA to implement a strong TMDL program to clean up those water bodies still not meeting their designated uses. I understand that EPA is currently in the process of revising the TMDL rule developed under President Clinton.

One of the more disturbing revisions in the draft would allow States to more easily de-list polluted waters. Another would make EPA's responsibility to develop a plan, in cases of State inaction, discretionary rather than mandatory. After 30 years, many States have produced only a handful of TMDLs, others have not produced a single one.

How can EPA expect the new TMDL program to do a better job than the current regulation if EPA is relaxing its standards and reducing EPA's oversight role?

Response. The regulations currently in effect are the regulations promulgated in 1985 and amended in 1992. The regulation published on July 13, 2000 has never gone into effect. Because of the intense controversy generated by the rule, including the congressional spending prohibition on funds for fiscal year 2000 and fiscal year 2001 as well as legal challenges by a broad array of litigants, EPA has set an effective date for the rule of April 30, 2003. The Agency believed that this delay would be sufficient to conduct a meaningful consultation process, analyze and reconcile the recommendations of the various stakeholders and promulgate changes to the currently effective rule, if necessary. It also enabled us to review recommendations in a report from the National Research Council entitled, "Assessing the TMDL Approach to Water Quality Management," which recommends changes to the TMDL program.

After careful review, EPA published a notice in the Federal Register on December 27, 2002, proposing to withdraw the 2000 TMDL rule. EPA is developing a staff draft of proposed changes to the currently effective rule, which EPA hopes will be an improvement over the current program that will be less controversial than the 2000 rule and have buy-in from most stakeholders. Such buy-in is essential for the program to make significant additional progress.

As far as listing and de-listing of waters, our present thinking is to offer significant improvement over both the current rule and the 2000 rule. The approach would require an integrated report on the status of all waters in a State with an opportunity for public comment on the report. Such an integrated report would allow EPA and the public to track both listed and unlisted waters from report period to report period. States would be required to use the same science-based criteria to add or remove waters from the 303(d) list within the integrated report. We would also require States to provide good cause, when asked by EPA, for not including waters on the 303(d) list. Further we would require the State to develop and get public comment on the methodology they intend to use to develop the integrated report.

Under the current regulations, States have made significant progress over the last 2 years. EPA approved 1,779 TMDLs in fiscal year 1999, 2,162 TMDLs in fiscal year 2000 and 3,485 TMDLs in fiscal year 2001. Further TMDL have been approved in nearly all of the States. Under the statute, EPA must prepare TMDLs where a State fails to do so, and EPA takes this responsibility seriously. However, the statute sets no specific timetable for exercising this authority and, based on public comment and consultation with States, EPA believes it is appropriate to retain flexibility regarding the timing of EPA backstopping activities.

Question 4. When does EPA plan to propose the rule change?

Response. EPA is still working on a new TMDL rule. No date has been established for completion of this work.

Question 5. Will you rescind the Clinton rule at the same time?

Response. EPA published a notice in the Federal Register on December 27, 2002, proposing to withdraw the July 2000 rule. EPA intends to take final action on that proposal before the July 2000's effective date of April 30, 2003.

Question 6. What specific changes does EPA plan to propose?

Response. The draft rule would improve the listing and assessment process, clarify the TMDL submittal and approval process, provide added opportunity for stakeholder involvement, clarify TMDL implementation through watershed planning, and strengthen the State planning process.

Question 7. One of the primary goals of the Clean Water Act is to eliminate the discharge of raw sewage waste into the nation's waters. That goal is also still to be achieved.

About 40,000 times a year, raw sewage overflows into U.S. rivers, lakes, and coastal waters. About 400,000 basement backups of sewage pollute America's homes every year, and sewage overflows also spill onto streets and even playgrounds. Sanitary sewers are designed to carry wastes to sewage treatment plants, but when overloaded, inadequately maintained or obstructed, they dump raw sewage into waterways. These events are called sanitary sewer overflows (SSOs).

In January 2001, the Bush Administration blocked proposed regulations that would require improved capacity and operation of sewage systems and would require that systems notify the public when overflows occur. Those proposed regulations were based on the consensus recommendations of a Federal Advisory Committee. Now, 20 months since January 2001, the EPA still has not proposed this regulation. Why not?

Response. I share your concern regarding the importance of responsibly controlling SSOs. In many of our cities, SSOs are resulting in the discharge of raw sewage directly into local waterways, although they are already covered by the Clean Water Act and generally prohibited as unpermitted discharges. EPA agrees that SSOs continue to be an important environmental issue that needs to be addressed. The Agency received extensive comments and suggestions in response to its January 2001 draft proposed regulations. One point on which there is general consensus is that it is not technically possible to eliminate all overflows cost-effectively under all circumstances; some are caused by events beyond the sewer operator's reasonable control. An on-going concern is how best to minimize such overflows and their environmental impacts and how to address them when they occur. EPA and States are continuing to address SSO problems with compliance assistance and enforcement in accordance with the EPA's April 27, 2000, Compliance and Enforcement Strategy Addressing Combined Sewer Overflows and Sanitary Sewer Overflows.

Question 8. Does the EPA intend to propose the regulation agreed to by the Federal Advisory Committee? If so, when? If not, why not?

Response. In October 1999, the SSO Federal Advisory Subcommittee supported, when taken as a whole and recognizing that they are interdependent, basic principles for suggested NPDES permit requirements for municipal sanitary sewer collection systems and SSOs. EPA reflected the approach discussed with the SSO Subcommittee in its January 2001 draft notice of proposed rulemaking. The Agency received extensive comments and suggestions in response to this draft. We are considering various regulatory options and have not settled upon a course of action.

Question 9. How many people are made ill or die every year because of sanitary sewer overflows? How many waterways are polluted by overflow events? Is this source of pollution preventable?

Response. EPA is preparing a Report to Congress that will provide the Agency's first national assessment of the impacts of SSOs. The Consolidated Appropriations Act for Fiscal Year 2001, P.L. 106-554, required EPA to transmit to Congress by December 15, 2003, a report summarizing:

- The extent of human health and environmental impacts caused by combined sewer overflows and SSOs, including the location of discharges, the volume of pollutants discharged, and the constituents discharged.
- The resources spent by municipalities to address these impacts.
- An evaluation of the technologies used by municipalities to address these impacts.

• *Human health impacts:* The Report will rely on recent scientific research including studies for the Centers for Disease Control and Prevention (CDC) and the World Health Organization. Such research, however, generally does not distinguish human illness resulting from water-borne pathogens originating in sewage from illnesses from other sources. Providing an estimate of the number of illnesses caused by SSOs in the U.S. will be exceptionally difficult.

On August 14, 2002, EPA convened a group of public health experts from CDC, academic institutions, and EPA to discuss a methodology for quantifying human illness caused by sewer overflows. This group concurred with EPA's assessment of the state of information available on public health impacts and the complexity of this issue. A summary of this meeting will be published later this year and will be available on EPA's web site at www.epa.gov/npdes.

Water bodies polluted: EPA is evaluating the extent of the SSO problem in its Economic Analysis for the SSO proposed rule as well as the Report to Congress. On an interim basis, the Agency estimates that 30,000-50,000 SSO events occur each year; these vary dramatically in size and potential impact. Not all SSOs are expected to reach waters of the United States and cause or contribute to violations of water quality standards or human health problems. Very few are expected to cause long-term water pollution problems.

Prevention: The Economic Analysis for the proposed SSO rule will assess the percentage of SSOs nationwide that are attributable to various causes. EPA currently believes that most SSOs can be prevented through improvements to operation and maintenance of collection systems or investments to increase the capacity of collection systems. However, EPA recognizes that some SSOs are caused by factors beyond the operator's reasonable control.

Question 10. Do sewage operators oppose require public notice of sewage overflow events? Does anybody? Why shouldn't this part of the proposed rule be adopted immediately?

Response. Representatives of key municipal stakeholder groups participated in the SSO Federal Advisory Subcommittee that supported, when taken as a whole and recognizing that they are interdependent, basic principles for suggested NPDES permit requirements for municipal sanitary sewer collection systems and SSOs. These include public notice requirements. These municipal groups continue to support rulemaking for SSO requirements, provided EPA invites comment on potential alternative regulatory options. However, municipal representatives have indicated (based on an April 20, 2002, letter to the Administrator) that they oppose any attempt to break up the different parts of the SSO proposal and propose them in a piecemeal fashion.

Question 11. As you are aware, 4 weeks ago this committee unanimously passed an amendment allowing communities that are required to obtain stormwater permits beginning in March of next year to continue to use section 319 funds for stormwater projects and for other activities in the same town. I understand that you are in the process of making a policy determination on the same issue. What is the status of that review?

Response. The Office of Water and the Office of General Counsel have been reviewing the questions of whether and to what extent the current statutory scheme authorizes the use of Section 319 funds to fund storm water projects that may be covered by the storm water regulatory framework implemented under the Clean Water Act's point source provisions. We have not finalized our review of this issue nor formulated a final policy determination.

Question 12. Can you provide the committee with a list of all lawsuits brought against the EPA involving the 1992 TMDL rule with a description of why the suit was brought forward?

Response. There were no legal challenges to the 1992 TMDL rule itself. However, there were a number of lawsuits seeking orders compelling EPA to establish TMDLs if the States failed to do so in accordance with Section 303(d) and the 1992 rule. The following chart provides information on those lawsuits.

TMDL LITIGATION BY STATE

23 STATES IN WHICH EPA IS UNDER COURT ORDER OR AGREED IN CONSENT DECREE TO ESTABLISH TMDLS IF STATES DO NOT ESTABLISH TMDLS

Alabama (1998; 5 year schedule)	Iowa (2001; 9 year schedule)
Alaska (1992; no schedule)	Kansas (1998; 10 year schedule)
Arkansas (2000; 10 year schedule)	Louisiana (2002; 10 year schedule)
Calif. (LA) (1999; 13 year schedule)	Mississippi (1998; 10 year schedule)
Calif. (North Coast) (1997; 11 year schedule)	Missouri (2001; 10 year schedule)
Calif. (Newport Bay) (1997; 4 year schedule)	Montana (2000; 7 year schedule)
Delaware (1997; 10 year schedule)	Nevada (partial CD; 2002; 2 year schedule)
District of Columbia (2000; 7 year schedule)	New Mexico (1997; 20 year schedule)
Florida (1999; 13 year schedule)	Oregon (2000; 10 year schedule)
Georgia (1997; 7½ year schedule)	Pennsylvania (1997; 12 year schedule)
Hawaii (partial cd; 2001; 1 year schedule)	Tennessee (2001; 10 year schedule)
	Virginia (1999; 12 year schedule)
	Washington (1998; 15 year schedule)
	West Virginia (1997; 10 year schedule)

2 STATES WITH RESPECT TO WHICH PLAINTIFFS HAVE FILED LITIGATION SEEKING TO COMPEL EPA TO ESTABLISH TMDLS

Ohio (2001 complaint)

Wyoming (1996 complaint)

15 STATES (12 ACTIONS) DISMISSED WITHOUT ORDERS THAT EPA ESTABLISH TMDLS
(SOME CASES WERE RESOLVED WITH SETTLEMENT AGREEMENTS)

Arizona (EPA completed all consent decree obligations; decree terminated July 17, 2000)

California (9th Circuit affirmed dismissal, 2002)

Colorado (Joint Motion for Administrative Closure filed August 24, 1999; parties signed settlement agreement in which EPA agreed to establish TMDLs if State did not) Idaho (EPA Motion to Dismiss granted 1997; settlement agreement signed 2002)

Lake Michigan (WI, IL, IN, MI) (Scott case—final order 1984; related NWF case challenging EPA actions in response to Scott order—case dismissed 1991)

Minnesota (Dismissed 1993)

Maryland (Dismissed 2001)

New Jersey (Dismissed 2002)

New York (EPA Motion to Dismiss granted on all but one claim May 2, 2000)

North Carolina (Joint Stipulation of Dismissal filed June 1998; EPA agreed by letter to ensure development of a TMDL for the Neuse River by date certain) Oklahoma (Tenth Circuit upheld dismissal of case on August 29, 2001) South Dakota (Dismissed without prejudice on August 27, 1999)

RESPONSES OF G. TRACEY MEHAN TO ADDITIONAL QUESTIONS
FROM SENATOR CHAFEE

Question 1. The Clean Water Act (CWA) specifies that National Pollutant Discharge Elimination System (NPDES) permits may not be issued for a term longer than 5 years. What is the current state of the NPDES backlog? Is EPA on target to meet its backlog reduction goals?

Response. Currently, the backlog for NPDES permits is about 17 percent for major facilities, 26 percent for minor facilities, and 18 percent for all minor facilities when those covered by non-storm water general permits are also considered. While our goal of 10 percent backlog for major facilities by the end of fiscal year 2001 has already passed, significant progress was made and continues to be made to reduce backlog for major permits. Given the rate of permit issuance and data clean-up for permits, 10 percent backlog for all permits by the end of CY 2004 remains possible.

EPA and States have made a dedicated effort to reduce permit backlog. Some of the specific actions we have taken to help reduce permit backlog include:

- issuing national guidance to ensure the issuance of timely and high quality NPDES permits
- teaching six training courses each year for approximately 350 EPA and State permit writers. We are currently developing advanced permit writer and train-the-trainer courses.
- conducting an ongoing data quality assurance review program, eliminating 18,000 old records from PCS, thereby improving the accuracy of the data.
- developing and distributing permit quality management tools to the Regions and States to help improve permit quality and timeliness.
- developing and distributing electronic permit application and permit writing tools.

While EPA and States have made significant progress toward reducing the NPDES permit backlog, it is imperative to ensure that EPA and the State resources are focused on reviewing and reissuing those permits with the greatest potential for environmental benefit. To this end, our office has initiated an effort to characterize the universe of NPDES permits, and the associated backlog, with respect to several indicators of their potential environmental impact. We are currently comparing backlogged permits for dischargers near impaired waters, and based on previous analysis believe it will be about 50 percent. We are also looking to compare which ones are near drinking water supplies. The results of that characterization will be used, on an ongoing basis, to establish priorities and measure program progress toward addressing the most environmentally significant permits. As these data become available in the future, we will be happy to share the results of our analyses.

Question 2. How will EPA's new Watershed Grants Program build upon the ongoing work of local governments and community organizations across the country to restore watershed resources?

Response. The goal of the Watershed Initiative is to advance the success of partnerships and coalitions that have undertaken the necessary steps and have developed a technically sound watershed plan that is ready to be carried out. Experience has shown us that strong partnerships and well laid plans lead to positive environ-

mental results. If it receives congressional funding, the Administration's new Watershed Initiative will focus on successful partnerships—partnerships that have proven working relationships and established track records. Watershed plans that incorporate a wide variety of partnerships will be favored.

Question 3. Beginning in March 2003, the Phase II Storm Water Program will require States to develop and implement management plans to address storm water runoff. I understand that EPA's Office of General Counsel (OGC) is currently reviewing whether States may continue to use Section 319 funds for Phase II Storm Water Program activities and, more generally, in Phase II geographic jurisdictions. What is the status of OGC's review with regard to the use of Section 319 funds for addressing storm water and urban water quality concerns?

Response. The Office of Water and the Office of General Counsel have been reviewing the questions of whether and to what extent the current statutory scheme authorizes the use of Section 319 funds to fund storm water projects that may be covered by the storm water regulatory framework implemented under the Clean Water Act's point source provisions. We have not finalized our review of this issue.

RESPONSES OF G. TRACEY MEHAN TO ADDITIONAL QUESTIONS
FROM SENATOR VOINOVICH

Question 1. On August 27, 2002, the Effluent Guidelines Program Plan was published in the Federal Register. The Plan gives a brief update on the status of EPA's draft "Strategy for National Clean Water Act Regulations" and invites the public to identify existing regulations that EPA should consider revising. What is the "Strategy for National Clean Water Act Regulations" and what do you hope to achieve as a result of this effort?

Response. The draft "Strategy for National Clean Water Industrial Regulations" outlines a process that EPA proposes to use for future decisions regarding effluent guidelines. A documented and systematic process will help EPA identify existing effluent guidelines the Agency should consider revising and also identify industrial categories for which the Agency should consider developing new effluent guidelines. The Strategy will provide a framework for good decisions regarding resource allocation and the need to develop new regulations and will assist EPA in carrying out its obligation under the Clean Water Act to revise effluent guidelines as appropriate. The Strategy offers EPA and interested stakeholders an excellent opportunity to evaluate the existing program and to consider how national industrial regulations can best support the national clean water program.

Two overarching goals guided the development of the draft Strategy: reducing risk to human health and the environment, and assuring transparent decisionmaking. EPA hopes the Strategy will increase understanding of the planning process, and broaden public participation in decisions about how technology-based regulations can best meet the needs of the national clean water program. EPA is also looking for ways that the Strategy can help spur the development of innovative technologies, promote multi-media pollution prevention, and expand the use of market-based incentives to improve the quality of our nation's waters.

On November 29, EPA published a notice of availability of the draft "Strategy for National Clean Water Industrial Regulations" and announced a public meeting scheduled for January 15. Comments on the draft strategy are due by February 27, 2003. In addition, the Industrial Wastewater and Best Available Treatment Technology Conference will be held February 26–28, 2003.

Question 2. The SRF program has been a successful funding source for communities seeking to upgrade their water infrastructure. While I agree with your statement that "because of the revolving nature of the funds, dollars invested in the SRFs provide about four times the purchasing power over 20 years compared to what would occur if the funds were distributed directly to municipalities as grants," I continue to believe that grant programs should be available to help communities that may not be able to afford low-interest loans. Do you believe funding for grant programs, such as the sewer overflow control grant program, should be included in the President's budget and appropriated by Congress?

Response. We do not believe that new grant programs should be included in the President's budget and appropriated by Congress.

Question 3. In August, I conducted a field hearing on the problem of oxygen depletion in the central basin of Lake Erie. One of the possible causes of oxygen depletion may be aquatic nuisance species such as the zebra or quagga mussels. What is EPA doing to assess the impact aquatic nuisance species are having on water quality?

What can be done at the Federal and State level to prevent the introduction and spread of aquatic nuisance species?

Response. The U.S. EPA, Great Lakes National Program Office, through its Lake Erie Supplemental Study, is investigating several aspects of aquatic nuisance species' impacts on water quality. Some of the more important aspects of the research deal with assessing mussel abundance, and measuring how zebra and quagga mussels affect the environment through their feeding, and excretion of nutrients (especially phosphorus and nitrogen). The work of assessing the lake-wide abundance of zebra and quagga mussels began during the summer of 2002, and will continue into 2003. Researchers have started to measure the important zebra and quagga mussel nutrient cycling rates as part of the study. Efforts are also underway to determine the role of another aquatic nuisance species, the round goby, in water quality changes. Our aim is to be able to use this new information to revise historically proven models of Lake Erie's ecosystem. This will help us understand how aquatic nuisance species, and changes in, for example, water level and water temperature, are affecting Lake Erie's water quality. Results of the 2002 fieldwork are due from the investigators by early summer 2003 and will be reported widely within the basin.

Preventing the introduction and controlling the spread of aquatic nuisance species is an important component of any invasive species management plan. In the Great Lakes, ballast water is the most significant vector for the introduction of aquatic invasive species. Federal and State agencies have been very active in the development and testing of ballast water treatment technologies. The Coast Guard, NOAA, and EPA on the Federal side and the State of Michigan have all supported projects focusing on ballast water treatment. Specific technologies currently being examined and tested include: filtration; hydrocyclone separation; ultra-violet light; ozone; and biocides, among others. There is also a significant amount of effort underway to examine the impacts of ships entering the Great Lakes claiming No Ballast on Board (NOBOB). A joint Coast Guard, NOAA, EPA study is currently underway examining the risk posed from these NOBOB vessels.

Additionally, the Office of Water is supporting the US Coast Guard's efforts to develop new ballast water regulations by conducting environmental assessments and economic analyses. The Coast Guard is currently finalizing a proposed rule that would require reporting on ballast water management practices by all ships entering U.S. waters. The data gathered from this reporting will in turn help to support further regulations, with the goal of establishing effective, achievable standards for the release of organisms from ballast water discharges. The Office of Water is currently working on environmental analyses to support ballast water management and treatment standards regulations.

Question 4. In your testimony, in reference to S. 1961, you state that the Administration wants to make sure that loan 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." You also state that "While some of the goals and principles . . . are reflected in the legislation before Congress, some represent actions that can be taken administratively." As you may know, I have taken an active interest in S. 1961 and many stakeholders are "up in arms" about the prescriptiveness of the bill. What changes would you recommend to the bill to address these concerns?

Response. As has been stated in previous testimony, the Administration supports the objectives behind the loan conditions that are in accordance with basic principles guiding our infrastructure revitalization efforts. Provisions dealing with such areas as long-term technical, financial, and managerial capacity; asset management planning; rate structures that reflect cost of service and capital replacement costs; and consolidation, partnerships or alternative nonstructural approaches, are among the most important innovations in the legislation. Of course, framing these provisions and others in the bill in a workable and flexible manner is important to ensuring the continuous high level of effectiveness of the SRF program. We want to work with the Congress and the States in finding ways to create the necessary incentives that move us in this direction.

STATEMENT OF THOMAS A. WEBER, ASSOCIATE CHIEF, NATURAL RESOURCES
CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. Chairman and Members of the Committee, I am pleased to appear before you today to present the Department of Agriculture's perspective on the Clean Water Act and the celebration of the 30th Anniversary of this historic Act. I thank the members of the committee for the opportunity to appear, and I would like to express

gratitude to the chairman and members of this body for your interest in USDA's roles in improving water quality.

The 30th Anniversary of the Clean Water Act is cause for celebration about the improvements that have been made in the quality of our Nation's waters. At USDA, we are celebrating this event along with our many partners at the Federal, State, Tribal, and local levels—including our non-governmental partners, farmers, ranchers, and woodlot owners. And as we celebrate the past 30 years, we are also reflecting on USDA's natural resource conservation heritage, and upon the significant work ahead of us as we enter this new century.

A HISTORICAL PERSPECTIVE

The People's Department, as Abraham Lincoln referred to USDA, has played a key role in the management of nonpoint sources of pollution for nearly a century, long before the word nonpoint was part of our vocabulary. In 1905, President Theodore Roosevelt named Gifford Pinchot the Chief Forester of the redefined U.S. Forest Service and signed the Act transferring the Nation's Forest Reserves from the Department of the Interior to the Department of Agriculture. This Act gave USDA its first authority to protect forestlands and the water resources they produce. Pinchot, Roosevelt, and their contemporaries believed in the wise use and management of all the Earth's natural resources, and began a nationwide Conservation Movement.

In the early 1900's, the Department was conducting soil surveys, identifying "rough gullied land" and the resulting sediment that made its way to nearby creeks, streams, and rivers. In the 1920's, Hugh Hammond Bennett, a USDA soil scientist who later became the first Chief of my Agency, drew upon his observations about soil erosion's impacts on agriculture. He was evangelistic in delivering his message on natural resource conservation and his writings and speeches were sprinkled with admonitions about the "evil of erosion", how "rainwater running wild" would result from poor land management, and other interesting phrases. Concerning water pollution from sediment and nutrients, Bennett made note of "the waste material marching down to the Gulf of Mexico."

In the 1920's and 1930's, Congress responded to natural resource degradation in many ways. Congress authorized the formation of soil conservation experiment stations; it created the Civilian Conservation Corps and the Federal Emergency Relief Administration, marking the beginning of public-sector erosion control assistance on private agricultural land; it formed the Soil Erosion Service, later named the Soil Conservation Service; and it established controls for livestock on public lands that began to prevent overgrazing and soil deterioration. Many of these new initiatives were responses to the devastation caused by poor land management during a period of terrible droughts—commonly called the "Dust Bowl." Other water resource protection authorities were established for USDA in the 1950's and 1960's.

CLEAN WATER ACT BRINGS NEW EMPHASIS

When the Clean Water Act was passed in 1972, it triggered a new national emphasis on the problems created by poor land and water management practices. Congress appropriately recognized the differences between point and nonpoint sources of pollution, and it established differing approaches to solving these distinct problems. New emphasis on water quality concerns also occurred at USDA and it has been of critical importance to our natural resource conservation work ever since. USDA's agencies that work on natural resource issues—including the Natural Resources Conservation Service, Forest Service, Farm Service Agency, Agricultural Research Service, the Cooperative State Research, Education, and Extension Service, and Economic Research Service—have emphasized water quality issues related to agricultural and forest land management in their program delivery, research, education, and extension efforts.

These efforts, performed in partnership with local soil and water conservation districts, State and Federal conservation and natural resource agencies, and owners and operators of the land, have been instrumental in protecting our soil and water resources. For instance, we are presently experiencing another major drought—the most significant drought since the Dust Bowl days. While the drought has resulted in decreased crop and forage production and imposed financial losses on farmers and ranchers, there is little threat of widespread natural resource degradation as experienced during the Dust Bowl. The poor land management practices of the 1930's have been replaced by and large with sound soil erosion reduction practices of today, such as conservation tillage, crop residue management, terraces, and conservation buffers. On working cropland and Conservation Reserve Program land, soil erosion caused by wind and water has been cut by 38 percent since 1982. Less

erosion means cleaner water, improved fish and wildlife habitat, and more fertile soils. On the subject of conservation buffers, since 1997, over 1.2 million miles of conservation buffers (about 4 million acres) have been established nationally on farms and ranches to protect water resources and establish wildlife habitat. Locally in the Chesapeake Bay watershed, the goal of establishing 2,010 miles of conservation buffers by the year 2010 will be completed this year—eight years ahead of the target!

21ST CENTURY OPPORTUNITIES

Last September, Secretary Veneman released Food and Agriculture Policy: Taking Stock for the New Century. This document provided guidance on future agriculture policy, and identified emerging challenges facing farmers and ranchers across the Nation. A key component dealt with the environment and natural resources, and highlighted policy options for meeting a breadth of conservation challenges including water quality and quantity. A central aspect of the conservation portion of that document was the proposition that market-based solutions should be developed and implemented as a means to achieve conservation goals. The document also pointed out that farmers and ranchers need voluntary conservation opportunities commensurate with the regulatory challenges they face.

Congress responded this year with the 2002 Farm Bill that provides for significant program authorities and funding levels to sustain past environmental gains, accommodate new and emerging environmental concerns, and to adopt a portfolio approach to conservation policies and programs. Secretary Veneman, in recent testimony before the Senate Committee on Agriculture, Nutrition, and Forestry, stated that “We are pleased with the strong conservation programs contained in the Farm Bill. The changes in the conservation policy support this Administration’s commitment to a voluntary approach and provide the Nation’s producers with a comprehensive portfolio of conservation options including cost-share, incentive, land retirement, and easement programs.”

For example, two provisions of the Farm Bill will substantially strengthen conservation efforts which complement Clean Water Act goals and objectives. Under the 2002 Farm Bill, funding for the Environmental Quality Incentives Program (EQIP) is increased to more than six times previously authorized levels. As a result, USDA will be able to implement a greater number of important conservation projects such as nutrient management and sediment control on an accelerated basis. In the area of wetlands, the popular Wetlands Reserve Program (WRP) was authorized by the 2002 Farm Bill for restoration and protection of an additional 1.25 million acres. This is a total land area roughly the size of the State of Delaware. Without question, the opportunities presented in the Farm Bill will lend greatly toward reduction of nutrients and sediments in water bodies as well as reversing wetland conversion on a national scale. The increased conservation funding may address natural resource priorities, such as impaired waterways or critical watersheds, allowing USDA to help advance many of the Clean Water Act’s objectives.

YEAR OF CLEAN WATER ACTIVITIES

In this Year of Clean Water, America’s Clean Water Foundation has coordinated a series of national events to focus public attention on the importance of clean water. USDA has participated in the planning of these events along with many other co-sponsors. USDA’s agencies have also conducted their own activities throughout the year to help publicize and inform the public of clean water benefits. We want to publicly applaud the efforts of America’s Clean Water Foundation and its President, Roberta Savage, for her tremendous job of conceiving and coordinating these many activities. We are pleased to have been a part of this celebration and we look forward to our involvement in this month’s events.

CLOSING

In closing, allow me to provide you with an observation by Aldo Leopold, the internationally respected scientist and conservationist who served for 19 years in the U.S. Forest Service (1909–1928) and later served on the faculty of the Department of Agricultural Economics at the University of Wisconsin. As you may know, Leopold espoused the notion of a land ethic and he said this:

“We shall never achieve harmony with land, any more than we shall achieve absolute justice or liberty for people. In these higher aspirations the important thing is not to achieve, but to strive.”

Regarding the Clean Water Act and its 30th Anniversary Celebration, I believe Aldo Leopold would suggest that we must continue striving to achieve the higher

aspiration of our clean water goals and to continue to help the public adopt a sound land ethic.

Thank you again, Mr. Chairman and members of the committee, for inviting USDA to participate in today's hearing. I would be pleased to respond to your questions.

STATEMENT OF ROBERT F. KENNEDY, JR., NATURAL RESOURCES DEFENSE COUNCIL

CLEAN WATER UNDER ATTACK

Mr. Chairman and members of the committee. It is an honor to testify before you today on the anniversary of the passage of the Clean Water Act of 1972. I am Bobby Kennedy and am testifying this morning on behalf of the Natural Resources Defense Council, the Waterkeeper Alliance, and the Clean Water Network. NRDC is a national environmental group that has a long history of working to protect our nation's waters through the Clean Water Act. Waterkeeper Alliance is a grassroots organization dedicated to preserving and protecting your waters from polluters. The Clean Water Network is a coalition of more than 1,000 groups supporting clean water from around the country.

Our nation is at a crossroads in its efforts to address water pollution, much as we were at a crossroads on Oct. 18, 1972 when the U.S Congress decided to override the veto of a then very popular president in order to protect the waters of the United States. Today, that law, the Clean Water Act, has been in place for exactly 30 years and has been the model for every subsequent environmental law. But the Clean Water Act is not just a model of an excellent environmental statute, its results have been demonstrated in improved water quality in rivers, lakes, and coastal waters across this country. It is ironic that we are celebrating the successes of the Clean Water Act today because at the same time we are trumpeting its environmental achievements, the Bush Administration is taking away the tools that made it successful. The Bush Administration is proposing or has already weakened requirements for treating raw sewage, cleaning up impaired waters, keeping solid wastes out of waters, protecting wetlands, and even for defining those rivers, lakes, wetlands, and other waters that are eligible for Federal protection at all. As it was in 1972, the course is clear. Our nation cannot afford to let our most precious resource—our waters—become increasingly polluted and dangerous. We need to reject the Bush Administration rollbacks and move ahead with the work of cleaning up our waterways.

OUR NATION'S WATERS BEFORE THE CLEAN WATER ACT

"[T]oday, the rivers of this country serve as little more than sewers to the seas. Wastes from cities and towns, from farms and forests, from mining and manufacturing, foul the streams, poison the estuaries, threaten the life of the ocean depths." These are the words uttered by Senator Edmund Muskie on November 2, 1971, during his introduction of the bill that would become the Federal Clean Water Act.¹ More than a generation has passed since passage of the Act, but it is important for those of you who remember what our waters used to be to pass on that knowledge to your children and grandchildren.

Before the passage of the Clean Water Act in 1972, clean water appeared headed for extinction.²

- In March of 1969 there was a blowout at a Union Oil Company located off the coast of Santa Barbara, California. This incident resulted in a release of gallons of oil blanketing more than 400 square miles of water with a six-inch thick layer of crude oil, and covering at least 30 miles of beach. Thousands of sea birds died and almost all of the fishing in the area was wiped out for several weeks;³

- There were record fish kills, including 26 million fish killed in Lake Thonotosassa, Florida;

- The annual commercial harvest of shrimp had dropped from more than 6.3 million pounds before 1936 to only 10,000 pounds in 1965;

- Industrial discharges of mercury into the Detroit River were at a rate of between 10 and 20 pounds per day, causing in-stream water quality to exceed by six times the Public Health Service limit for mercury;⁴

- In the 1970's most raw sewage was dumped into our rivers and lakes. At that time only 85 million people were served by any kind of sewage treatment plant.⁵

¹U.S. Government Printing Office, *A Legislative History of the Water Pollution Control Act Amendments of 1972*, 1253 (1973).

²R. Adler, et al, *The Clean Water Act: 20 Years Later* (1993).

³M. Graham, *The Morning After Earth Day: Practical Environmental Politics*, pp. 27-28. 1999; <http://brooklings.nap.edu/books/081573235X/html/index.html>.

⁴2 Congressional Research Service, *Legislative History of the Water Pollution Control Act of 1972* at 1253 (1973).

⁵Congressional Research Service. *Oceans & Coastal Resources: A Briefing Book*, Congressional Research Service Report 97-588 ENR. http://www.cnie.org/nle/crsreports/briefing_books/oceans/appendb3.cfm; <http://www.mtholyoke.edu/offices/comm/oped/browner.shtml>.

- Less than 10 percent of U.S. watersheds were characterized as unpolluted or even moderately polluted; and, utterly shocking,
- The Cuyahoga River in Cleveland, Ohio, burst into flames in June 1969 fueled by oil and other industrial wastes.

CONGRESS PASSES THE CLEAN WATER ACT

The resulting public outrage from these and other terrible incidents of pollution led to the Clean Water Act and paved the way for subsequent legislation. With overwhelming bipartisan margins in both houses of Congress, the Clean Water Act was passed over an initial veto by President Richard M. Nixon on October 18, 1972. In warning the representatives of the dangers of failing to override the President's veto, Representative Thomas "Tip" O'Neill from Boston stated, "Should we fail to act, future generations of Americans living with dirty, unsafe rivers and lakes would know where to squarely fix the blame with the Congress that refused to override the groundless objections of the President."⁶

CLEAN WATER ACT BEGINS TO PROTECT OUR NATION'S WATERS

The Clean Water Act is commonly viewed as one of the most successful environmental laws in America. In many ways, the Act truly did turn the tide on water pollution. We drastically reduced the percentage of our waters deemed unsafe for fishing and swimming, invested billions in sewage treatment plants and other technologies, and cut the rate of wetlands loss by three-fourths.

It has been estimated that, in 1972, 60–70 percent of America's lakes, rivers and coastal waters were not safe for fishing and swimming.⁷ According to the most recent Clean Water Quality Report to Congress, those numbers have dropped to 39 percent for rivers, 45 percent for lakes, and 51 percent for estuaries.⁸ Those numbers are still far too high, but without stringent regulation we will be back to 1972 statistics.

The present state of many of our lakes and rivers, when compared to their conditions in 1972, illustrates the Clean Water Act's effectiveness. For example, Lake Erie was proclaimed dead in 1970. The pollution had reached such high levels in Erie and other waterways in the Great Lakes system that it led to a ban on fishing in certain parts of the system. Now, 30 years after the passage of the Clean Water Act, the fish population of Lake Erie has improved significantly—and the numbers of fish—particularly walleye and bass have increased.⁹

The Hudson River has seen dramatic recovery since the 1960's. Back then, the River was considered an open sewer. Today, it is the only large river in the North Atlantic that retains strong spawning stocks of its entire collection of historical migratory species. These fish support recreational and commercial fisheries along the Atlantic coast worth hundreds of millions of dollars.¹⁰

During the 1960's and 1970's wastewater and industrial plants were discharging large amounts of harmful pollutants and nitrogen into Tampa Bay. The pollution damaged the bottom sediment and killed many organisms essential to a healthy ecosystem. Since then, thousands of acres of sea grass on the Bay floor have been recovered. An estimated 15 hundred acres of marsh and mangrove habitats have been restored, including 250 acres of tidal marshes that are critically important for fish.¹¹

Dramatic improvement in water quality is readily apparent in Boston Harbor. In the 1970's sludge was regularly dumped into it and the ecosystem was on the verge of biological death. Now, seals and porpoises swim off South Boston's Castle Island, lobsters are routinely caught and tourists can even take cruises through it.¹²

WATER POLLUTION CHALLENGES AHEAD

While overall water pollution levels have decreased dramatically over the past 30 years, recent data show a more troubling story. EPA just released its biennial survey of the quality of the nation's assessed waters, which shows for the first time since the passage of the Clean Water Act that water pollution levels are on the

⁶92 Cong. House Debates 1972, FWPC72 Leg. Hist. 15, LEXIS CIS Legislative Histories SourceFile.

⁷M. Kremer, *Clean Water Act 30th Anniversary*, www.surfrider.org/tempurl.com/makingwaves/makingwaves18-1/11.pdf

⁸U.S. EPA, *National Water Quality Inventory: 2000 Report*, Fact Sheet (Sept. 30, 2002), www.epa.gov/305b/2000report.

⁹From the website of the Joyce Foundation, *Cleaning Up Lake Erie*, www.joycefdn.org/articles/enviroarticles/9801cleaning.htm (Oct. 3, 2002).

¹⁰From the website of the Hudson Riverkeeper; www.riverkeeper.org (Oct. 3, 2002).

¹¹<http://clinton3.nara.gov/CEO/earthday/ch12.html>.

¹²<http://www.massnews.com/past-issues/other/envnews.html>.

rise.¹³ Worsening conditions are especially apparent for estuaries—13 percent more of which are too polluted to support their uses than just 4 years ago. Impairment of estuaries has profound ramifications for the environment and for the economy since they are nursery areas for many commercial and recreational fish species and most shellfish populations, including shrimp, oysters, clams, crabs and scallops.¹⁴

The number of beach closings and advisories is also increasing. In its annual beach report, *Testing the Waters*, NRDC found the number of beach closings and advisories has increased in 2001 by 19 percent over the previous year: 13,410 in 2001 compared with 11,270 in 2000.¹⁵ Nationally, beach closings and advisories have increased from 2000 in 1991 to more than 13,000 in 2001—more than six times as many closures and advisories than just 10 years ago.¹⁶ While much of that increase is due to better monitoring of beach water quality, that monitoring has increasingly found unsafe water quality conditions at our nation's beaches.

Overall, 44 percent of U.S. estuarine waters are degraded, according to the first National Coastal Condition report, released this past spring by EPA, NOAA, USGS and the U.S. Fish and Wildlife Service.¹⁷ The report also found that the overall score for eutrophic condition of estuarine waters is poor and increasing throughout much of the United States.¹⁸ Eutrophic conditions result from excessive nutrients in the waterbody and is usually expressed in overproduction of algae. Eutrophication depletes the water body of oxygen, making it unsuitable to support fish and other aquatic wildlife, and it kills submerged aquatic vegetation.¹⁹ The National Coastal Condition report projected that eutrophic conditions would worsen for 70 percent of U.S. estuaries by 2020.²⁰

Between 1993 and 2000 the percentage of the nation's lake acres and river miles under fish consumption advisories has increased steadily.²¹ River miles under advisory have increased from 2 percent in 1993 to 14 percent last year. Lake acres under advisory have increased from 8 percent in 1993 to 28 percent last year. Twenty-eight States currently have statewide advisories. One hundred percent of the Great Lakes and their connecting waters are under advisory. As of 2001, only one State in the country has no fish consumption advisories in place.²² There are fish consumption advisories for 71 percent of the coastline in the contiguous 48 States and for 82 percent of estuarine square miles.²³ A fish advisory warns the public that high levels of chemical contaminants have been found in local fish and shellfish and that eating the fish, especially in significant quantities, may not be safe.²⁴

The U.S. Commission on Ocean Policy, now halfway through an 18-month study, found that around 40,000 acres of coastal wetlands which provide spawning, feeding and nursery areas for three-fourths of U.S. commercial fish catches are disappearing each year.²⁵

CLEAN WATER ACT'S EFFECTIVENESS IN CLEANING OUR WATERS

While the Clean Water Act has been one of the most successful environmental laws ever, it has not yet been fully implemented or enforced.²⁶ It also does not adequately address all sources of water pollution, especially polluted runoff, which remains the largest source of water pollution in the Nation.²⁷ We need full implementation and enforcement of all CWA provisions and strengthening of those provisions that are not doing the job of protecting our waterways.

¹³U.S. EPA, *National Water Quality Inventory: 2000 Report*, T. Watson, "EPA Report Shows Water Quality May Be Stagnating," *USA Today* at 5A (Oct. 6, 2002).

¹⁴U.S. EPA, *National Water Quality Inventory: 2000 Report* at 25.

¹⁵S. Chasis and M. Dorfman, *Testing the Waters* at v (July 2002).

¹⁶*Id.*

¹⁷U.S. EPA, *National Coastal Condition Report* xvi (printed September 2001) (released April 2002) <http://www.epa.gov/owow/oceans/nccr/index.html>.

¹⁸*Id.* at xx.

¹⁹*Id.* at 10.

²⁰*Id.* at 36.

²¹www.epa.gov/waterscience/fish/advisories/factsheet.pdf.

²²*Id.*

²³*Id.* at xxii.

²⁴*Id.* at 14.

²⁵J. Heilprin, *Panel Finds U.S. Coastal Waters in Trouble*. Associated Press, www.nrdc.org/news/newsDetails.asp?nID=769.

²⁶U.S. Public Interest Group, *Permit to Pollute: How the Government's Lax Enforcement Of The Clean Water Act Is Poisoning Our Waters* (Aug. 6, 2002); <http://uspirg.org>; U.S. EPA, Office of the Inspector General, *Water Report: State Enforcement of Clean Water Act Dischargers Can Be More Effective*, ES i-iv (Aug. 2001).

²⁷U.S. EPA, *2000 National Water Quality Inventory Report*, Executive Summary at 3, <http://www.epa.gov/305b/2000report>.

A key element to the successes achieved to date is that, when it passed the Clean Water Act, Congress adopted a combination of techniques to revive the nation's waters:

- Protecting a broad range of water resources against despoiling or destruction. This protection applies broadly to rivers, lakes, coastal waters and wetlands.
- Protecting waters from industrial pollution by setting minimum technology-based standards for wastewater treatment that would become increasingly stringent over time.
- Ensuring that waters will be clean and safe to use by determining uses, such as recreation, aquatic habitat, and drinking water, and setting limits on pollutant discharges designed to meet those uses.
- Building municipal wastewater treatment plants to provide secondary treatment for all sewage.
- Requiring all discrete dischargers of pollutants (i.e., point sources) to obtain individual, tailored permits that clearly specify the discharge requirements necessary to prevent degradation of its receiving waters.
- Requiring States to identify all waters that are too polluted to be used safely, to determine how much pollutant loads need to be reduced to clean up those waters, and then to implement a cleanup plan.

Thus, most of the tools needed to effectively clean the nation's waters and were crafted by Congress 30 years ago. If these provisions are fully implemented as stated in this visionary Act, our nation could achieve the law's now long overdue goals of making all waters safe for fishing and swimming and ending the discharge of pollutants into waters.

We must fight to maintain adherence to these techniques and to continue to strive for achieving the goals of the Clean Water Act that Congress envisioned in 1972.

BUSH ADMINISTRATION ATTACKS ON THE CLEAN WATER ACT

Unfortunately, each one of these core concepts is under attack by the Bush Administration. In each case, the industry or industries that are required to reduce their water pollution discharges have been lobbying the Bush Administration to reduce protection for the environment. They have already been successful in derailing a number of clean water advances, broadening loopholes, and legalizing previously prohibited destructive practices. The rules and policies of the Bush Administration are rapidly undoing 30 years of progress and undermining the billions of dollars our country has invested in the effort to clean the waters.

Authorizing Raw Sewage Discharges

We did not have to wait long for the Bush Administration attacks on clean water to begin. The first attack came on Inauguration Day when President Bush's Chief of Staff announced an immediate moratorium on all recently adopted regulations. A proposed regulation to control raw sewage discharges and to require the public to be notified when overflows occur was withdrawn for further review by EPA. More than a year and a half later, EPA is still reviewing it and considering alternatives to that proposal that would authorize permanent discharges of raw and inadequately treated sewage.

Each year the U.S. experiences about 40,000 overflows of raw sewage and garbage—such as syringes, toxic industrial waste, and contaminated stormwater—into its rivers, lakes, and coastal waters. And each year about 400,000 sewage backups pollute the basements of America's homes. These overflows expose communities to a host of deadly diseases and could be a particularly virulent means of transmission for a waterborne bioterrorist threat.²⁸ EPA has estimated that between 1.8 and 3.5 million Americans become sick every year just from swimming in waters contaminated by sanitary sewer overflows.²⁹ Researchers from the Centers for Disease Control (CDC) have estimated that as many as 940,000 Americans become ill and 900 die from waterborne infections each year, many of which are caused by discharges of raw or inadequately treated sewage.³⁰ These overflows contaminate drinking water and cause beach closings, fish kills, shellfish bed closures, and gastro-

²⁸ *Id.*

²⁹ U.S. EPA, Notice of Proposed Rulemaking, National Pollutant Discharge Elimination System (NPDES) Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows (Jan. 4, 2001) (note: there are no official page citations available since this proposal was not published).

³⁰ J. Bennett, et al., *Infectious and parasitic diseases*, in *Closing The Gap: The Burden Of Unnecessary Illness* 102 (Robert Amler & H. Bruce Dull eds., Oxford University Press 1987).

intestinal and respiratory illnesses. Sewage-infested waters pose the greatest threat for children, the elderly, and those with weakened immune systems.³¹

Sewer overflows can result in illness and, in extreme cases, death. Such was the case in the small town of Cabool, Missouri in 1990, when an overflow was linked to a pathogenic strain of *E. coli* that killed four people, hospitalized 32 and caused diarrhea and other problems for 243 more residents.³² In 1988, sewage overflows in Ocoee, Florida periodically flooded a mobile home park during heavy rains and caused occasional outbreaks of disease, including 39 cases of hepatitis A. Two years ago, a 34-million gallon spill in San Diego continued unabated for a week, unmonitored. By the time it was finally discovered and stopped, solid sewage covered miles of beaches.³³

The Environmental Protection Agency rule that the administration stayed would help keep bacteria-laden raw sewage discharges out of our streets, waterways and basements, and make public reporting and notification of sewer overflows mandatory. The proposed rule would also help protect the public from getting ill from exposure to raw sewage, would improve capacity, operation and maintenance of sewer systems, and would cost only \$1.92 per household per year.

The Association of Metropolitan Sewerage Authorities (AMSA), which represents sewer operators, is lobbying the administration to abandon portions of the rule, despite having already agreed to those provisions in a 5-year Federal advisory committee process. AMSA favors a rule that would allow its members to continue to discharge raw sewage so long as they implement a capacity, management, operation, and maintenance program. AMSA argues that the Clean Water Act's requirement that all sewage be treated before it is discharged is too expensive. Congress rejected that argument in 1972, and it has no more basis today. Investment in our sewer systems is a sound investment in cleaner water and better health.

The Bush Administration proposal, if ever issued, is likely to be inconsistent with the CWA goal of providing effective treatment for all sewage. While these rules sit on the chopping block, raw sewage continues to flow into our waters, and Americans are still denied even rudimentary public notice of such contamination in the waters from which they drink and where they swim and fish. As the late Senator Edmund S. Muskie said in 1971, "The fact of raw sewage floating in our river outrages us."³⁴ Thirty years later, it still outrages us and still endangers us.

New Net Loss of Wetlands

For more than a decade, the cornerstone of America's approach to wetlands protection has been a policy that calls for "no net loss" of wetlands—a policy that originated with the first Bush Administration. However, over the last year, the Bush Administration has adopted two major changes to wetlands protection policy that will result in more wetlands being filled and destroyed, and, until reversed, have effectively eliminated the possibility that the Nation can achieve the no net loss goal.

In October 2001, with no public notice or opportunity for comment, the Corps of Engineers reversed the long-standing policy no net loss policy by issuing new "guidance" that dramatically weakened standards for wetland "mitigation."³⁵ The use of mitigation to try to make up for wetland losses is already a controversial practice that is often misused to justify the destruction of existing wetlands in exchange for a promise to create new wetlands. The new guidance makes this situation much worse by allowing wetlands to be traded off for dry upland areas that do not serve the same functions as wetlands. As our natural wetlands are traded away for uplands, the net loss of wetlands will increase. The result will be the loss of thousands of acres of wetlands each year, resulting in less flood protection, less water cleansing, and less fish and wildlife habitat. Other Federal agencies subsequently objected, but no guidance to overturn this misguided Corps guidance has been issued.

Despite the President's Earth Day 2001 pledge to preserve vital wetlands resources, his administration also relaxed a key provision of Clean Water Act regulations that govern development and industrial activity in streams and wetlands, the nationwide permit program. The Corps loosened these permit standards to make it far easier for developers, mining companies, and other industries to destroy more streams and wetlands without any notice or opportunity for the public to comment. EPA and the Fish and Wildlife Service opposed the changes, but the changes were put into place nonetheless. Developers and mining interests that brought suit

³¹ U.S. EPA, Notice of Proposed Rulemaking, National Pollutant Discharge Elimination System (NPDES) Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows (Jan. 4, 2001).

³² *Id.*

³³ T. Rodgers and S. La Rue, "City Lacks Early Warning Systems for Spills" at A1, San Diego Union-Tribune (Mar. 1, 2000).

³⁴ A *Legislative History of the Water Pollution Control Act Amendments of 1972* at 1263.

against the previous set of nationwide permits have been urging the Bush Administration to allow more wetlands destruction for development, mining, and other purposes. So far, their voice appears to have outweighed those of environmental and natural resources experts and the public, which supports strong protections for the nation's water resources.

Wetlands play a critical role in protection of the environment and public health. They absorb floodwaters, filter pollution, recharge groundwater aquifers and provide habitat for hundreds of plant and animal species, including many that are threatened or endangered.

Since the 1800's, the conterminous U.S. has lost over half of its wetlands, and the Nation continues to lose at least 60,000 acres of wetlands each year. This rate of loss will certainly increase as a result of rollbacks of wetland protections by the Bush Administration. These changes will mean greater destruction of wetlands, with less opportunity for notice and comment by the public. The inevitable result will be increased flooding, more water pollution, and greater loss of wildlife habitat.

Turning our Waters into Waste Dumps

Allowing masses of industrial wastes to be dumped into streams, lakes, rivers, and wetlands is contrary to the central purpose of the Clean Water Act: to restore and maintain the integrity of the nation's waters. Nothing is more inconsistent with that goal than allowing industries to bury and permanently destroy waters under huge piles of industrial debris.

Yet, on May 3, 2000 the Bush Administration eliminated a 25 year-old Clean Water Act regulation prohibiting the Army Corps of Engineers from allowing wastes to be used to bury and destroy waters of the United States.³⁵ The rule change was motivated by administration efforts to legalize the practice of mountaintop removal mining, where coal companies blast the tops off of mountains and huge volumes of waste are dumped into nearby valleys, burying streams and wetlands and killing all aquatic life. Already, in West Virginia and Kentucky alone, well over 1000 miles of streams have been authorized for destruction by mountaintop removal waste fills.

As if this were not bad enough, the Bush proposal would not stop at the edge of the Appalachian coal fields, but would allow the Corps to issue permits to all kinds of industries to dump wastes like hardrock mining waste, construction and demolition debris, and other solid industrial wastes to bury wetlands, streams, rivers, coastal waters, and other waterways throughout the country.

The polluters—coal mining companies, gold and copper mining companies, and other industrial polluters—made these rule changes to allow them to dump their wastes in waters a top priority. According to government documents, these industries met with EPA and other Bush Administration officials to pressure them to rewrite clean water rules according to industry specifications. The administration acquiesced, and the final rule gives the Corps authority to permit any industry to bury any waterway under piles of coal mining waste, hardrock mining tailings, construction and demolition debris—almost any sort of solid waste.

Allowing waters to be buried under piles of waste permanently destroys those waters. The Clean Water Act was adopted in 1972 to protect our rivers, streams, lakes, wetlands, and coastal waters. The very first sentence of the law declared this goal: "It is the objective of this chapter to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Turning waters into waste dumps is the very kind of act that the Clean Water Act was passed by Congress to prevent.

Derailing Cleanup of Polluted Rivers, Lakes, and Coastal Waters

Thirty years after passage of the Clean Water Act, the overwhelming majority of the population—218 million Americans—lives within 10 miles of a polluted river, lake, or coastal water.³⁶ These waters are not safe for fishing, swimming, boating, much less as drinking water sources or for other basic uses. The polluted waters include approximately 270,000 miles of rivers and streams, 7.7 million acres of lakes, and 15,000 square miles of estuaries that have been assessed and found to be impaired—polluted by discharges of sediments, nutrients, and pathogens, as well as pesticides and other toxic chemicals.³⁷

In 1972, the drafters of the Clean Water Act created a program to ensure that where the law's technology requirements limiting pollution from factories, sewage plants, and other "end-of-the-pipe" pollution sources were not enough to result in

³⁵ 67 Fed. Reg. 31129 (May 9, 2002).

³⁶ U.S. Environmental Protection Agency, *Atlas of America's Polluted Waters*. EPA 840-B-00-002. Washington, DC. 2000.

³⁷ U.S. EPA, *National Water Quality Inventory: 2000 Report*, <http://www.epa.gov/305b/2000report>.

clean, safe water, additional steps would have to be taken. That program is the “Total Maximum Daily Load” cleanup program. The cleanup program requires that States and EPA identify rivers, lakes, and coastal waters that are not protected enough by the Act’s technology requirements and then develop a cleanup plan (known as a TMDL) for each waterbody.

The cleanup plan calculates the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, sets a pollution “cap” or load limit, then allocates the total pollutant load reductions among all point and nonpoint dischargers of the pollutant to ensure that the total cumulative amount of the pollutant discharged will not exceed the limit.

Now, the Bush Administration has said that it plans to “redesign” the Clean Water Act’s program for cleaning up these polluted waters. On August 7, 2002, the EPA announced that it intends to rewrite the rules of the Act’s cleanup program. Bush Administration strategies for crippling the cleanup of polluted waters include proposals to:

- Weaken standards for classifying waterbodies and allow currently polluted waters to be re-defined as clean—at least on paper;
- Allow States to rely upon speculative and unenforceable reductions from nonpoint sources as a basis for classifying waters as “likely to achieve” water quality standards and, therefore, avoid doing a TMDL cleanup plan;
- Allow increased discharges from point sources based upon those same speculative, unenforceable future reductions from nonpoint sources; and
- Curtail EPA’s oversight of the States’ implementation of this vital program of the Clean Water Act.³⁸

Current regulations for implementing the cleanup program were adopted in 1985 by the Reagan Administration, then amended in 1992 under the previous Bush Administration. These rules have been supplemented by various guidance documents and many Federal court opinions interpreting the EPA’s and States’ responsibilities under the cleanup provisions of the statute. If finalized, the Bush Administration’s proposal will drastically weaken these longstanding rules and ensure that dirty waters remain polluted—if not become more so—for decades to come.

Rather than rolling back another core Clean Water Act program, the Bush Administration should focus on ensuring that the States properly implement the current TMDL cleanup program. Congress established the TMDL program to clean up America’s waterways. It is the duty of the States and EPA to implement this program and restore the nation’s waters for safe use by all Americans. We have no hope of ever attaining this goal under this Administration’s aggressive attack on the Act.

CUTTING TRIBUTARIES, STREAMS, AND WETLANDS OUT OF THE CLEAN WATER ACT

If all of these threats were not enough, the Bush Administration recently announced the largest potential roll back of CWA protections yet. Instead of demonstrating its commitment to protecting all the waters of the United States and strengthening the effectiveness of this most important law, the administration has instead decided to propose new regulations that could remove many waters from coverage under the Clean Water Act.

Testifying before Congress on September 19—just a month short of the 30th anniversary—EPA and U.S. Army Corps of Engineers officials announced that they now “question” whether the Act should apply to non-navigable tributaries of navigable waters, intermittent and ephemeral streams, man-made watercourses connecting these waters, and wetlands adjacent to such waters—waters that have been undeniably protected by Federal law for decades. The rules now questioned by the Bush Administration have, since 1975, explicitly defined waters of the U.S. broadly in order to implement the Clean Water Act’s goal of restoring and maintaining the “chemical, physical, and biological integrity of the Nation’s waters.” They told the House committee that the administration will initiate a rulemaking to change the regulatory definition of “waters of the United States” because of these questions.

This was a stunning pronouncement. If the administration removes Federal Clean Water Act protection for non-navigable tributaries of navigable waters, including intermittent and ephemeral streams, man-made watercourses connecting these waters, or wetlands adjacent to these waters, this proposal would reverse almost 30 years of national policy to protect the nation’s waters and has grave implications for the control of pollution, the health of communities, the protection of habitat and

³⁸U.S. EPA powerpoint presentation to AMSA (July 19, 2002); U.S. EPA powerpoint presentation to the Association of State and Interstate Water Pollution Control Administrators (March 10, 2002).

flood control efforts. Reopening the definitions of which waters should be included in the Clean Water Act will undermine many rules and court decisions that have protected our nation's waters for decades.

Of course, Congress enacted the Clean Water Act, and only Congress can change it, so any attempt to limit the scope of the act by regulation would undoubtedly be the subject of a vigorous legal challenge. But it is important to recognize the significance and audacity of what the administration is proposing here. To define certain waters as outside the scope of the Act means those waters would not be subject to *any* of the law's protections: the prohibition on discharging pollutants, the requirements to get a permit before discharging effluent or fill material, or the requirement that impaired waters be listed and plans to clean them up written.³⁹ For these excluded waters, there would be no Federal Clean Water Act.

There is no scientific basis for excluding any of these waters from Federal protection. In fact, the vast body of scientific evidence teaching us how hydrologic systems function emphasizes the connectivity of waters, how affecting one part of the system affects the whole. Wetlands, intermittent and ephemeral streams, and tributaries are integral parts of watersheds that affect the health of all water systems, even those that are seemingly "isolated." These waters drain into larger waterbodies and groundwater sources. Pollution or fill dumped into these waters destroys important water resources and eventually ends up in larger lakes and rivers.

Administration officials claim that the proposed rulemaking is a response to a January 2001 Supreme Court decision concerning so-called "isolated" wetlands and subsequent lower court rulings concerning wetlands. However, the Supreme Court ruling at issue, *Solid Waste Agency of Northern Cook County vs. Army Corps of Engineers*,⁴⁰ only struck down the use of a policy under which the Corps of Engineers extended jurisdiction to water bodies based on their use by migratory birds. Neither the Supreme Court ruling nor the majority of lower court rulings have held that any regulatory weakening of the Clean Water Act's regulatory definition of "waters" is warranted, let alone the sweeping proposal announced by the Bush Administration.

In fact, the Department of Justice (DOJ) has argued in nearly two dozen court cases since the Supreme Court's January 2001 decision that the current definition of "waters of the United States" is not only legal and reasonable, but that without broad protection of all waters, the goals of the Clean Water Act cannot be met.

For example, on August 30, 2002 the DOJ filed a brief in the case of *U.S. v. Newdunn*, on appeal to the Fourth Circuit, which stated:

Federal regulations reasonably construe the [Clean Water Act] term "waters of the United States" to include wetlands adjacent to all tributaries, not just primary tributaries, to traditional navigable waters.

In criticizing the lower court's ruling, the DOJ's *Newdunn* brief argues that any other interpretation of the regulations would be inconsistent with the Act itself:

The court fails to explain why or how Congress could have intended to regulate discharges into all primary tributaries but not secondary tributaries, regardless of their significance to the traditional navigable waters into which they flow, *directly or indirectly*.

The regulations have consistently construed the Act to encompass wetlands adjacent to tributaries to traditional navigable waters—be they primary, secondary, tertiary, etc.—since 1975, a construction that comports with *Congress's intent to control pollution at its source and broadly protect the integrity of the aquatic environment*. (Emphasis added.)

Similarly, a July 2002 brief for the United States in *U.S. v. Rapanos* before the Sixth Circuit Court of Appeals argues that:

To exclude non-navigable tributaries and their adjacent wetlands from the coverage of the Act would disserve the recognized policies underlying the Act, since pollution of non-navigable tributaries and their adjacent wetlands can have deleterious effects on traditionally navigable waters.

Despite the Justice Department's arguments, the Bush Administration's response to the narrow loophole created by the SWANCC ruling is to tear open the entire Clean Water Act. No President in the last 30 years—Republican or Democrat—has ever proposed such a significant cutback to Clean Water Act protections.

³⁹ 33 U.S.C. § 1311, 1342, 1344, and 1313(d).

⁴⁰ 531 U.S. 159 (2001).

CONCLUSION

The administration's attacks on the Clean Water Act come at a time in our country's history when national security concerns are at new high. The administration is seizing upon these risks as an excuse to relax the environmental laws—essentially equating environmental protection with increased threats to our security. This administration's nexus between the environment and our nation's security could not be further from reality. A country without clean water to drink, without clean water in which to swim, and without healthy fish is a country at grave risk.

Every living creature on this planet depends on water for its survival on water. Thirty years ago, this Congress understood this basis premise of life and bravely stood up to industry opposition and crafted the wisdom of the Clean Water Act. Sound, judicious enforcement of this law has protected our public health and the environment and secured a healthier, safer future for all Americans. This administration has turned its back on that wisdom. If we do not halt this reversal, we will be exposed to long-term threats to the health and welfare of the environment, the citizens of this country and our society.

STATEMENT PAUL PINAULT, EXECUTIVE DIRECTOR, NARRAGANSETT BAY COMMISSION,
AND PRESIDENT, ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES (AMSA)

INTRODUCTION

Good morning Chairman Jeffords, Senator Smith, members of the committee, and distinguished guests. My name is Paul Pinault. I am Executive Director of the Narragansett Bay Commission in Providence, Rhode Island and President of the Association of Metropolitan Sewerage Agencies (AMSA).

It is an honor for me to be here today to represent AMSA's membership of 280 publicly owned treatment works across the country. As environmental practitioners, we treat more than 18 billion gallons of wastewater each day and service the majority of the U.S. population.

The success of the Clean Water Act is due, in large part, to the hard work, ingenuity and dedication of local wastewater treatment officials. In fact, it has been 32 years since a group of public wastewater officials banded together and founded AMSA. From the early 1900's, municipal governments have provided the majority of financial support for water pollution control.

In the early days, cities financed and built collection systems that conveyed wastewater to primary treatment facilities. Eventually, outbreaks of cholera and typhoid and the decline of fish populations led to the passage of the 1948 Water Pollution Control Act and the first Federal funding program that would help cities address the enormous challenge of treating billions of gallons of wastewater. Then, on June 22, 1969, Ohio's Cuyahoga River became engulfed in flames, a sign that our country's water quality was in crisis. The stray spark that ignited the oil and debris on the Cuyahoga also lit a fire under Federal lawmakers to strengthen the Federal water quality program. The result was the enactment of the Clean Water Act of 1972.

Mr. Chairman, America's greatest water quality improvements were made during the 1970's and 1980's when Congress boldly authorized and funded the Construction Grants Program, providing more than \$60 billion for the construction of publicly owned treatment plants, pumping stations, and collection and interceptor sewers. The Construction Grants Program was directly responsible for the improvement of water quality in thousands of rivers, lakes, and streams nationwide. As our waters once again became fishable and swimmable, recreation and tourism brought jobs and revenue to local economies.

Unfortunately, the Federal commitment to fund continued water quality improvements declined drastically with the end of the grants program and the implementation of the 1987 amendments to the Clean Water Act.

As Federal funds dramatically declined in the 1990's, the complexities of our challenges and the costs of implementing regulations continued to rise exponentially. While we, as public agency officials, consider ourselves America's true environmentalists who have cleaned-up and restored thousands of the nation's waterbodies, our progress has been slowed by this decline in the Federal financial commitment.

Over the past year, this committee has received substantial testimony that has documented the coming funding crisis in the wastewater industry. As the measurable gap between projected clean water investment needs and current levels of spending continues to grow, local ratepayers will be unable to foot the bill for the costs associated with increasingly stringent requirements of the Clean Water Act. In a report entitled "The Clean Water and Drinking Water Infrastructure Gap Anal-

ysis" that was released last week, EPA estimated the 20-year gap for clean water could be as high as \$442 billion.

At the Narragansett Bay Commission, an estimated \$471 million is needed for the completion of current capital projects. Our average cash expenditures are expected to be \$100 million annually. We anticipate receiving approximately \$60 million a year from Rhode Island's State revolving loan fund, leaving an annual funding "gap" of \$40 million.

Mr. Chairman, Senator Smith, and members of the committee . . . I would like to take this opportunity to thank you for working with AMSA this year on important legislation that would significantly increase the authorized levels of funding under the Clean Water Act.

Unfortunately, the world has changed significantly from when this process began with a series of hearings in 2001. At that time, AMSA had targeted the Federal budget surplus as a logical source of funding to increase the Federal investment in wastewater infrastructure. In light of our current budget deficit and the continued costs associated with our nation's defense, we believe that the authorized levels of funding proposed in S. 1961 and S. 2813 would not be available to appropriators out of the general revenue fund for many years to come.

As a result, AMSA is exploring alternative, dedicated sources of revenue to fund future water quality improvements.

Our municipal wastewater treatment systems are critical pieces of national infrastructure and, as such, should be financed through a long-term, sustainable, and reliable source of Federal funds. Although operating efficiencies and rate increases can provide some relief, they cannot and will not be able to fund the current backlog of capital replacement projects plus the treatment upgrades that will be required in the years to come.

Federal support for wastewater infrastructure is critical to safeguard the environmental progress made during the past 30 years under the Clean Water Act. As water pollution control solutions move beyond political jurisdictions to a broader watershed approach and as we address a wider array of pollutants and pollution sources, the national benefit of improved water quality will more than justify the larger Federal contribution.

As we look to the future, we see that the challenges facing the leaders of today's wastewater treatment agencies include polluted runoff from every source imaginable containing billions of pounds of soil, manure, fertilizer, farm and lawn chemicals, oil and grease, nutrient and toxic contaminants, and other pollutants. Nonpoint source pollution, along with the challenges posed by combined and sanitary sewer overflows and stormwater system discharges, are going to cost this country billions of dollars and take several decades to control. In a March 2002 interview with the Christian Science Monitor, EPA Administrator Christine Whitman said, "I think water is going to be the biggest environmental issue that we face for the 21st century in both quantity and quality."

The "quality" part of that challenge, Mr. Chairman, will fall squarely on the shoulders of local wastewater treatment officials. As we strive together to make further progress under the Clean Water Act, it is imperative that we create a new Federal funding program to finance today's infrastructure needs as well as the innovative solutions that will be required to control future water quality problems.

On behalf of AMSA's members, we look forward to working with you to solve these problems together. The bipartisan nature of this committee over the 30-year history of the Clean Water Act has undoubtedly contributed to the Act's success. Thank you for the opportunity to present our views to the committee and we look forward to your participation in the celebration of the 30th anniversary of America's Clean Water Act.

RESPONSES OF PAUL PINAULT TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

OUTDATED TMDL RULE MUST BE REVISED

Question 1. In a letter to EPA Administrator Whitman on the draft TMDL rule, AMSA described the 1992 rule on TMDLs as "broken" and urged the EPA to proceed with a new rule. Why do you believe that the Administration's draft TDL rule is beneficial to the municipal wastewater community?

Response. AMSA supports the Administration's efforts to revise the existing total maximum daily load (TMDL) regulations. We have consistently advised EPA that the existing regulations are inadequate and do not support the large number of TMDLs which states will be required to develop and implement.

What is needed is a realistic regulatory format which establishes a fair and equitable allocation among pollution sources, accounts for and remedies the current paucity of reliable water quality information upon which TMDLs and listing decisions are based, enables States to adapt TMDLs over time with advances in data and modeling information, streamlines the current listing and de-listing process, and promotes the review and revision of State water quality standards early in the process. The decade-old 1992 regulations leave many of these critical issues unaddressed. As a result, States lack sufficient guidance as to EPA's expectations and permittees in the NPDES program, by default, assume all of the risk and a disproportionate amount of the burden in the faulty allocation process.

To date, AMSA has not had the opportunity to review the draft proposed regulations and we are unable to elaborate in detail those provisions which are or will be acceptable to the municipal wastewater community. At the same time, EPA staff have publicly informed AMSA and other stakeholder groups about the changes being considered by the Agency. Although AMSA has not reviewed the proposed rule changes, we are supportive of the following concepts that may be under consideration:

- Integrated 305(b)/303(d) reports
- New listing categories (no listing of "threatened" waters)
- Greater reliance on States for implementation and planning
- Less aggressive EPA permitting role
- Adaptive implementation—encouraged through CPP

The following are among a longer list of unresolved issues and are areas of concern for AMSA in a possible revised proposal:

- The standard for non-point source load allocations
- Specific allocations for nonpoint sources
- Review and revision of Water Quality Standards not tied to TMDL development
- Pre-TMDL permitting
- TMDLs still required for waters impaired by pollutants not amenable to attainment of water quality standards via a TMDL (e.g., legacy pollutants, air deposition, CSOs, etc.)
- No provisions to ensure that TMDLs will be higher quality documents/plans

AMSA members are the daily practitioners responsible for achieving the goals of both the TMDL program and the Clean Water Act. As water quality experts, AMSA's members will continue to provide expert input into the development of an equitable and updated TMDL rule.

NON-POINT SOURCE CONTROL CRITICAL TO CWA SUCCESS

Question 2. As you know, non-point source pollution remains a significant source of impairment for America's waters. How would you frame a policy to address non-point pollution?

Response. Water quality improvements over the past 30 years are a direct result of municipal and industrial point source programs designed to achieve technology-based treatment standards and water quality standards set for individual water bodies. As the question states, a significant number of our nation's waters remain impaired. In fact, according to the U.S. Environmental Protection Agency (EPA), after 30 years of the Clean Water Act, 40 percent of U.S. waters remain polluted—largely by non-point source pollution.

Industrial and municipal point sources are easily identified and highly regulated facilities that are required to treat wastewater before it is discharged into receiving waters. Point sources are strictly controlled by the Clean Water Act, which forbids any discharge to U.S. waters unless regulated by a permit. Discharges without permits are punishable by fines or imprisonment, and wastewater quality is continually monitored and reported to State and Federal regulators who ensure that water quality is protected.

Water pollution from nonpoint sources is preventing the country from realizing its full clean water potential—high quality drinking water, teeming fisheries and wildlife habitat and expanded recreational opportunities. According to EPA, agriculture is responsible for degrading 60 percent of the country's impaired river miles and half of the impaired lake acreage. Non-point source pollution closes beaches, contaminates or kills fish, destroys wildlife habitat and pollutes drinking water. The current mix of voluntary, incentive-based programs to reduce non-point source pollution have not shown the type of results that are desperately needed to reach America's clean water goals.

As a logical starting point, AMSA recommends that the proposed revisions to the total maximum daily load program (TMDL) adopt proportionate share responsibilities for the allocation of pollutant loading reductions to all contributing sources.

The new watershed rule should address the fact that there are no Federal statutory or regulatory criteria on how loading reductions shall be apportioned between various point and nonpoint sources. AMSA also believes that States must carefully craft regulations and procedures regarding the proper apportionment of loading reductions.

In addition, States must be required to establish enforceable requirements for the control of all nonpoint sources of pollution within impaired §303(d) listed watersheds. Furthermore, the waste load allocations (WLAs) for nonpoint sources must be delineated in TMDLs in sufficient detail so that all sources (including land use individuals) understand their pollutant contributions, their required reductions, and the control measures they must implement.

Another critical but overlooked element in the non-point source reduction debate is the huge amounts of cash local governments are spending to meet tough Clean Water Act requirements. The Act requires cities, towns and counties to reduce wet weather flows and to bring impaired waters into compliance with State and Federal water quality standards. But many communities across the country have no response when their citizens ask, "Why spend all this money when the bulk of the problem lies elsewhere?"

Put in perspective, urban flows are a part of the country's overall water quality problems but do not represent the most persistent threat. Although local governments will spend billions of dollars to meet the Act's requirements, they are powerless to address the most pervasive problem in most watersheds: nonpoint sources that seriously pollute waters. With gaps in the law, gaps in our economic and scientific data, lack of funding and no consistent, comprehensive mechanisms for monitoring and regulating those responsible for non-point source pollution, many communities may be held hostage by someone else's pollution.

Stronger laws and regulations, increased funding, and further research aimed toward controlling non-point source pollution are essential. Without a comprehensive national plan that incorporates all of these elements, further water quality gains will go unrealized. When it comes to the nation's water quality, it boils down to two basic issues: equity and priorities. Where equity is concerned, Americans strongly feel that whoever makes a mess should clean it up. And, as for priorities, most would agree that to complete the job the Clean Water Act started, we should target the biggest remaining problem—non-point source pollution—with a combination of better scientific data, new laws, tougher regulations, and increased funding. The reason is simple. Fair, priority-driven, holistic approaches to control non-point source pollution will markedly improve water quality nationwide at a lower cost to our communities.

RESPONSE OF PAUL PINAULT TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

CLEAN WATER CRITICAL TO HEALTHY LOCAL ECONOMIES

Question 1. You cited during the hearing a direct relationship between waters that are fishable and swimmable to the economy and job creation. Throughout my career, I have fought to improve Lake Erie's water quality, and I have seen firsthand the economic benefits of the Lake's revival. Has your Association or do you know of any studies that quantify the economic impact of water quality on our country?

Response. As Senator Voinovich's question acknowledges, investments in water and wastewater systems pay substantial dividends to the environment, public health, and the economy. It is well documented that municipal wastewater treatment plants prevent billions of tons of pollutants each year from reaching America's rivers, lakes, and coastlines. In so doing, they preserve natural treasures such as Lake Erie.

Clean water supports a \$50 billion a year water-based recreation industry, at least \$300 billion a year in coastal tourism, a \$45 billion annual commercial fishing and shell fishing industry, and hundreds of billions of dollars a year in basic manufacturing that relies on clean water. Clean rivers, lakes, and coastlines attract investment in local communities and increase land values on or near the water, which in turn, creates jobs, add incremental tax base, and increase income and property tax revenue to local, State, and the Federal Government.

In Senator Voinovich's region, in 1995, the U.S. Fish and Wildlife Service (FWS) reported that participants in the fishing industry in the U.S. portion of the Great Lakes generated about \$2.22 billion in sales to local businesses and that the sport fisheries industry represented \$4.4 billion in annual economic activity. Additionally,

the FWS reported that about 75,000 jobs are supported by Great Lakes sport fisheries.

Per your request, you will find more details on the economic impact of clean water in Chapter 1 of *Clean and Safe Water for the 21st Century* by the Water Infrastructure Network, which is available for downloading at: <http://www.amsa-cleanwater.org/advocacy/winreport/winreport2000.pdf>. At the end of Chapter 1 you will find the list of footnotes. The list includes additional reports that contain data on the value of clean water to our nation's economy.

This information, while helpful, falls far short of conveying the true role of clean water in America's economic development and the recurring 'real' value of clean water to citizens of the United States. Simply put, our nation would not, could not, and will not thrive without clean water.

CLEAN WATER CHALLENGES IN THE 21ST CENTURY

Question 2. What are some of the specific challenges that we face in the 21st century and how best can we hope to address them? What programs have worked the best in getting the biggest bang for our buck in improving water quality?

Response. Too often we forget that with the exception of the interstate highway system, the biggest public works investment in America in the 20th century was in water and wastewater infrastructure. The value of that investment must be protected for future generations in the 21st century.

The importance of wastewater infrastructure was well understood in the late 1960's as the Nation watched the quality of its waters decline precipitously and chose in the 1972 Clean Water Act to spend Federal tax dollars to reverse this trend. A large number of publicly owned treatment works (POTWs) built secondary and advanced treatment capabilities as a result of the EPA's Construction Grants Program. According to EPA's 2000 report entitled "Progress in Water Quality", a total of \$61.1 billion (\$96.5 billion as constant 1995 dollars) was distributed to municipalities through construction grants from 1970 to 1995. Not coincidentally, the greatest gains in water quality also were realized under the Federal Construction Grants Program.

Adequate financial resources to States, cities, and communities are the most essential element to maintaining our nation's wastewater infrastructure. The Clean Water Act (CWA) amendments of 1987 created a new phase of clean water funding by replacing the Federal Construction Grants Program with the Clean Water State Revolving Fund Loan Program (SRF). Since 1980, according to studies by both the U.S. Environmental Protection Agency (EPA) and the private sector, Federal contributions have declined by 75 percent in real terms and today represent only about 10 percent of total capital outlays for water and wastewater infrastructure and less than 5 percent of total water and wastewater outlays. Local governments currently assume more than 90 percent of water infrastructure construction costs in the form of expensive bond issuances—municipal debt—and increased water and sewer bills.

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.

When funds for the repair, replacement and rehabilitation of pipes are unavailable and projects are deferred, cracks, leaks and failures become more frequent. Additional costs then are incurred to remediate the resulting environmental and related economic impacts (i.e. beach closures, etc. can lead to significant losses for seasonal, localized economies). The failed pipes also become more costly to repair. Clearly, a long-term, sustainable, and reliable source of Federal funding for clean water construction projects would prevent the additional costs associated with failures, safeguard the environment, protect public health, and sustain local economies.

As America's economy continues to slow and unemployment increases, as the backlog of infrastructure projects grows and sewer rates increase, a Federal investment in public wastewater infrastructure would be a sound investment. For every \$1 billion invested in infrastructure, tens of thousands of jobs are generated. Moreover, these investments yield significant short-term as well as long-term benefits in the form of improved efficiencies, security, safety and reliability.

Among the many specific clean water challenges of the 21st century, the most costly will be controlling urban wet weather flows. With 40 million Americans being served by combined sewer systems and an estimated 40,000 backups of sanitary sewers each year, the challenge of the decade for many wastewater treatment agencies will be how to pay for the needed improvements in these systems to bring them into compliance with EPA rules and regulations.

The most effective investment that the Federal Government can make in order to improve water quality is direct funding for municipal capital programs.

STATEMENT OF ROBERTA HALEY SAVAGE, PRESIDENT,
AMERICA'S CLEAN WATER FOUNDATION

Mr. Chairman and members of the committee: I am Robbi Savage, the President of America's Clean Water Foundation (ACWF) and the national coordinator for the Year of Clean Water: The Commemoration of the 30th Anniversary of the Clean Water Act.

America's Clean Water Foundation was established in 1989 to coordinate the celebration of the twentieth anniversary of the passage of the Clean Water Act. The Foundation's Board of Governors was, at that time, co-chaired by the House and Senate Floor Leaders of the 1972 statute: Senator Edmund Muskie, Senator Howard Baker, Representative John Blatnik, and Representative William Harsha.

These environmental statesmen were all personally and actively involved in the Commemoration of the 20th Anniversary attending cleanups, festivals and the World Water Summit hosted by President Carter at the Carter Presidential Library in Atlanta, Georgia.

As we convene here today, we are celebrating 30 years of progress under what has been called by members of this body "the most successful environmental statute in history." Throughout October, America's Clean Water and its many partners (see attached list) are sponsoring four national events that include:

The Youth Watershed Summit: October 6–10, 2002 at the Smithsonian Environmental Research Center (SERC) in Edgewater, Maryland. ACWF, and its two primary co-sponsors, the Smithsonian Institution and the Environmental Protection Agency, have invited the nation's Governors to select 4 students and a teacher/advisor to accompany the students to SERC for a 4-day program designed to educate, inspire and train young people from throughout the 50 States to be water quality monitors and advocates for cleaner water. Three of the young people attending this Youth Watershed Summit are here with me today.

National Water Monitoring Day: October 18, 2002, 30 years to the day after the passage of the Clean Water Act. This national event is expected to bring together upwards of 100 thousand Americans into the nation's waters taking samples for pH, dissolved oxygen, temperature and turbidity on the same day. With our partners at Earthforce, USEPA, the Department of Agriculture, the Department of Interior's US Geological Survey, the National Oceanic and Atmospheric Administration and the Army Corps of Engineers, we have developed a nationwide effort that will occur annually and provide citizen-monitoring data that can be tracked over time. And, Mr. Chairman, at the culmination of National Water Monitoring Day, we will begin the synthesis process and will provide you and the House Committee chair with our report.

The Senior Watershed Summit: October 28–30 in Sandy Cove, Maryland. This Summit is being co-sponsored by ACWF and the Environmental Alliance for Senior Involvement (EASI). At this Summit we will bring together seniors from around the country to learn about in-stream monitoring techniques and to help with the establishment of Senior Water Body Monitoring Corps in all 50 States.

The World Watershed Summit: October 30–November 1, at the JW Marriott Hotel in Washington, DC. President George W. Bush has been invited to keynote the Summit. Senator Howard Baker and former Administrator Bill Ruckelshaus are also expected to participate in the culminating event. This World Watershed Summit is being cosponsored by The Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) and the Association of Metropolitan Sewerage Agencies (AMSA).

The purpose of these events and of the Commemoration of the 30th Anniversary of the Clean Water Act is to focus national attention on the improvements made to our national water resources and to highlight areas where additional attention should be targeted.

As the Committee is well aware, in 1972, Congress enacted the Federal Water Pollution Control Amendments (Public Law 92–500), known as the Clean Water Act.

The Act was designed to respond to public demands on the government to clean up and protect our nation's waterways.

Public interest was intense because throughout the 1960's many communities experienced extensive fish kills, discolored streams, fouled beaches and contaminated water supplies. Before the law, government response to these issues varied according to the limits of available science, technical and institutional capacity and available funding. Legislators tried to respond to the problems, often without solid technical evidence or insight as to the economic and environmental consequences of the actions they championed.

The Clean Water Act, one of the first and most successful national environmental laws to be passed by the Congress had as its primary goal to ". . . restore and maintain the chemical, physical and biological integrity of the nation's waters." The goals called for water to be "fishable and swimmable" by 1983 and for the elimination of pollution discharges to navigable waters by 1985.

In the past three decades, Clean Water Act programs have yielded measurable improvements in water quality. Streams that were once devoid of fish and other aquatic life now support an abundant and varied population. Lakes that were once choked by eutrophication are now vastly improved. Yet even with these improvements, we are far from attainment of our national goals and the stringent water quality objectives of subsequent amendments.

With the passage of time, the public's attention to these goals has waned, even though Americans consistently cite clean water as among their highest priorities. Ironically, even with the priority Americans consistently place on clean water, there has been a decline in public awareness, technical innovation and youth education relative to clean up and protection of our water resources. The spirit of cooperation and enterprise, the hallmark of early efforts to craft an effective national water pollution control act, has also faded since the early 1970's. The public stewardship ethic needs to be rekindled in order to address the intricate web of human activity that consistently degrades water quality.

In closing, Mr. Chairman, I would like to extend a special thank you to the nation's Governors, the majority of whom have issued proclamations designating 2002 as the Year of Clean Water. Many of the States have developed comprehensive outreach programs, which include but are not limited to:

- (1) Stream and lake cleanups;
- (2) Water festivals;
- (3) Governors' water conferences;
- (4) Training and education programs and materials;
- (5) Public service announcements;
- (6) Press education symposia;
- (7) Poster, photo and essay contests; and
- (8) Exhibits and documentaries.

It is our hope and expectation that the activities and events taking place throughout this nation during the month of October will foster awareness of our clean water successes and challenges and strengthen our commitment to finding solutions. The response to our programs has been overwhelmingly positive, and we are most grateful for the willingness of so many to dedicate their time and talents to support the Year of Clean Water. A comprehensive list of the plethora of celebratory events can be found at www.yearofcleanwater.org.

Finally, I also want to thank you and your staff for putting this hearing together so that we may revisit the accomplishments of the past three decades and refocus national attention on the importance of continuing our efforts to provide Clean Water Everywhere for Everyone!

STATEMENT OF GRACE CHRIS, STUDENT DELEGATE FROM VERMONT,
YOUTH WATERSHED SUMMIT (OCTOBER 6-10, 2002)

Good morning and thank you, Senators, for allowing me to speak about clean water before this committee while I'm attending the Youth Watershed Summit. My name is Grace Chris, I'm 13 years old and I live in Vermont. I am both honored and very, very nervous this morning.

I came here from the State of Vermont, also known as the Green Mountain State for the beautiful hills that cross the State north to south. Throughout the Green Mountains and its adjacent lowlands are miles of streams and rivers and acres of ponds and lakes. These waterways nourish the green of the mountains and in turn support the wildlife, farm life, and human life whose habitat is the State of Vermont. The fall foliage for which Vermont is famous draws water from Vermont earth and creates jobs for Vermonters involved in the tourist industry. The sweet

maple syrup from Vermont Sugar Maple trees starts out as clean water in the many Vermont watersheds. Cows drink Vermont water and give us world famous Cabot cheese and Ben and Jerry's ice cream. Agriculture, hunting and fishing, trees and tourists, recreation, business and industry, and daily Vermont quality of life all depend on maintaining the abundance and cleanliness of Vermont's waters.

My classmates and I, and all the other kids attending the Youth Watershed Summit, are doing something back home to help protect the waters that bring life to our States. This week in Maryland we've all come together to share evidence of our efforts to protect our water. We already know that 30 years ago *you* did something very important by creating The Clean Water Act, and for 30 years Americans have benefited from that important legislative accomplishment. My teacher was a senior in High School when you passed the Clean Water Act in 1972. This week he's here with me and the other students and teachers at the Summit to share in a celebration of what this Senate helped create 30 years ago. We're hoping to demonstrate that the effort to protect the world's waters continues through us and the work we do back home.

I'm an 8th grade student at The Hartford Middle School in White River Junction, Vermont. My school is located about one-half mile from the point where the White River flows into the Connecticut River. Upstream from us, the White River Watershed collects rain and runoff from the many, many tributaries that flow through the forests, farmlands, and towns of Bethel, Randolph, Rochester, Stockbridge and Sharon, and many, many other beautiful small Vermont villages of central Vermont. The activities we conduct and allow along these waterways determine the present and future health and abundance of these waters. The work of our State and Federal employees and the many local volunteers is very important in protecting the White River Watershed. My classmates and I are a part of that group effort, and I'm here to tell you a little bit about what we are doing to fulfill the Clean Water Act's goals.

As water flows through my watershed, it's drawn out for various uses and then returned in various states of contamination. Also, rain water and snow melt carry manure, road salt and many other chemicals from fields and roads and parking lots into the watershed through "non-point source pollution." Business, industry, breweries and cider mills, sewerage treatment plants, schools, hospitals, private homes and vacation homes often add materials and chemicals to the waterways through identifiable pipes, or "point source pollution." The disease causing bacteria *E. coli*, cancer-causing heavy metals, poisonous industrial wastes and road salts all contribute to changes in the water quality in my watershed. Fish and other animal populations, drinking water sources and favorite swimming holes benefit or suffer from what you and I and others do, or fail to do, in and around our waterways. Most of the water uses are necessary and very important and need to continue. Volunteers and professionals follow the fate of these waters through water quality monitoring programs and stream bank restoration projects. Small towns pass budgets to upgrade sewerage treatment plant facilities or adopt low salt policies for their roads, and students collect tires and trash from streams and ponds during Vermont's Green Up Day on the first Saturday in May. Together, we use and sometimes abuse our watersheds through our daily activities. Together, we have a responsibility to undo the damage that our waters are subjected to every day. The Clean Water Act gives us the authority to clean up our waters, but it is we individuals who must put forth the effort to repair, restore and maintain our watershed water quality. I want to thank you for all you do as Federal leaders and lawmakers, and I want to tell you what we are doing.

My school is a pioneer in the use of Geographic Information System, or (GIS), and Global Positioning Systems, or (GPS) technologies in Vermont. We are learning how to collect data and display data in spatial, or map formats. We can take fish collection data, *E. coli* population data, soil type and land use data, or pH and water temperature data collected in our watershed and show it as a map. We can ask important questions about the relationships among these water quality factors, and then display those relationships in multi-colored maps. The spatial display of these data may reveal patterns that better explain what is going on in the watershed. Right now my group's work has been to look for relationships among the land use on the shores of the streams and riverbanks, the soil types on those shorelines, and the *E. coli* populations in the downstream waters. We've found that the *E. coli* populations are higher in water that has less forest vegetation along the shoreline. However, we don't see a clear relationship between Prime Agricultural Soils on the shoreline and high *E. coli* populations in the nearby water. Our GIS analysis has begun to reveal some relationships among water quality factors in our watershed, and it's created some new questions for us to investigate in the future. What we expected to find was not exactly what we found, and we want to know why. So, we'll keep on working at it and training other kids how to do this work.

We are just young people, but young people with an interest in our watershed. We've been lucky to work with groups like the Vermont Institute of Natural Science (VINS), the White River Partnership, and Vermont Fish and Wildlife. They have taught us about GIS and shared their water quality data with us. Together we are creating a Community Mapping Program to help local community leaders use GIS technologies to plan for their community's future and manage its resources wisely. Our teacher has received training from groups associated with NASA and the Environmental Protection Agency. Now, we'd like to count on continued support from you, the U.S. Senate, through thoughtful legislation, to help my school and other schools protect the White River Watershed and every other watershed in every other State. I hope my testimony here today contributes to that goal.

Again, I'm very honored to have been invited to talk to you about clean water. Together, I hope we'll continue to be responsible citizens and support the 1972 Clean Water Act for at least another 30 years. Thank you very much, and goodbye.

STATEMENT OF JORDAN CHIN, STUDENT DELEGATE FROM OREGON,
YOUTH WATERSHED SUMMIT (OCTOBER 6-10, 2002)

Mr. Chairman and members of the committee: My name is Jordan Chin. I am 16 years old, and I attend the Metropolitan Learning Center in Portland, Oregon.

I am here today, Mr. Chairman, as one of the Oregon representatives to the Youth Watershed Summit, hosted by America's Clean Water Foundation, the Smithsonian Environmental Research Center and the Environmental Protection Agency.

When I was invited to attend the Youth Watershed Summit, I jumped at the opportunity because I have always believed that youth involvement in our society could create new visions for our country. This convention of some 250 students selected by their Governors from the 50 States is an outstanding chance for me and for my fellow students to learn, to share and to carry the Clean Water message home to our respective States.

I believe that information about our environment is something that should be shared and made available to every American. Awareness and knowledge are the keys to bringing about a positive change in our society and its attitudes about our fragile environment. Water is what we are made of: it is the source of life. I think that youth involvement and education is an exceptional beginning to that process.

Because I believe in bringing the need for cleaner water to the attention of young people, I am one of the actors who will, this evening, perform the *The Murky Water Caper: A Real Fish Story*, written for ACWF by Deborah Rodney Pex. I am pleased to play the Detective Michelle Tuesday.

Ms. Tuesday is an inquisitive private investigator with a passion for justice and the desire to assure the well being of the creatures and spaces around her. Ms. Tuesday helps the fish, who have retained her, find the causes of pollution that is contaminating their home. Even with the cheesy jokes, I'm very excited and proud to be a member of the cast. I understand, Mr. Chairman, that some members of your committee staff may be joining us tonight at the YMCA Camp Letts to see just how *The Murky Water Caper* can be an inspiring and fun way to educate people of all ages who care about the quality of their water. Because this play is packed with information, I would like your permission, Mr. Chairman, to present each member of the committee with a copy of *The Murky Water Caper* booklet recently published by America's Clean Water Foundation.

I am here today to say thank you to those who were so wise as to give our country the Clean Water Act back in 1972 and to say that I know that the future of water quality rests in our hands as well as yours. As a young person, I want to be very informed about the ways I affect the environment and I want to share that information with my peers.

At home in Oregon, I am currently enrolled in an ecology class at my school and am making a project of finding eco-friendly options for those teenagers, like myself, who are in search of a plentiful wardrobe. Even small things like buying clothes that don't negatively affect our planet can be helpful in more ways than most of us can imagine. And while there is lots of public information available, I am hard pressed to find more than a handful of people outside of my class who are aware of the resources we're draining, or the negative impact we are having on our planet by how we live our lives each day.

Mr. Chairman and members of the committee, I have one message that I want to leave with you. The people of our country don't seem to be aware of the fact that the environment is deteriorating and is being largely neglected by virtually every person who lives on this planet.

This neglect is not just in other countries or other States—it's not just the distant rain forest down in South America or those wetlands we hear about in other States. It's where we live, it's all around us, it is us. We are fouling the air we breathe, the surface and groundwater we drink, the land we live on and the foods that we eat.

I am but one student in a small State on the other side of the country from Washington DC, but I know that every citizen in this country needs to know how important it is for us all to protect our water. They need to know that polluted water affects the health of our parents, our children, our friends, our relatives and people we have never even met. In protecting the Earth we are protecting ourselves, we are protecting all people, all animals and all the vegetation that sustains us.

If we care for our planet, we are taking care of each other. I sincerely hope that our testimony before you this morning has shown you, the guardians of our country, that teenagers can care. We are drinking in the information provided at the Youth Watershed Summit, and we're thirsty for more. We want a healthy planet to grow up in, to go to college in and to live and raise our families in. Everyone on this committee and many of the people in this room have the power to protect our water. I want you to know that we will be there to help.

Thank you for listening.

STATEMENT OF KRISTEN HOEFT, STUDENT DELEGATE FROM MINNESOTA,
YOUTH WATERSHED SUMMIT (OCTOBER 6–10, 2002)

Mr. Chairman and members of the committee. Good Morning and thank you so much for inviting me here to talk with you about the Clean Water Act. My name is Kristen Hoeft. I come before the committee as a representative of the Youth Watershed Summit and as a citizen of the land of 11,842 lakes, the great State of Minnesota. I am currently a senior at the School of Environmental Studies in Apple Valley, Minnesota. Mr. Chairman, I am very honored to be appearing before you today and I want to share my thoughts about growing up in Minnesota, a State that has water virtually everywhere. I have been able to experience some of our State's beautiful lakes and rivers from canoeing in the boundary waters in northern Minnesota, hiking along the shores of Lake Superior or boating on the Mississippi and St. Croix Rivers.

My parents felt it was very important for me to know how to swim and to learn boating safety because we spend most of our summers along the Mississippi and St. Croix Rivers. I look back and realize the important foundation my parents gave me because, not only do I enjoy the recreational aspect of the water we have in Minnesota, but I also have come to appreciate water ecology, the need to educate people about shore erosion and the reduction of chemical pollution in our lakes, rivers and streams. Over the years, I have seen the Minnesota and Mississippi Rivers flood many times where farmers have lost crops and precious topsoil. This erosion has not only hurt the farmers, it adds to the pollution of the Minnesota and eventually the Mississippi River. I have come to understand that it is not only topsoil that is eroding into our stream and lake waters it is also the variety of chemicals used in the farming process.

I have always thought that if our country's pollution problems were really important, the adults would take care of finding a solution to pollution. But I have come to realize that this has not always been the case.

In my junior year of high school, I decided to attend the School of Environmental Studies (SES) because it is a much smaller setting than the traditional high school. From the four high schools in our district, 200 juniors and 200 seniors are selected to attend. SES, as it is known, has an innovative way of teaching the basic subjects of English, Social Studies and Science by collecting data, analyzing it and reporting the information blending all three subjects together with an environmental theme.

The mission statement of SES reads "a community of leaders learning to enhance the relationships between people and their environments." The first project of my junior year started with the Pond Profiles. This is an activity that the city of Eagan helps us with a great deal. We were given a course in identifying water plants and organisms as well as land plants and running chemical tests. Then we were sent out with a teacher to a specific lake or pond in the city of Eagan. While at the pond or lake, we were required to identify organisms found in and around the water and conduct several water quality tests such as Secchi disk to determine the clarity of the pond or lake and chemical tests such as pH and dissolved oxygen.

All of this data is collected and then presented to the city of Eagan water officials and put on permanent record in Eagan. We provide this service because with over 1,000 ponds, lakes and wetlands in the watershed city staff do not have time to col-

lect such data. This is the first of many such projects that SES does for the city of Eagan. This was a gratifying way to expand the learning process beyond the classroom and I enjoyed it thoroughly. Learning environmental science with hands on experience is much more interesting than just reading out of a textbook. That is why we at SES are excited about participating with America's Clean Water Foundation and its many cosponsors, in National Water Monitoring Day. On October 18, 2002, students, seniors, professionals and those who just want to help protect water quality are coming together to sample water quality throughout the Nation. I am so excited to think that hundreds of thousands of people will join together on the actual 30th Anniversary of the Clean Water Act to test for pH, DO, temperature and turbidity.

Another experience I have regarding the environment is that I frequently walk my dog around the lake at the park across the street from my home. It is a small lake that is enjoyed by many people in the area. Any time of the year you will see people fishing in the lake. In the spring when the snow and ice have melted the lake is beautiful. It appears to be clean and clear. But looks can be deceiving because by early summer the growth of algae is so thick that it would appear as if you could walk across the lake. The city then comes in with a large machine that harvests the weeds and rids the lake of most of the algae. I wish that the same people that enjoy that lake year round would take some time to think about the chemicals that they dump on their lawns to make their lawns lush and green at the expense of the water quality of the lakes in our watershed district. The city of Eagan is attempting to combat the phosphorus chemicals found in the fertilizer used by many people and has recently started to add a chemical called Alum that removes the phosphorus in the water and should eventually lessen the amount of algae growth in the lake.

Mr. Chairman, I would like to see legislation and education maintain water quality so that my neighborhood lake and the thousands of other lakes and rivers in Minnesota can be clean for future generations.

For the past four summers, I have worked as a nanny for a family with three girls. One day last summer the girls and I decided to go for a bike ride on a trail that overlooks the confluence of the Minnesota and Mississippi Rivers. It was a clear, bright and sunny day. We stopped where the rivers come together and I decided to point out some interesting river ecology facts to the girls. The first thing I asked the girls was to tell me which river they thought was the Minnesota and which one they thought was the Mississippi. Because it was a very bright day, one river looked very clean and the other very dirty. The girls were amazed to learn that it was actually the Minnesota River that appeared very dirty. They found this hard to believe because everyone seems to think of the Mississippi as the "Muddy Mississippi." But the fact remains; it is the farm chemicals, livestock runoff and silt that pollute the Minnesota River. When the two rivers join, you can see the line of suspended soils from the Minnesota River blending into the Mississippi. So, it is actually the Minnesota River that gives the Mississippi a bad reputation in our part of the Nation.

In 1819 Fort Snelling was settled because of its location between the two rivers. The Native Americans in this area believed that the land near the confluence was the origin of all life. It is sad that today we do not think it is important enough to try and improve the quality of these rivers and are slow in doing anything to fix the problems.

I have come to realize that although some people are aware of the problems regarding water quality, it will be the responsibility of my generation through awareness and education to clean and protect the environment. That is why I wanted to come to the Youth Watershed Summit. I want to learn as much as I can about water quality, pollution and remediation in the various States.

I know that the problems we face in Minnesota are not Minnesota's alone; these are the problems of our Nation. It will be necessary to work together to clean up and restore the lakes, rivers and oceans. I say let's make America even greater by setting an example to the rest of the world that clean water is an important issue for everyone. While I know that there have been significant improvements over the past three decades, I also know that I want clean water for my generation and the generations to follow. I want clean water for my children and the children of my children.

So when I was looking on the Year of Clean Water website (www.yearofcleanwater.org) I was surprised to notice that the last time the Congress reauthorized the Act was in 1987. Through my studies I know that there have been many changes over the past 15 years and I also know that water detection and protection has become far more complex. So more advanced technologies should be translated into the Clean Water Law. So I must ask you Mr. Chairman and members of the

committee, to begin the process of reauthorization to assure that our country can provide clean, fresh water for all of us for many generations to come.

Thank you for allowing me to appear before you today.

ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES (AMSA),
October 9, 2002.

Senator JAMES JEFFORDS, *Chairman,*
Environment & Public Works Committee,
SD-410 Dirksen Senate Office Building,
Washington, DC 20510-6175.

DEAR SENATOR JEFFORDS: On behalf of the Association of Metropolitan Sewerage Agencies (AMSA), I would like to thank you for the opportunity to provide testimony before the Environment & Public Works Committee yesterday in recognition of the 30th anniversary of the Clean Water Act. AMSA appreciated the chance to highlight achievements made in the past 30 years, including the remarkable progress made as a result of the efforts of public wastewater treatment utilities, as well as the challenges that remain to continuing improvement of the quality of our nation's waters.

As a matter of clarification, I would like to respond to assertions made by the Natural Resources Defense Counsel (NRDC) concerning AMSA's position on the forthcoming sanitary sewer overflow (SSO) rule. We want the committee to understand that AMSA always has and still does support the U.S. Environmental Protection Agency's (EPA's) efforts to publish a Federal rule which provides regulated communities with the direction they need to minimize SSOs. The discussions we have had with EPA on the issue of SSOs over the past year have been with an eye toward encouraging the Agency to publish the current rule, and to be open to exploring options during the public comment period that are equally protective of the environment while being cost effective in this era of limited resources.

AMSA supports a regulation that passes Senator Mitchell's "common sense" rule, one which clearly defines an achievable standard for the design, operation and maintenance of sanitary sewer collection systems. It is AMSA's belief that the current proposal's zero discharge standard imposes a technologically unrealistic mandate without reference to actual impact, such that limited local resources would be diverted from addressing other pollution sources that pose a greater threat to water quality. AMSA continues to believe that alternative solutions to addressing SSOs can and should be discussed in a public forum following the proposal of a rule.

Thank you again for the opportunity to testify before the committee, and to clarify our support for continued improvements in water quality. We ask that this letter be included as part of the committee's record of this hearing. Please feel free to call me if you should have any questions at (202) 833-4653.

Sincerely,

KEN KIRK,
Executive Director, AMSA.

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 present this statement for the record to the committee on the 30th anniversary of the Clean Water Act, one of the nation's premier environmental statutes.

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.

I. BACKGROUND

The Federal Water Pollution Control Act, 33 U.S.C.A. 1251 et seq., is the principal law that deals with pollution in the nation's streams, lakes, and estuaries. The Act, commonly referred to as the Clean Water Act, was enacted in October 1972. It was substantively amended in 1977, 1981 and 1987.

The Act consists of two major parts: a regulatory scheme that imposes progressively more stringent requirements on industries and cities to abate pollution and meet the statutory goal of zero discharge of pollutants and provisions that authorize Federal financial assistance for municipal wastewater treatment plant construction.

Both are supported by permit and enforcement provisions. Programs at the Federal level are administered by the Environmental Protection Agency (EPA); the Act allows EPA to delegate enforcement and permitting authority to the States, and they have major responsibilities to implement the Act's programs.

Congress declared in 1972 that it intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters. These objectives were accompanied by statutory goals to eliminate the discharge of pollutants into navigable waters by 1985 and to attain, wherever possible, waters deemed "fishable and swimmable" by 1983. While the goals have not been entirely achieved, progress has been made, especially in controlling conventional pollutants (suspended solids, bacteria, and oxygen-consuming materials) discharged by industries and municipal sewage treatment plants. These discrete sources are easily identifiable and regulated.

To meet the goals of fishable, swimmable waters, Congress has authorized \$65 billion in grants and loans to wastewater treatment plants between 1972 and 2002. Appropriations—the money actually flowing to the States and local governments over the past 30 years—have totaled \$78.45 billion.

With point sources receiving virtually all of the funding, other critical, less definable sources of water pollution—agricultural and industrial runoff, for example—are yet to be fully regulated. "The Act ignores largely nonpoint sources of pollution leaving these important issues to the common law and State and local regulation."¹ The U.S. Supreme Court read the concept of local regulation quite literally in *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (holding that the government could not regulate isolated wetlands and other nonnavigable waters). The decision may lead to more regulation, not less.

The Supreme Court's decision in SWANCC did not conclusively foreclose the Federal Government's right under the Clean Water Act to restrict environmental degradation of all nonnavigable wetlands. Nevertheless, the decision indicates that longstanding policies that previously supported an expansive view of Federal powers in the environmental regulatory arena will continue to be severely restricted. The Court's shift toward a more rigid and inflexible method of statutory analysis will increasingly transfer governmental authority to promulgate conservation planning and open space protection onto local, more decentralized jurisdictions. *This will invariably mean that the need for State, local, and regional governing bodies to develop coordinated agendas for land use planning will become more pressing than ever.*²

Moreover, some critics have argued that this congressional faith in State regulation has not always resulted in improved pollution-control programs in certain cases.³

II. INFRASTRUCTURE FUNDING NEEDS

Although the Federal Government has spent more than \$78 billion on wastewater treatment programs since 1972, 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. 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. The total does not account for any growth in demand from new systems.

Funding has remained flat for a decade. In Fiscal Year 2002, Congress appropriated \$1.35 billion for wastewater infrastructure, which 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 Environmental Protec-

¹ William H. Rodgers, Jr., *Environmental Law* 248 (2d Ed. 1994).

In 1987, the Supreme Court ruled that the Clean Water Act, which has a savings clause, does not preempt common law nuisance actions so long as they are based on the law of the state of the source of the pollution. See Mary J. Davis, *Unmasking the Presumption in Favor of Preemption*, 53 S.C.L.REV. 967, 995 (2202) (citing *International Paper Co. v. Ouellete*, 479 U.S. 481 (1987)).

² Owen Demuth, *Sweetening The Pot: The Conservation and Reinvestment Act Reignites the Property Rights/Land Conservation Debate for the Twenty-First Century*, 50 *Buffalo Law Review* 755, 798–799 (2002) (emphasis added).

³ See, e.g., Oliver A. Houck and Michael Rolland, *Federalism In Wetlands Regulation: A Consideration of Delegation of Clean Water Act Section 404 and Related Programs to the States*, 54 *Maryland Law Review* 1242, 1243 (1995) ("The Act has been amended to allow States to operate delegated section 404 programs, and to allow States to regulate certain activities, in the alternative, under broad Federal permits. Neither of these opportunities has been widely exercised to date.") (citations omitted).

tion Agency (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.

Recently, the EPA released a new analysis of wastewater funding needs over the next 20 years. The needs are staggering. "Estimates of capital needs for clean water from 2000 to 2019 range from \$331 billion to \$450 billion with a point estimate of \$388 billion," the Agency said.⁴

Between 35 percent and 45 percent of U.S. surface waters still do not meet current water-quality standards. According to 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. Pending Federal regulations to manage sanitary sewer overflows (SSO) would impose an additional total cost for all municipalities of \$93.5 million to \$126.5 million each year.

Without a significantly enhanced Federal role in providing assistance to wastewater 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 and wastewater improvements, but how.

Policy Options

New solutions are needed to what amounts to a nearly trillion dollars uncritical drinking water and wastewater investments over the next two decades. Not meeting the investment needs of the next 20 years risks reversing the public health, environmental, and economic gains of the last three decades.

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

Equally compelling is the case for flexibility in the forms of Federal investment including grants, loans, and other forms of assistance. Grants will be needed for many communities that simply cannot afford to meet public health, environmental, and/or service-level requirements.

Loans and credit enhancements may be sufficient for other types of communities with greater economies of scale, wealthier populations, and/or fewer assets per capita to replace.

ASCE recommends that funding for water infrastructure system improvements and associated operations be provided by a comprehensive program.

Specific Recommendations Supported by ASCE

- congressional appropriations of \$11 billion–\$12 billion annually for immediate wastewater infrastructure repairs and system upgrades.
- Creation of a water trust fund to finance the national shortfall in funding for water and wastewater infrastructure. These trust funds should not be diverted for non-water purposes.
- Issuance of revenue bonds and tax exempt financing at State and local levels, as well as public-private partnerships, State Infrastructure Banks, and other innovative financing mechanisms.

III. OTHER POLICY ISSUES

ASCE supports a CWA that maximizes, to the extent possible, the protection of our nation's waters and the beneficial use of those waters. The Clean Water Act should aggressively address non-point source pollution from watersheds and also point source pollution from sanitary sewer overflows, combined sewer overflows, and storm sewer discharges. The reauthorized Clean Water Act should:

- Increase funding for infrastructure needs to meet the goals and objectives of the Act.
- Establish source water protection programs.

⁴ U.S. EPA, *The Clean Water and Drinking Water Infrastructure Gap Analysis 6* (2002).

- Establish standards for the use of recycled water.
- Include provisions to encourage pollution prevention.
- Integrate watershed management.
- Provide source-water protection.
- Protect fish and wildlife habitat.
- Safeguard the quality of coastal waters and estuaries.
- Provide meaningful information to the public about water quality.
- Authorize regulations that are effective in protecting the beneficial uses of the nation's water and flexible enough to allow innovative practices and means to achieve these goals.

ASCE supports the use of the Total Maximum Daily Load (TMDL) regulation for improved water quality.

A national wetlands policy should be established separately.

That concludes our statement. Please contact Michael Charles of ASCE's Washington Office at (202) 789-2200 with any questions.

STATEMENT OF ROBERT E. LEE, CHAIRMAN, NATIONAL CATTLEMEN'S
BEEF ASSOCIATION

Producer-directed and consumer-focused, the National Cattlemen's Beef Association is the trade association of America's cattle farmers and ranchers, and the marketing organization for the largest segment of the nation's food and fiber industry.

The National Cattlemen's Beef Association (NCBA), on behalf of its members and affiliates, herein submits its testimony to the Environment and Public Works Committee of the U.S. Senate concerning the oversight hearing conducted on October 8, 2002 concerning "The Clean Water Act—Then and Now."

NCBA represents the many cattle feeders and family ranchers, all of whom have a stake in protecting the environment. We believe that common sense, cost-effective and affordable principles can be applied to livestock production to achieve environmental protection of wetlands and riparian areas.

Initiated in 1898, NCBA is the marketing organization and trade association for America's one million cattle farmers and ranchers. With offices in Denver and Washington, DC, NCBA is a consumer-focused, producer-directed organization representing the largest segment of the nation's food and fiber industry.

NCBA'S COMMITMENT TO CONSERVATION

During last year's Farm Bill debate, NCBA Vice President, Eric Davis of Bruno, Idaho, appeared before the Senate Agriculture Committee to present testimony outlining the importance of conservation initiatives for America's cattle producers.

"Regardless of what form the final conservation title will take, we are aware that the financial resources committed to conservation spending over the next 10 years will make the 2002 Farm Bill a great milestone in Federal conservation policy. . . . NCBA wants to stress that whatever form the final package takes, it is critical that the 2002 farm bill make a major, new commitment to providing livestock producers with conservation cost share and incentive payments assistance in the context of voluntary, incentive-based programs."

(Testimony of the National Cattlemen's Beef Association to the Senate Agriculture Committee, The Honorable Tom Harkin, Chairman, presented by Eric Davis, NCBA Vice-President, July 24, 2001).

THE ROLE OF THE DEPARTMENT OF AGRICULTURE

NCBA appreciates the role that the Department of Agriculture has taken throughout the years in assisting cattle producers. The technical assistance that the Agency provides is critical in helping farmers and ranchers implement conservation and environmental practices on their operations.

THE ROLE OF THE ENVIRONMENTAL PROTECTION AGENCY AND THE STATES

The Clean Water Act outlines different approaches for "point sources" and "nonpoint sources." Depending on their particular situation, a cattle operation can either be a "point source" or a "nonpoint source." If a cattle operation is a "concentrated animal feeding operation," that operation is a point source, subject to effluent limitations guidelines drafted by the Environmental Protection Agency (EPA). If a cattle operation is not a concentrated animal feeding operation, that operation is considered by the Clean Water Act to be a nonpoint source, and pursuant to Section 319 of the Clean Water Act, is subject to management programs implemented by the States.

The Act envisioned a partnership between the States and various Federal agencies, working in collaboration to “restore and maintain the chemical, physical, and biological integrity of the nation’s water.” 33 U.S.C. § 1251(a).

States have developed workable programs that are achieving positive environmental results. The fact that the programs vary from State to State is evidence that a “one-size-fits-all” approach is not appropriate.

Recently, EPA proposed a nutrient trading policy. NCBA submitted comments to the proposal. Nutrient trading could be an opportunity for effective Federal and State collaboration, with the Agency recognizing that in many instances, incentives for voluntary actions can result in greater water quality and environmental benefits than would otherwise be achieved under the Clean Water Act.

THE ROLE OF THE PRODUCER

NCBA recognizes that environmental stewardship is important. NCBA policy directs that the Association will not be compelled to defend anyone in the beef cattle industry who clearly acts to abuse grazing, water, or air resources.

On the other hand, we believe that it is important to recognize those producers who have clearly acted to protect grazing, water, air, and wildlife resources. For the past 11 years, NCBA has named seven regional Environmental Stewardship Award winners, and a national winner. The regional winners are recognized during our summer conference, and the national winner is named at the annual National Convention.

Because the role of the producer is ever changing, at this year’s National Convention, NCBA staff will provide an educational session on the new provisions of the Environmental Quality Incentives Program (EQIP) during NCBA’s “Cattlemen’s College.”

NCBA appreciates the opportunity to provide this testimony. We remain committed to responsible stewardship of our natural resources.

