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DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT AND INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2004

THURSDAY, MARCH 20, 2003

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:02 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Christopher S. Bond (chairman) presiding.

Present: Senators Bond, Craig, Mikulski, and Leahy.

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF HON. CHRISTINE TODD WHITMAN, ADMINISTRATOR

ACCOMPANIED BY G. TRACY MEHAN III, ASSISTANT ADMINISTRATOR, OFFICE OF WATER

OPENING STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Good morning. The Senate VA–HUD Appropriations Subcommittee will come to order. My distinguished Ranking Member is out temporarily and asked that I begin, so on her behalf let us welcome EPA Administrator Christine Todd Whitman and our other guests from EPA who have joined us here today to testify on the President's fiscal year 2004 budget request for the Environmental Protection Agency.

Let me say that because of many other activities going on today we are going to have to go through this hearing as quickly as we can. Senator Mikulski and I both have several other commitments but we will not ignore you. However, we will submit questions for the record if we do not have time to ask them.

Madam Administrator, let me begin by saying that the EPA has one of the most important and difficult missions of any Federal agencies, with responsibilities from the cleanup of Superfund and brownfields sites to the funding of clean water and drinking water infrastructure to the enforcement of environmental laws to representing our Nation with regard to issues of global climate change.

More recently, as part of the Federal Government's homeland security efforts, EPA has been named as the lead Federal agency for reducing the vulnerability of the chemical industry and the haz-

ardous material sector of the Nation's critical infrastructure. I applaud you and EPA for your commitment to this responsibility.

This year the administration has requested some $7.63 billion in budget authority. This is a reduction of some $450 million for the fiscal year 2003 funding level that I do not agree with. However, assuming a number of adjustments, if you put back in the administration's reduction of $460 million in congressionally designated EPA water and sewer grants and programs, the EPA funding level is approximately equivalent to the fiscal year 2003 level.

Unfortunately, many of these designated grants go to communities with significant water infrastructure challenges as well as to programs administered by nonprofits that provide key support for many of EPA's programs and activities. I am convinced that the EPA would be very troubled if we failed to fund many of these nonprofit programs which are not included in the budget request, and I know that our environment would suffer significantly if these were not made available.

I want to call your attention particularly to something that is a major crisis, identified in yesterday's copy of an article from yesterday's Springfield, Missouri, *News Leader*. In rural Christian County, Missouri, there are 12 trailers at the Starlight Mobile Home Park which flush their human waste into a pit that fails to meet even the minimum wastewater treatment standards. The untreated green sludge eventually oozes into a creek that is a tributary of the James River which feeds Table Rock Lake, which is one of our Nation's prime resource areas, and because it sits on limestone with cheese-like openings the water is traveling underground and what does not pollute the lake is polluting the underground water system.

This is the State Department of Natural Resources' primary responsibility, but it is a situation that is intolerable, and it is as serious in Springfield, Missouri, as pollution of Chesapeake Bay is to all of my friends who live on and around the Chesapeake Bay.

But, having said that, back to the broader issues. The VA–HUD Subcommittee is facing even more difficult funding decisions in 2004 than we faced in 2003. We have to balance the funding needs and priorities among other programs and agencies, VA medical care, HUD low-income housing, and in NASA reacting to the tragic loss of the Columbia orbiter.

Particularly, without relief from the full committee in our subcommittee's allocation, we will have to make up a shortfall of some $1.1 to $1.4 billion in VA medical care and shortfalls of upwards of a billion dollars in a variety of other HUD programs. Also, as we face the onset of war, our first obligation will be to pay for the costs associated with the preservation and protection of our freedoms from the threat of terrorism and terrorist nations.

I am gratified that the EPA budget request for 2004 continues our Nation's commitment to a better environment and meets the primary funding needs of EPA's missions, programs and goals. I think it is generally a good budget that stays the course set in the administration's 2003 budget request and our appropriations for that year. I am glad EPA is focusing on meeting its primary programs and legal obligations rather than creating a new set of pro-

grams and responsibilities when we have not done enough to fund our existing top priority programs.

I am very much concerned, however, one more time, about the failure to maintain the 2003 funding level of $1.35 billion for the Clean Water SRF. The administration proposes funding of $850 million, a reduction of half a billion dollars from 2003. Now, I understand that the Clean Water SRF has been capitalized since 1987 for a total of some $42 billion, including $19 billion in Federal funds. But the Nation faces some $540 billion in Federal funding needs alone for new and existing water infrastructure needs over the next 20 years.

In addition, there are a number of other significant EPA infrastructure priorities. The EPA budget does not address that. It does not address the combined and separate sewer overflows funding needs which are a priority for some 772 municipalities or the funding needs of many small communities in the West that must reconstruct their water systems because of the new arsenic water standards. We cannot mandate that people do things and not give them some help in getting them done.

The bottom line is that, in addition to the EPA's environmental enforcement requirements, water infrastructure needs must be a much higher priority for EPA.

The EPA also faces significant challenges with regard to new requirements for total maximum daily load, TMDL, of pollutants that impact public health and the environment by large animal feeding operations, statutory requirements for the protection of wetlands, and continued demands to expedite the cleanup of Superfund sites.

With respect to TMDL, I plan to reintroduce this year a bipartisan Fishable Waters Act, which is widely supported by conservation and outdoor groups, fishing and hunting groups, that I think can begin to make a difference in some of the runoff streams using voluntary activities, and I would welcome EPA's support on the announcement of the Act.

I am also concerned about issues relating to air quality standards under the Clean Air Act, including the status of implementation of new source review of the Clean Air Act, which authorizes the EPA to set standards for certain facilities for the installation of air pollution equipment. Substantial progress has been made since last year, this remains an important issue as we seek to maintain the economic viability of U.S. producers of energy while meeting the air quality standards of the Clean Air Act.

Congress, I think, also needs to move forward on the administration's proposed Clear Skies legislation that will reduce emissions and encourage investments in new plants by providing certainty regarding future regulatory requirements.

I would add one other thing. As an avid supporter of plant biotechnology, I am gratified that EPA has approved the use of a new genetically-engineered corn developed by Monsanto. This corn includes a gene from a soil bacteria that allows the roots of the corn plant to secrete a protein that kills the corn rootworm, the crop's number one pest. To reduce the chance that the rootworm will develop resistance to the corn, EPA has required growers to set aside 20 percent of the planted acreage for non-transgenic corn. I think this is a major breakthrough in the development of genetically-en-

gineered crops and represents another significant step towards eliminating our Nation's dependence on harsh chemical pesticides.

More importantly, as we develop heartier and more nutritious crops through genetic engineering, we are going to be able to feed starving people in developing countries in Africa and Asia and throughout the world that face unforgiving environmental conditions, including droughts and soils that are not productive for crops unless they are modified.

Madam Administrator, I thank you for your inspired leadership and commitment to EPA's mission. I look forward to working with you on the challenges you face.

Senator BOND. I now turn to my Ranking Member Senator Mikulski for her opening statement.

STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Thank you very much, Mr. Chairman. I want to welcome Administrator Whitman to her fifth hearing before the subcommittee. I look forward to during her tenure calling her "Secretary" because I do believe it should be a cabinet agency. I want to thank her for her continual availability to not only testify in the usual and customary hearings, but to be available for meetings and hearings related to the anthrax contamination of not only the Hart Building, but also of the Brentwood Post Office. So many of those workers there are my constituents, but even if they were not, they are our people. You have also been available for hearings pertaining to toxic cleanup in Anniston, Alabama.

So we have worked together from arsenic to anthrax and so on. I feel we have had a very productive relationship. When I look, though, at the submittal of the budget, I am troubled at the 2004 budget request for EPA. The total of $7.6 billion is actually a $450 million decrease from the 2003 level. This is a cut of almost 6 percent, when we have such compelling needs to protect the environment and to protect public health.

I am very, very, very troubled that the major cuts seem to be in water infrastructure funding and everything else is kept at the status quo. I believe that OMB in its work with EPA was not prepared to be bold about the administration's commitment to the environment.

The budget is a planned budget. Instead of using it as a tool to help protect health and the environment, it seems that we are going to maintain the status quo, except in water and sewer programs. I want to just confirm the comments that the chairman has made about water and sewer. Governor Ehrlich, our new Governor of Maryland, says that his new number one priority is water and sewer projects and Maryland getting its fair share. Well, there is not a lot of fair share to get.

We in Maryland, because we have a Republican Governor for the first time in 37 years, Senator Sarbanes and I want to do partnership politics because on issues like water and sewer, there is no politics. In the Chesapeake Bay alone, Administrator Whitman, there is a $4 billion list of water and sewer projects that could be funded this afternoon that meet the State priorities. That just shows the magnitude of what Governor Ehrlich is facing in just one State on a waterway that I know impacted you in New Jersey

while you were Governor and in which you have had a very keen interest.

Much is made about these earmarks that the Senate comes up with. Speaking for myself, I know that the number one request I get for earmarks from Members goes to water and sewer projects and as part of the mandate from the committee they have to be on the State priority list. So this is not about pork. It is about failed water systems.

We could probably have a $50 billion bill of just water and sewer projects. So we are really going to be working on this, and you need to know that the subcommittee is very troubled about this and I am going to come back to it in my questions. Senator Bond has spoken very eloquently about it.

This is partnership politics because water and sewer improvements could contribute to economic stimulus and add value for the dollar. It is federal funds working at the local level with a 45 percent match that could have an impact on creating jobs from the civil engineers to the people who will be digging the ditches. It will have value for protecting public health and the environment, and it will also impact on the ratepayers.

Mayor O'Malley is under a decree from your agency, which I am not disputing, to fix the Baltimore water and sewer system for $900 million. Baltimore City does not have $900 million. We are going to have a 10 percent rate increase, so from our standpoint the EPA mandate is helping increase taxes. I am not trying to jackpot you, but I think you should know what we are facing.

I think Senator Bond and Senator Craig have been outspoken on concern about the regulations on arsenic, but they need help. Those little communities that the Senator stood up for on the Senate floor need help.

The second issue that I want to emphasize is brownfields. I know you are a brownfields baby as a past Governor of New Jersey. We feel that brownfields can be turned into green fields and, though the budget has been increased, we would really hope that we could move to the authorized level of $250 million, because it is one of the major tools, I believe, for cleaning up the environment and again making grounds ready for economic development.

PREPARED STATEMENT

There are other issues that I could raise, but I think we do need to get on with the hearing. But you see where the subcommittee is headed, towards those things that protect the environment, create the jobs, help local taxpayers, and also create an environment for even additional government. If you want to help a new Republican Governor, help me get water and sewer grants.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BARBARA A. MIKULSKI

EPA serves the very important mission of protecting human health and the environment. So I am troubled that the 2004 budget request for EPA totals just $7.6 billion, a $450 million decrease from the 2003 level. This is a cut of almost 6 percent. I believe that instead of using the budget as a tool to protect public health and the environment, this administration prefers to make changes through the regulatory and legislative process.

In the past few months, EPA has made a series of changes to environmental regulations and has proposed new legislation. This subcommittee provides the funding for EPA to develop these proposals. So it is our duty, on behalf of our taxpayers, to ensure that these proposals will protect public health and the environment. Maryland's taxpayers want clean and safe air and water and they want the Chesapeake Bay cleaned up. Specifically, I want to know how EPA's new Water Quality Trading Policy and Clear Skies legislation will accomplish these goals. We need to protect children and the elderly, who are most vulnerable to the health effects of air pollution. Many water quality problems in the Chesapeake Bay are due to air pollution. We must be sure that we are not backtracking on public health and environmental gain under the Clean Air and Clean Water Acts.

I am puzzled about many areas of this budget proposal. I know that EPA didn't get everything it wanted from OMB but I really question some of the priorities. The most glaring example is water infrastructure. The budget request cuts over $800 million in critical water and sewer project funding. The budget cuts $500 million from the Clean Water State Revolving Loan Fund and $300 million targeted water projects. Congress funds these projects because there is no national framework that even comes close to addressing the national needs. This just doesn't make sense—for two reasons. First, our communities have enormous needs. Over the next 20 years, there will be a funding "gap" for our communities of $540 billion. These needs have been studied and restudied. In April 2000, the Water Infrastructure Network reported that our Nation's water and wastewater systems will face a funding gap of $23 billion a year over the next 20 years. In November 2001, the General Accounting Office (GAO) reported that costs could range from $300 billion to $1 trillion over the next 20 years. In September 2002, the Environmental Protection Agency reported that over the next 20 years, demands for improved sewer and drinking water systems will outstrip current levels by $535 billion. And in November 2002, the Congressional Budget Office (CBO) reported that water and sewer costs could average as much as $40 billion each year. The results are conclusive and the need is real.

We can't expect communities to comply with growing regulations like arsenic, radon, and new requirements related to security to name just a few without increased financial assistance. If we don't help, the entire burden falls on local rate payers in many urban and rural low-income areas and rate increases are just not affordable.

Second, the economy lost 300,000 jobs in February. Water infrastructure funding creates jobs: for every $1 billion we spend on water infrastructure up to 40,000 jobs are created. So I am puzzled why the budget skimps on this priority. I know this was probably a funding decision by OMB. But this cut really signals a failure in that we don't have a comprehensive national policy to address our communities' needs. We need new thinking on a new national policy to help communities pay for water and sewer projects.

In January, EPA convened a conference on how to "close the gap" including State and local officials, business, and other experts to exchange ideas about how to meet water and sewer challenges. I would like to hear what happened at that conference and what the next steps will be. I want to know what is EPA doing to develop new ideas to help communities meet these challenges and I want to know what EPA, as an advocate for the environment, is doing to make this a national priority and develop solutions for our communities.

The authorizing committee is working to reauthorize the water loan funds at much higher levels in the future. And there are discussions underway about creating a Trust Fund for water infrastructure. Even though I have serious concerns about the new formula that has been proposed, I have applauded Senator Jeffords' leadership in seeking additional resources for critical water infrastructure improvements. But I hope that some new thinking can be incorporated into those efforts.

I am also very concerned that EPA may be getting back into the business of allowing retired Navy and Maritime administration ships to be exported to developing countries for dismantling. In 1997, Pulitzer prize-winning series of articles in the *Baltimore Sun* exposed the dangerous conditions created at home and abroad because these ships contain PCBs, asbestos, and lead. In 1998, I began worked with the Defense Department to make sure that we dispose of these ships in a way that is: efficient, orderly, environmentally sensitive, and keeps the work in American shipyards where environmental and safety standards can be met and monitored. But a recent *Washington Post* article reported that EPA may be assisting the Maritime Administration to once again begin exporting ships to be dismantled overseas. I want to know what EPA's role will be. Does EPA think that these ships should be exported and if so, what has improved since 1997 when the *Baltimore Sun* first exposed this story?

I also want to follow up on EPA's budget to enforce environmental laws. Over the last two years, the subcommittee has rejected EPA's proposals to shift enforcement funding to the States. The subcommittee had serious concerns that reductions in Federal enforcers would result in more polluters ignoring the law. We need both a strong Federal and strong State enforcement to achieve compliance with our environmental laws, not one or the other. I am pleased that this year's budget does not make the same mistake.

Now, I would like EPA to tell us how priorities are being set within the enforcement funding we provided. We need to know how EPA is managing enforcement to ensure that the Agency is recruiting and retaining the experts needed to enforce environmental laws.

Finally, Senator Bond and I have always taken the position that the VA–HUD bill should not be a vehicle for environmental riders. I hope that as we move a bill through the Committee this year, we can continue this policy. I thank Administrator Whitman for her testimony today and I look forward to hearing from her.

Senator BOND. Wow, what a compelling reason. Thank you, Senator Mikulski.

Senator CRAIG.

STATEMENT OF SENATOR LARRY CRAIG

Senator CRAIG. Thank you very much, Mr. Chairman, and let me thank Barbara for her kind statements also and our concerns that we jointly share on this committee.

Madam Director, welcome again before the committee. We appreciate your presence here. I have to go chair another committee in a few moments, but I did want to make a couple of comments reflective of some of the work we have done jointly this past year that I think is tremendously positive.

I have been able to secure funding for about $800,000 in the omnibus bill that passed a few months ago for the National Academy of Science to undertake a review of the science behind EPA's decision in the Coeur d'Alene basin area, in Superfund sites in northern Idaho. That is to bring the science together, to have a third party review of it, and we think to modernize some of the overall adjustments.

Of course, we did come with a record. Your regional administrator up there, John Iani, agreed that once the study had gelled that there could be possibly some adjustment in the record based on that science. So I think what is important for the whole of our record-setting agreement—and I mean this, Mr. Chairman, in the sense that EPA and the State of Idaho jointly are approaching something that I think is a model for other States for broader cleanup of the Superfund area and setting guidelines and some cooperative financing and joint decisionmaking that is very helpful. The director led in that, the Administrator. We are very pleased that you would do so.

But it is also important we gel the balance of it. So your help in getting the National Academy's work under way is important, and I certainly appreciate the work of your administrator in Region 10. That is going to be awfully important.

But, as is typical, Madam Administrator, we have what I call embedded bureaucrats, and I will be very blunt, in our Region 10 Seattle office, who are not asking, are not following your approach to applying common sense solutions to environmental challenges within current regulatory constructs. I would urge you to continue to pressure that recalcitrant and sometimes resistant bureaucracy

to get with it. I think it is awfully important that they do for the sake of our children and a clean environment.

You have had the privilege of being in the beautiful part of north Idaho where we think Mother Nature and EPA and the State in cooperation have made significant headway in cleaning up that site. The solution in this cooperative effort, Mr. Chairman, is the avoidance of literally hundreds of millions of dollars spent potentially in the downstream and also the reality that when you do all the right things in a timely fashion in concert with Mother Nature's great effort you can clean up a major site without it being so terribly disruptive as some might choose it to be, or for it to be a lifelong pursuit of somebody who is administering it who just happens to like to live in a beautiful area in which they are pursuing the end game.

Thank you, Mr. Chairman.

Madam Administrator, I must say in all sincerity we do greatly appreciate your cooperation and we think we have established a record out there and a model that other States and regions ought to take a look at, how you get it done in a cooperative fashion.

Senator BOND. Thank you very much, Senator Craig, for your very informative statement.

Senator Leahy.

STATEMENT OF SENATOR PATRICK J. LEAHY

Senator LEAHY. Thank you, Mr. Chairman.

Administrator Whitman, welcome. It is good, as always, to have you here. It is said that you have one of the most difficult jobs in Washington and I am sure there are days you believe that. But you also have one of the most enviable jobs, a job where you can make decisions that have profound effects on our Nation's environment, not just for today but the Nation's environment that our children and our grandchildren will inherit.

It is the mission of your agency, to safeguard our Nation's precious lands, air, water, protect the health of our citizens, especially our children. As we all know, our children are affected more than anybody else.

I always enjoyed working with the EPA. I've done this for years. Under your leadership, EPA has been very responsive to my office and I appreciate that, and I might say responsive, respectful, and nonpartisan, and I think that reflects the direction they get from you, Governor.

In my home State of Vermont, EPA has been instrumental in helping Vermont citizens restore the health of Lake Champlain and the Connecticut River watershed, the two bodies of water that border us on either side. Your New England regional office is working with local Vermont communities and my Vermont office to ensure the Elizabeth Mine Superfund site is properly maintained and cleaned.

Just last week, EPA highlighted the immediate need for additional resources. There is a dam that holds back copper tailings. If there were a breach it would be catastrophic, there would be great loss of life, as well as environmental degradation, all the way down into the Connecticut River, and would also affect other States below us.

So I see this and I see wonderful help and all, and then I worry about other things. The administration put forth proposals that I believe would reduce the objective oversight for the U.S. Fish and Wildlife Service and the National Marine Fisheries Service of the Endangered Species Act. We have all relied, both Republicans and Democrats, on their impartial oversight, and I am afraid that objectivity may be diminished and that would create a real problem for us and our own debates up here.

The administration is delaying the issuance of a document which shows the impact of mercury on children in this Nation, something that I am very worried about and I know you are. I wish we could get the document issued.

Most recently the administration suggested the Clean Water Act only applies to a fraction of our Nation's wetlands. And all this takes place in such rapid succession that I am afraid that the balance, the balance that has come up over the years, with the balance that we have seen in EPA programs, may come unglued. I express that to you as one who has great respect for you as a person and great respect for the EPA, as one who has seen the very good things you can do, but also one who worries very much if the EPA steps back from either objectivity or involvement.

PREPARED STATEMENT

That is all my statement, Mr. Chairman. If I am not here at the time, I will have questions, especially on the Elizabeth Mine matter, because I want to know whether you will fully fund the plan to clean up that mine. Maybe you can answer that yes or no.

Ms. WHITMAN. We are awaiting a record of decision on that. As you know, they did request the additional money for the dam, but we are waiting to have the full record of decision to know what the plan is and what the ultimate costs will be of doing that. But it is on the national priority list. It is clearly a priority for us as well as for the State.

Senator LEAHY. I appreciate that.

I appreciate it, Mr. Chairman.

Senator BOND. Thank you very much, Senator Leahy. We always appreciate your participation.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PATRICK J. LEAHY

Welcome Administrator Whitman. Thank you for taking the time to come to the Senate and testify.

It has been said that you have one of the most difficult jobs in Washington, but it is also one of the most enviable. It is a position where the decisions you make today can have profound effects on the Nation's environment tomorrow. A successful Administrator will meet the EPA's mission of safeguarding our Nation's precious lands, air, and water and protecting the health of our citizens, particularly our children, from environmental pollutants.

I have always enjoyed working with the EPA, and under your leadership, EPA has been respectful and responsive to my office. In my home State of Vermont, EPA has been instrumental in helping Vermont citizens restore the health of Lake Champlain and the Connecticut River watersheds.

Even as we speak, your New England Regional Office is actively working with local Vermont communities and my Vermont offices to ensure that the Elizabeth Mine Superfund site is properly maintained and cleaned. Just last week, the EPA highlighted the immediate need for additional resources to ensure that a cata-

strophic breach of a dam, which holds back copper tailings, does not occur at the site.

With that as a backdrop, Madam Administrator, I must tell you that I continue to be disappointed at how vigorously this administration has worked to emasculate over 30 years of environmental law that has significantly improved the nation's environmental health. Recently, the administration has put forward proposals that could reduce the objective oversight by the U.S. Fish and Wildlife Service and National Marine Fisheries Service of the Endangered Species Act; the administration has delayed the issuance of a document that shows the impacts of mercury on the children of this nation; and most recently, the administration suggested that the Clean Water Act only applies to a fraction of our Nation's waters.

The careful balancing required to protect the public's health has been unbalanced at the EPA as the fingers of special interests are invited to shape this administration's environmental policy. I fear that the health of our environment has not markedly improved since the last time you testified here, Madam Administrator, and as the environment has suffered, so has the health of American citizens.

Senator BOND. Now, Madam Administrator, if you would give your opening statement and then we will move on. Thank you very much.

STATEMENT OF CHRISTINE TODD WHITMAN

Ms. WHITMAN. Thank you, Mr. Chairman, and I appreciate the opportunity to be here once again to discuss the President's proposed budget for fiscal year 2004. I do, with your permission, Mr. Chairman, have a longer statement to submit for the record.

Senator BOND. Thank you, if you would.

Ms. WHITMAN. I would like to begin by first congratulating you on assuming the chair. I also want to thank you for your leadership and attention earlier this year to the funding issues we discussed as you were wrapping up the fiscal year 2003 appropriations. And all the members of the committee for that, your assistance was very much appreciated. I am looking forward, obviously, to working with you and members of the committee on the appropriations process to advance our shared goals of cleaner air, purer water, and better protected land.

The President's budget request of $7.6 billion for EPA provides the funding that we need to advance these goals and to meet the Agency's mission of protecting human health and safeguarding America's precious environment. It is a fiscally responsible request that recognizes the many competing priorities that, as you mentioned, Mr. Chairman, on taxpayers' resources, particularly with respect to homeland security, a time of war, without shortchanging our commitment to environmental protection.

This budget request also advances our commitment to building strong partnerships with State, local, and tribal governments. More than 40 percent of our budget request, some $3.1 billion, will go directly to provide assistance to our non-Federal partners.

I would like to take just a few minutes to point out some of the highlights of the President's budget request and then I would obviously be happy to take any questions that you might have. To promote cleaner air, the President's budget requests $617 million in the next fiscal year. These funds will allow us to improve air monitoring and analysis and provide $16.5 million in grants to States, tribal and local governments for air toxics monitoring. They will also allow us to raise to $23.9 million, a $3 million increase, our funding efforts to combat children's asthma.

In addition, the President's budget supports the administration's Clear Skies proposal. Clear Skies would require a mandatory reduction in power plant emissions of sulfur dioxide, nitrogen dioxide, and mercury by 70 percent. It is the President's most important environmental legislative initiative of this year and I look forward to working with you and the committee on getting it to his desk for his signature.

To promote purer water, the President's budget places a strong emphasis on our core water programs which have proven so successful over the years. We propose to increase spending on these programs by $55 million, for a total of $470 million. This includes $20 million in the Clean Water Section 106 grants and $12 million for public water system supervision grants for our non-Federal partners.

Our proposed budget also includes a $5 million increase in grants to help State, local, and tribal governments protect wetlands and $20 million to again fund the program we began last year to advance protection efforts in 20 additional threatened wetlands around the Nation.

This budget also seeks $850 million for the Clean Water State Revolving Fund, which is less than was requested last year, as has been pointed out by several Members. However, the administration is committed to financing the Clean Water SRF at this level through fiscal year 2011, 6 years beyond any previous commitment. This means that the long-term revolving level of the fund will be at $2.8 billion, a 40 percent increase over the $2 billion commitment made under the previous administration. We also propose to fund the drinking water SRF at $850 million a year through 2018, so it can revolve at $1.2 billion a year or a 140 percent increase over the previous goal of $500 million.

Given our proposed increase in our core water programs, the current fiscal restraints, and the variety of innovations we are pioneering, I believe that this budget does fully support the commitment to pure water across our country. To better protect the land, this budget includes two significant increases. The first, an additional $150 million for Superfund cleanup; these additional funds will allow us to start an additional 10 to 15 construction projects at Superfund sites nationwide. The second, a $10.7 million increase over last year's record request for brownfields programs, brings our request to $210.7 million.

Over the years, both the Superfund and the brownfields program have demonstrated their value, not just in restoring the environment and protecting the health of America's families, but in revitalizing neighborhoods and communities in every part of our country.

In addition to our traditional environmental mission, EPA plays an important role in homeland security. The President's budget requests $123 million for our homeland security efforts. These funds will allow us to carry on the work we are doing to help protect our Nation's water infrastructure and will give us the resources that we need to enhance our emergency response capabilities.

Given our time constraints, Mr. Chairman, I would like to just briefly mention several other areas that are fundamental to our ability to meet our mission, our ability to use the best available

science, and our ability to enforce the law. The President's budget requests a total of $607 million to develop and apply strong science to address both current and future environmental challenges.

It also asks for $503 million, the largest ever requested, for enforcement and a $21 million jump from our request last year. This will allow us to add an additional 100 FTEs to our enforcement efforts.

PREPARED STATEMENT

Mr. Chairman, I am confident that our budget request supports our obligation to be both good stewards of the Nation's environment and good stewards of the taxpayers' dollars. It gives us the resources we need to help ensure that we leave America's environment cleaner and healthier than we found it.

Thank you very much for your time.

[The statement follows:]

PREPARED STATEMENT OF CHRISTINE TODD WHITMAN

Mr. Chairman and Members of the Committee, I am pleased to be here to discuss President Bush's fiscal year 2004 budget request for the Environmental Protection Agency (EPA). The President's fiscal year 2004 budget request of $7.6 billion provides funding necessary for the Agency to carry out our mission efficiently and effectively—to protect human health and safeguard the natural environment. Given the competing priorities for Federal funding this year, namely the War on Terrorism and Homeland Security, I am pleased by the President's commitment to human health and environmental protection.

I would like to begin, Mr. Chairman, by emphasizing that the President's budget request for EPA reflects the Agency's commitment to cleaning, purifying, and protecting America's air, water, and land. The request promotes EPA's goals in a manner consistent with fiscal responsibility by strengthening our base environmental programs, fostering stronger partnerships, and enhancing strong science.

This Agency remains committed to working with States, tribes, and other entities to protect human health and the environment. Of the $7.6 billion budget, $3.1 billion would provide direct assistance to States, tribes, universities, local governments, and other partners. The President and I both believe that these partnerships are a vital part of effective environmental management and stewardship. Our budget request reflects that.

As EPA continues to carry out its mission, I look forward to building upon a strong base of environmental progress. This budget, Mr. Chairman, will enable us to carry out our principal objectives while allowing us to react and adapt to challenges as they arise.

CLEANER AIR

The budget requests $617 million to fund our clean air programs, thereby helping to ensure that air in every American community will be clean and safe to breathe. This includes $7.7 million more for modeling and analysis to strengthen the Agency's clean air programs. Furthermore, this budget supports the President's Clear Skies initiative, an aggressive plan to cut power plant emissions by 70 percent. Clear Skies legislation would slash emissions of three power plant pollutants—nitrogen oxide, sulfur dioxide, and mercury—by 35 million tons over and above what would be obtained under current law. Such emissions cuts are an essential component of improving air quality and thus environmental and human health. The Clear Skies initiative would build upon the 1990 Clean Air Act's acid rain program by expanding this proven, innovative market-based approach to clean air. Many counties could be brought into attainment with new ozone and particulate matter air quality standards based solely on Clear Skies. Clear Skies would significantly improve air quality conditions even in counties that would require additional emission reductions. Such a program, coupled with appropriate measures to address local concerns, would provide significant health benefits even as energy supplies are increased to meet growing demand and electricity rates remain stable. I look forward to working with you, your fellow members of Congress, and the President on this landmark legislation.

The budget also includes $16.5 million for air toxics monitoring grants to State, Tribal, and local entities, a $7 million increase from last year, aimed at improving our understanding of air toxics exposures to help implement EPA's comprehensive air toxics strategy. The budget dedicates $23.9 million, an increase of $3 million, to the Agency's efforts combating children's asthma. The successful Tools for Schools Program, which helps schools assess and improve the quality of air students breathe, and other such efforts will benefit from the added funding.

PURER WATER

EPA's budget request places a strong emphasis on core water programs to improve our water management framework, program implementation, and information sharing. The President's request boosts resources to States, tribes, and various entities to provide technical assistance, guidance, training, and additional funding. Our core water programs will increase by $55 million for a total of $470 million. This includes $20 million for Clean Water Section 106 Grants to help States improve implementation of the Clean Water Act (CWA) and $12 million aimed at enhancing State and Tribal drinking water program capacity through Public Water System Supervision (PWSS) grants. Other efforts reflected in the budget to provide clean and safe water to the American public include:

—*Additional Great Lakes Funding.*—This budget nearly doubles the Agency's Great Lakes commitment. EPA is requesting $15 million in support of the Great Lakes Legacy Act to bolster contaminated sediment cleanup activities. In 2004 the Agency plans to begin cleanup on two to three new sites. Some of this funding will also be used for assessment and analysis, resulting in additional cleanups.

—*Extending the Federal Commitment to the Clean Water State Revolving Fund (SRF).*—The President's budget is committed to funding the Clean Water SRF well above the previous administration's $2 billion average annual revolving goal. It finances the Clean Water SRF at $850 million through 2011 and increases the long-term revolving level by $800 million to $2.8 billion, a 40 percent increase over our previous goal. At present, there is $42 billion on loan or available for loans to States and tribes. The expanded commitment is projected to make $63 billion available over 20 years thus allowing States and tribes to finance an additional 15,000 projects over that period.

—*Extending the Federal Commitment to the Drinking Water SRF.*—EPA also proposes to fund the Drinking Water SRF at $850 million through 2018 so it can revolve at $1.2 billion per year, an increase of 140 percent above and beyond our prior goal of $500 million.

—*Protecting Wetlands.*—Due to a 2001 Supreme Court decision, tens of thousands of acres of isolated waters and wetlands may be subject to development that no longer requires a permit under the CWA. EPA's budget provides a $5 million increase for State and Tribal wetland protection grants to help them protect these waters and move the U.S. closer to no net loss of wetlands.

—*Helping States Address Nonpoint Source Pollution.*—The President's budget allows EPA to work closely with State water quality agencies, USDA, conservation districts, and others to accelerate national efforts to reduce nonpoint source pollution. In light of significant increases in Farm Bill resources, EPA will shift the program's emphasis in agricultural watersheds from implementation of pollution reduction projects to planning, monitoring, and assisting in the coordination and implementation of watershed-based plans in impaired and threatened waters.

—*Safer Drinking Water in Puerto Rico.*—To ensure public health protection, the Agency requests $8 million to design necessary infrastructure improvements to Metropolitano, Puerto Rico. When these infrastructure improvements are completed, EPA estimates that about 1.4 million more people will have access to safer and cleaner drinking water.

BETTER PROTECTED LAND

To immediately reduce potential human health and environmental threats, this budget continues our long-standing commitment to clean up contaminated sites. Superfund, funded at $1.39 billion, includes a $150 million increase over the President's fiscal year 2003 budget request to start an additional 10–15 construction projects at Superfund sites nationwide. By strengthening Superfund, one of our base programs, this budget will continue the progress we have made in completing cleanups at more than 800 National Priority List (NPL) sites. Cleanup has either begun or been completed at over 93 percent of Superfund NPL sites.

EPA is committed to building and enhancing effective partnerships that allow us to safeguard and restore land across America. To do so, this budget provides $210.7 million, $10 million above last year's funding request, for the Brownfields program, one of the administration's top environmental priorities. The Brownfields program will draw on these additional resources to enhance State and Tribal response programs that restore and reclaim contaminated sites. By protecting land and revitalizing contaminated sites throughout the United States, EPA continues to expand efforts to foster healthy and economically sustainable communities and attract new investments to rejuvenated areas.

HOMELAND SECURITY

EPA plays a vital role in preparing for and responding to terrorist or other intentional incidents because of our unique expertise and experience in emergency preparedness and response to hazardous material releases. To meet our obligation to protect America's homeland we are asking for $123 million and 142 FTEs. This request would allow the Agency to continue providing leadership and guidance for the protection of the nation's critical water infrastructure while upgrading and enhancing our emergency response capabilities.

The President's budget reflects EPA's role in protecting public health and critical water infrastructure in the event of terrorist or other intentional acts. To ensure the safety and integrity of America's water infrastructure, resources would be dedicated to working with States, tribes, drinking water and wastewater utilities, and other entities to assess the security of these water facilities and develop emergency response plans where appropriate.

Incorporated in this request are targeted investments to strengthen the Agency's readiness and response capabilities, including the establishment of a "decontamination team," state-of-the-art equipment, and highly specialized training for On Scene Coordinators (OCSs). Meanwhile, EPA will conduct research and provide guidance and technical support for Federal, State, and local governments, and other institutions in the areas of building contamination (chemical and biological) prevention, treatment and cleanup activities, water security, and rapid risk assessment.

This budget would also expand our radiological contamination detection ability across the country and enhance our capacity to provide near real-time biosurveillance information should a biological incident occur. In addition, this request provides resources for Antimicrobials Scientific Assessments, Acute Exposure Guideline Levels, IT management for vulnerability assessments, environmental crimes expertise, as well as resources to enhance the Agency's physical infrastructure security.

ENHANCING STRONG SCIENCE

Sound science is a fundamental component of EPA's work. The Agency has long relied upon science and technology to help discern and evaluate potential threats to human health and the natural environment. Much of our decision-making, policy, and regulatory successes stem from reliance on quality scientific research aimed at achieving our environmental goals. The budget request supports EPA's efforts to further strengthen the role of science in decision-making by using the best available sound scientific information and analyses to help direct policy and establish priorities. We have requested $607 million to develop and apply strong science to address both current and future environmental challenges. Our budget supports a balanced research and development program designed to address administration and Agency priorities and meet the challenges of the Clean Air Act (CAA), Safe Drinking Water Act (SDWA), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Food Quality Protection Act (FQPA), and other environmental statues.

This budget supports increases to funding for research of sensitive populations such as children and the elderly, our new Aging Initiative, programs such as Computational Toxicology research, which integrates modern computing with advances in genomics to help develop alternatives to traditional animal testing approaches, and the Agency's Integrated Risk Information System (IRIS). We propose to nearly quadruple our funding for the modernization and expansion of IRIS—an EPA database of Agency consensus human health information on environmental contaminants.

Additionally, the Agency is taking steps to ensure a high quality scientific workforce. To do so, we are requesting resources for the Science Advisory Board (SAB), the newly established Science Advisor, and the STAR Fellowship program. EPA will expand its support for the SAB, an independent council to Congress and the Administrator on scientific, engineering, and economic issues that underpin EPA policies. Like the SAB, the Science Advisor will be responsible for ensuring the availability and use of the best science to support Agency policies and decisions and advise the

Administrator. To help us educate new environmental scientists we have requested $5 million for the STAR Fellowship program. This grant program has funded some of the country's best scientists and engineers. In addition, we have asked to expand our post-doc initiative which has encouraged environmental scientists and engineers to join EPA.

ENFORCEMENT

Since EPA's inception nearly thirty years ago, many environmental improvements in our country can be attributed to a strong set of environmental laws and our efforts to ensure enforcement of those laws. State, Tribal, and local governments bear much of that responsibility. EPA partners with those governments and other Federal agencies to promote environmental protection and restoration. This budget requests $503 million, the largest amount ever and a $21 million increase over last year's request, for EPA's environmental enforcement program. These additional funds, coupled with our proposed 100 Full Time Equivalent (FTE) enlargement of the Federal enforcement workforce, would help the Agency maximize compliance and achieve environmental results through an integrated program of assistance and compliance assurance.

QUALITY ENVIRONMENTAL INFORMATION

Information gathering, processing, and delivering are fundamental to EPA's work because of our reliance on scientific and analytical data and our close collaboration with external partners. Our goal is to provide the right information, at the right time, in the right format, to the right people. To achieve this goal, improve the Agency's information infrastructure, ensure that the American public has easy access to environmental information, and expand E-Government in support of the President's Management Agenda (PMA), we have proposed an additional $30.5 million investment for a total investment of $202 million in EPA's Environmental Information office.

We will continue development of the National Environmental Information Exchange Network. The Exchange Network is an electronic method of sharing environmental data using secure points of exchange. The primary components of the Exchange Network are the National Environmental Information Exchange Network Grant Program and the Central Data Exchange (CDX). The grant program assists States and tribes in evaluating their readiness to participate in the Exchange Network, enhances their efforts to complete necessary changes to their information management systems to facilitate Network participation, and supports State information integration efforts. The CDX is the focal point for securely receiving, translating, and forwarding data to EPA's systems—the electronic reporting gateway to the Agency's information network. This year the CDX will service 46 States and at least 2,000 private and local government entities.

ENSURING SAFE FOOD

The President's request includes $119.0 million to help ensure that all Americans will continue to enjoy one of the safest and most affordable food supplies in the world. To do so, EPA will continue implementation of the Food Quality Protection Act (FQPA) which focuses on new science-driven policies for pesticides review, seeks to encourage the development of reduced risk pesticides that provide alternatives to older versions, and develop and deliver information on alternative pesticides/techniques and the best pest control practices to pesticide users. The Agency is also working to help farmers transition, without disrupting production, to safer pesticide substitutes and alternative farming practices. We will reassess existing tolerances to ensure food safety, especially for infants and children, and ensure that all registered pesticides meet current health standards.

A COMMITMENT TO REFORM AND RESULTS

The President's proposed EPA budget for fiscal year 2004 fully supports the Agency's work. The request demonstrates EPA's commitment to our principal objectives—safeguarding and restoring America's air, water, and land resources—by strengthening and refining our base environmental programs, fostering stronger partnerships, and enhancing strong science. As we look to the future, I am confident that this funding will ensure the Agency's fulfillment of our responsibilities to the American public.

With that, Mr. Chairman and members of the Committee, my prepared statement is concluded. I would be pleased to answer any questions you may have.

Senator BOND. Thank you very much, Madam Administrator.

CLEAN WATER SRF—PRESIDENT'S REQUEST

As both my colleague from Maryland and I indicated, water infrastructure funding is an extremely high priority. We oppose the reduction in the Clean Water State Revolving Fund. The EPA gap analysis concluded the United States will need $540 billion over the next 40 years. Other estimates indicate that these costs could top $1 trillion.

How does the administration justify reducing funding for clean water and when, where, and how are we going to be able to find the resources to meet our water infrastructure needs?

Ms. WHITMAN. Well, Mr. Chairman, the Clean Water State Revolving Loan Fund has reached the previous revolving goal of around $2 billion as a long-term annual revolving level. Rather than saying that is where we are going to stay and nothing further will be committed, the administration has, through this budget, decided to increase this commitment effectively to an annual long-term revolving level of $2.8 billion through 2011, which will provide $4.4 billion more over those 6 years.

When the legislation was initially enacted, there were no promises made and no assumptions made beyond the fact that this was eventually going to be something that was going to be taken over by the States. It is clear that there is always going to be the need of a Federal participation and there is a need for a substantial commitment to that, which is why the administration proposes taking it to 2011.

There are also a number of other areas where we are providing funds to State, local, and Tribal governments for water, clean water, and drinking water infrastructure needs, and we are working with the States and trying to be as flexible as possible to allow them to move dollars from some of their other programs to address what may be their most pressing need on water infrastructure.

But it is clear that we have dollar needs that are beyond any one part of government to meet. We had a conference—last month was it, Tracy?

Mr. MEHAN. Yes.

Ms. WHITMAN [continuing]. In January, bringing together the stakeholders of various water systems representatives, as well as ratepayers and other State experts, to talk about some of these needs and identify things that we could do beyond just the straight dollars.

But we believe that by providing a comprehensive program with dollars from a number of different sources, and the flexibility for States to apply these where their needs are the greatest, and by making the commitment to 2011, that we will in fact be able to continue to move this program forward.

COMBINED AND SANITARY SEWER OVERFLOWS

Senator BOND. We need to do something more than just continue. I appreciate your mentioning Tracy. I know he has probably fished in Christian County and knows the problem and knows the area that I spoke about earlier.

But while we are speaking about needs, the combined and separate sewer overflows, there are 772 municipalities that combine do-

mestic sanitary sewage, industrial waste, infiltration from groundwater, and storm water collected, and they are overloaded and they result in tremendous pollution when they are overloaded. What is the cost to address these needs and how should these needs be paid?

Ms. WHITMAN. What cost estimates do we have on sanitary sewer overflows, Tracy? I am looking to the expert on this one, Senator.

Senator BOND. Why don't you get that answer for the record.

Ms. WHITMAN. We would be happy to get you that answer for the record.

[The information follows:]

COST ESTIMATES OF SANITARY SEWER OVERFLOWS

The Clean Watersheds Needs Survey (CWNS) does not include a category specifically for correction of sanitary sewer overflows (SSOs). Therefore, EPA is using a model to develop a SSO estimate for the CWNS 2000 Report to Congress. The model is based on reducing wet weather overflows within a collection system to every 5 years. This is a level of control that could be reasonably estimated by a model at this time using available information.

The modeled estimate of SSO costs is $88.5 billion in January 2000 dollars. This is an estimate of the capital investment required. The actual of capital investment needed can only be determined by a case-by-case analysis of each system. The modeled estimate does not include the cost of improved collection system management and operation and maintenance, which can be a significant factor in estimating SSOs.

ARSENIC STANDARD

Senator BOND. Let me ask you another impossible question.

Ms. WHITMAN. It's that Princeton education.

Senator BOND. What steps is EPA taking to make sure that communities with water that exceeds the current standards for arsenic will be able to convert or rebuild the water systems to meet the——

Ms. WHITMAN. Actually, Senator, we are doing a great deal on that. We have put out a request for willing communities to serve as hosts for pilot projects. We have had about 117 responses. By the end of this year, we hope we will be beginning pilot programs, eight to ten pilot programs. Those will be in different States around the country.

Really what we are looking for is we are testing new technology. A great deal of new technology has come forward to us that purports to be effective in reducing arsenic and will give us the opportunity to find less expensive methods, a host of methods.

But we also recognize that there are geologic factors, there are different water concentrations, that impact how the arsenic is getting in the water. So we are looking for sites that represent both the different kinds of problems that we face on the ground and the different types of technology. We are providing additional money, with working with the Department of Agriculture. And we have also given a 3-year extension that is almost automatic for all the water companies to meet the goal. Then smaller water facilities can continue to get 2-year extensions, three more 2-year extensions. So we will give them time to meet these needs.

Senator BOND. Well, I was going to try to sneak in another question. But let me turn now to my Ranking Member, Senator Mikulski.

CLEAN WATER SRF—PROPOSED REDUCTION

Senator MIKULSKI. Well, as you can see, Madam Administrator, we are really focused on water quality. I am going to ask some of my questions and then leave others for the record because the Senate is working to draft a resolution in support of our troops. Today is a very tense day in the world. I know our thoughts are with our troops and the people with responsibility for leading them. I know, too, that you have been working very hard on homeland security.

Let me go, though, to the water infrastructure issues. I just want to pick up again on what Senator Bond said. There is a group called the Water Infrastructure Network and they estimate there is a funding gap of $23 billion for a year. GAO says over the next 20 years there could be $300 billion. EPA itself said that over the next 20 years demands for improved sewer and drinking water could outstrip current levels by $535 billion.

Now let me go to this year's request for appropriations. The budget cuts $500 million from the Clean Water SRF and $315 million in targeted water projects. How many water projects will not be funded as a result of these cuts and what will be, do you estimate, the impact on the environment?

Ms. WHITMAN. Well, Senator, we have no way of knowing how many projects will not be funded because we have not set out a budget. We do not have all the requests in and we do not know how the States will be using those dollars. These are dollars that the States get to put toward their needs. So it would be difficult for us to say that.

I think the important thing to remember here is this is a revolving fund. Over the long term, it will be revolving at better than $2 billion a year, which is where it was anticipated to be. And we are trying to make the commitment to ensure that that anticipation is going to be met in the out years as well.

Senator MIKULSKI. Could you tell me, what was the rationale of going from, with water projects, from $1.3 billion to $850 million? What was the rationale behind it?

Ms. WHITMAN. Again, the assumption was that when you added together the fact that we were extending the Clean Water SRF to 2011 and increasing the annual long-term revolving commitment to $2.8 billion, from the previous annual revolving level of $2 billion, that would address those needs, understanding that there was no way we were going to have all the money to be able to do all of the projects that were out there. By putting that together with the other pots of money that we have for States and the other increases there is a very, as we say at the Agency, robust water program. There are a significant amount of dollars available to States and local districts to meet their needs.

But the understanding is that we do not have all the money to do it.

Senator MIKULSKI. State and local governments are really hurting and they are hurting because of, one, their own budget issues, which I know you have heard about from the Governors. Number two, they are hurting because, particularly in the coastal states, they are tremendously impacted by these cuts on water and because of the increased costs of homeland security. But they are also

calling me and my colleagues about money to protect water infrastructure issues for homeland security. Then they see that their water and sewer projects are hurting.

So I do not know what to tell them and how we are going to help them.

Ms. WHITMAN. Well, I think it's important to note——

Senator MIKULSKI. If you were with the Mayors Council or the National Association of Counties what would you tell them on how the Federal Government is on their side and how we are going to help them?

Ms. WHITMAN. Well, I think it is important to note that we are proposing a $32 million increase in core water programs over the total budget of the Agency as it deals with water programs for States, local governments, and tribes. In addition, we are also increasing EPA's resources to provide guidance and technical assistance to local governments and to tribes.

Over the nearly 30 years of the Clean Water Act and the Drinking Water Act we have worked together at all levels and made incredible progress. There is no question that there continue to be extraordinary needs, but with an increase of $32 million overall in our core water programs and the guarantee of the revolving nature——

Senator MIKULSKI. Excuse me, but that $32 million could be used by about five States and use it right up.

There are other questions that I have, one of which is, I know in January EPA convened a conference on closing the gap with local officials on how to meet water and sewer challenges. Could I have for the record what came out of that meeting so we can have the best guidance of your own consultations?

Ms. WHITMAN. Certainly.

[The information follows:]

SUMMARY OF DISCUSSIONS FROM THE CLOSING THE GAP: INNOVATIVE SOLUTIONS FOR AMERICA'S WATER INFRASTRUCTURE FORUM [1]

JANUARY 31, 2003

INTRODUCTION

In an effort to facilitate and stimulate a national dialogue on the importance of finding innovative ways of enhancing and sustaining the Nation's water infrastructure which is vital for protecting public health and the environment, U.S. EPA Administrator, Governor Christine Todd Whitman, and the Assistant Administrator for Water, G. Tracy Mehan, convened a forum on Closing the Gap: Innovative Solutions for America's Water Infrastructure on January 31, 2003, in Washington, DC.

The emerging theme from the forum was that Federal, State and local governments and the private sector, working with the public should extend their efforts in supporting the necessary water infrastructure. This infrastructure is critical for protecting public health and the environment, and maintaining local and national economies.

Over the past several years, a number of studies have highlighted the need for substantial investment in the Nation's drinking water and wastewater infrastructure. (U.S. Environmental Protection Agency 1998, 2001, and 2002; General Accounting Office 2002; Congressional Budget Office 2002; Water Infrastructure Network 2000 and 2001; American Water Works Association 2001.) While the estimates of the cost of this investment vary greatly, each study concludes that a significant increase in spending above current levels will be necessary to meet this investment need. In response, the U.S. Environmental Protection Agency (U.S. EPA) convened

[1] This document is a summary of discussions during a public meeting and does not necessarily represent EPA's position.

a forum of water system experts from industry, government, and academia to discuss options for meeting this investment need. While Federal subsidies for investment in drinking water and wastewater infrastructure would help finance needed investment, Federal support will not address the entire need; therefore, the U.S. EPA wants to consider other innovative responses to ensure the investment need is met in an efficient, timely, and equitable manner. These approaches could include improvements in management systems and water use, a watershed approach to resource management, and efficient pricing of drinking water and wastewater services.

The forum was convened by the U.S. EPA Administrator, Governor Christine Todd Whitman, on January 31, 2003, in Washington, DC. The Assistant Administrator for Water, G. Tracy Mehan III, opened the forum and introduced Governor Whitman, who welcomed the participants and explained the purpose of the forum: to exchange information and views on innovative management and sustainable financing of the Nation's water and wastewater infrastructure. Following the Governor's remarks, the Assistant Administrator summarized the issues to be addressed during the day by two panels comprised of water system operators, regulators, environmentalists, and academics, focusing on four areas: better management, smarter water use, full-cost pricing, and a watershed approach. (The forum's agenda, the introductory remarks, and the list of panel members are appended at the end of this report.) The first panel focused on management of water and infrastructure assets. The second panel focused on infrastructure financing. In addition to 14 panelists, more than 250 people attended the forum. The forum concluded with an open discussion with the Assistant Administrator for Water and panel members.

The difference between the projected level of spending on drinking water and wastewater infrastructure and the projected level of spending required to meet future investment needs is referred to as the "gap." While the gap is a useful construct, it has limitations. The gap is a static estimate of a dynamic phenomenon; the level of investment required will change over time, depending on a wide range of variables and the actions of water and wastewater systems. The estimates are sensitive to the assumptions made regarding economic growth, population growth, and future spending on operations, maintenance, and investment. Finally, the high end estimates do not take into account how systems will use less water; adopt new, more efficient technologies; or better manage their assets.

On the other hand, the gap analyses focus attention on the additional resources—financial, technical, and managerial—necessary to ensure water remains clean and safe. The issues raised by the forum can be organized into the following themes:

—System management;
—Technology;
—Finance;
—Efficient pricing;
—Public education.

This report summarizes the discussion and presents the basic conclusions of the forum. It presents the issues raised by the two panels and the public discussion that followed. It does not represent EPA policy; rather, it presents the issues and ideas raised during the forum about approaches for addressing the water and wastewater infrastructure needs.

AN INTEGRATED APPROACH TO SYSTEM MANAGEMENT

Effective management integrates approaches across assets in watersheds and is coordinated with financing, including pricing, and public education to address clean water needs. Drinking water and wastewater systems need good management systems such as asset management and environmental systems management programs. Good watershed management can minimize the cost of future investment. Watershed management also requires regulatory flexibility to deal with a range of conditions that exist in different systems and watersheds.

Asset Management

Water systems need to conduct a full accounting of the costs to manage their assets, both for current operations and future investment needs. This accounting is also necessary to substantiate pricing water to cover the full cost to treat and deliver to consumers (addressed below). Asset management is an approach for an integrated assessment of future capital and operating needs and ensuring investments are made efficiently. By appropriately managing its assets, a system may be able to reduce its overall investment needs. The key focus of asset management is on improving the quality of information on which decisions are made. Asset management requires an information system that characterizes the risks associated with failure to repair or replace elements of infrastructure and a decision-making approach that

uses risk assessment to measure the benefits of alternative approaches to infrastructure rehabilitation and replacement. Asset Management processes and techniques can be adapted to the complexity and scale of the organization's systems. For more complex systems, asset management is neither inexpensive nor easy to implement, but it can be a cost-effective means of closing the gap.

Asset management is an inventory-based approach to planning. Systems must define the service levels required for end uses, from fire flow to residential water use. They then account for the physical assets in their inventory by assessing the age, condition, and importance of each asset. Age will give a sense of the condition of the asset, but its physical condition also must be evaluated. Condition assessments are focused on parts of the system that are most critical to continuing successful provision of the services. Physical inspections (such as walking through pipe or sending in cameras) may be needed. Other means also may be available. For example, systems can measure iron pick-up in the water in the distribution system over time as is done in England, which would indicate potential corrosion of the iron pipes. Use of operational data and statistical approaches also can be used to identify trends in performance.

Systems also must determine how critical the asset in question is. For example, not all pipe of similar age and condition needs to be replaced at the same time. In some cases, a pipe break would have severe consequences: it could disrupt service for thousands of customers for several days, and it could be very expensive to fix. In other cases, a break can be repaired in several hours, with little impact on customers. By classifying how critical each asset is to service provision, a system can focus its investment where it is needed most.

Based on this assessment, systems can then plan for the replacement of its assets. As with pricing, this may require changes in culture and attitude. In many cases, the approach towards public infrastructure is to build it and operate it, with minimal maintenance, until it wears out. Asset management entails a more proactive approach, looking at the asset over its entire life cycle. In addition to technological needs like fiber optics, cameras, and flow meters, system operators need training to implement asset management. Asset management requires a significant amount of information, and a major commitment on the part of the system to collect the data and manage the system. Seattle with more than 1,000 employees was able to commit four staff to asset management. Smaller systems may require outside assistance.

Watershed Management

A watershed approach that involves both institutional and physical integration of wastewater management, storm water management, water use, and land use could lower costs all around. A watershed approach would entail broad stakeholder involvement, hydrologically defined boundaries, and coordinated management across all aspects of policy that affect water. Through increased efficiency in water use and water reuse, water withdrawals can be lowered, reducing the need for new source development and reducing the amount of wastewater to be processed. By protecting source water, it may be possible to reduce the need for expensive treatment plants. Some regionalization of systems, through actual consolidation; sharing of management resources, computer systems, and information; or interconnection, can help lower costs for small systems and enhance the management of the watershed.

One example of this type of integration happened in 1974 in the United Kingdom. Responsibility for all water and sewer policies was vested in ten new authorities that were defined by hydrological boundaries. The oversight of these regional authorities by national agencies concerned about water quality and the cost of service created the conditions for strong asset management policies. The United States is not the United Kingdom; therefore, there will not be a real opportunity for national watershed planning. But there are opportunities within States, as some States are moving forward in consolidating entities into larger units for decision-making on water beyond political boundaries.

Regulatory Flexibility

The regulatory regime also can have an impact on system planning and watershed management. Inflexible regulations can lead to inefficient management of the watershed. For example, controlling and managing non-point sources of pollution are very important to improve water quality and will require significant attention. But these sources are not the focus of current regulations, which force systems to put most of their resources towards curbing point sources of pollution. Increased regulatory flexibility may let systems meet clean water and drinking water standards at a lower cost. For example, Seattle was able to save a significant amount

of money when it was allowed to invest in source water protection rather than install a filtration plant to comply with drinking water standards.

Regulators tend to favor the traditional approaches, even though new approaches can be more cost effective. Seattle has experimented with using swales on both sides of a street and has succeeded in reducing runoff by 97 percent. This kind of "thinking outside the box" may be expensive at the beginning, but can produce significant savings in the long run from reduced maintenance costs.

The Role of Technology

Water infrastructure ranges from relatively simple pipe to complex treatment facilities. The need to replace infrastructure is the source of the funding need; technological innovations may provide a means for reducing the cost of the future investment. The use of fiber optics can help assess the condition of buried infrastructure, as has been done in the United Kingdom. Cleaning out and lining old pipes provide low-cost alternatives to replacement of distribution mains and sewer lines. New pipe material that reduces leaks will reduce water demand. Computers can free operators from monitoring dials to managing assets and other tasks. New membrane technologies will be useful, at least on a small scale. A host of decentralized wastewater technologies are very cost-effective for small communities compared to conventional sewers. Some of these technologies can be blended with conventional systems for urban and suburban areas.

Not all promising innovations are complex technologies. Coca-Cola reduced water consumption by 25 percent in a matter of days by capturing wastewater onsite and using it to wash the company's trucks and crates. Other small technology changes, like replacing an old chlorinator with a state-of-the-art model, can yield significant cost savings as the Narragansett Bay Commission discovered.

However, regulators, engineers, and drinking water and wastewater system operators tend to be conservative when it comes to adopting new technologies. The technology must be in use for it to even be considered. Laboratory testing likely will not be adequate to encourage operators to adopt new technologies; rather, full-scale demonstrations may be necessary. The Federal Government plays an essential role in promoting research, development, testing, and evaluation of new technologies and then in disseminating information about proven technologies. This role will remain important in the future.

FINANCING INFRASTRUCTURE INVESTMENT

EPA's gap analysis (U.S. EPA, September 2002), like other studies, focuses on projected estimates of the cost of future investment in water infrastructure without identifying the source of funds to pay for this investment. While not the focus of the forum, funding was an underlying theme. Clean and safe water is a public good; therefore, the central question is to what extent taxpayers or rate payers will pay for the needed investment. The forum raised several issues with regard to the means of financing infrastructure investment.

First, the drinking water and wastewater systems themselves—and by extension, their customers—will pay for the vast majority of the investment. Some argue that systems should move towards full-cost pricing that accounts for needed future investment to generate the necessary funds and to impart a clear signal of the cost of water to their customers. As mentioned earlier, many systems do not adequately account for their investment needs and charge rates below cost; therefore, they generate insufficient revenue to finance investment, and will need to increase their rates. Because water consumes a relatively small share of household income, most households may be able to afford a rate increase. To minimize rate payer backlash, systems must back-up rate increases with solid information on costs of service. Programs also will need to address affordability issues through mechanisms such as lifeline rates for low-income customers. It was also mentioned that accounting/financial reporting is needed to regulate the industry economically to press the case for proper rates.

Second, the Federal Government will continue to play an important role. Appropriate incentives can promote improved management practices. The Federal Government can provide incentives to encourage systems to implement asset management, full-cost pricing, technological innovation, and water saving programs. The Federal Government also remains an important source of funds for water and wastewater infrastructure improvements. Some panelists called for additional resources by the Federal Government, including an increase in the Federal contribution to the Drinking Water State Revolving Fund and the Clean Water State Revolving Fund. Several panelists recommended that States should leverage these funds to generate additional resources. Some States leverage these funds, others do not. One controversial suggestion was the establishment of a Federal water trust fund, with dedicated

funds tied to a water-related fee. Other panelists believed that increased Federal funding should not be the answer.

To encourage sustainable financing, some argued that steps should be taken to level the playing field so that anyone interested in investing in public infrastructure for the public good has access to tax-exempt financing, which often is limited even for public utilities. This access can be provided by lifting the restrictions on tax-exempt financing for many communities and allowing private activity bonds. Municipal bond reform could generate additional funds by providing preferential tax treatment for water-related bonds issued by both publicly or privately owned systems. "Green" bonds—below market interest rate bonds to support water infrastructure and other environmental programs—also could be created to finance water projects. Also, many systems cannot float bonds for political or rating reasons, limiting access to capital markets.

Creative measures are available for systems' rate structures as well. Connecticut and Pennsylvania allow water utilities to recover infrastructure investment through monthly bills for a particular period of time. The Elizabethtown Water Company can segment their market by charging for specialized services (e.g., insurance for line breaks between the curb and the house); these funds can then be used to finance infrastructure investment.

The issue of financing sustainable infrastructure can be viewed in the framework of capacity development. While some systems may be able to meet their needs through a combination of increased rates, improved water use, and asset management, other systems—especially low-income small systems—may not be able to implement improved management techniques or raise sufficient funds. Many low-income small systems may not have the managerial, technical, or financial capacity to meet the investment challenge or national environmental and drinking water standards. Often these systems may not know what their needs are; in some cases, the State or other regional authority assesses the needs of the system and makes recommendations. Regionalization provides a means of upgrading assets at lower costs. For regionalization to succeed, a third party may be needed to provide an unbiased analysis of the situation. Regionalization will not always be the answer, however. Small, isolated systems should be screened to determine whether a structural solution is warranted, or if technical or financial support would address the system's needs.

THE ROLE OF PRICING

Pricing water appropriately is important for water providers and consumers to get the right market signals. Like other utilities, drinking water and wastewater systems are typically either regulated monopolies or publicly owned. One of the key challenges facing systems under these circumstances is to provide their services in an economically efficient manner. Prices play an important role, but the price signal often is muted in publicly owned systems or regulated monopolies. The price of drinking water and wastewater services is rarely equal to marginal cost (i.e., the cost to the system of producing an additional unit of water), and is often below the average cost per unit of water service (implying some form of subsidy).

It was discussed that switching to a pricing approach that recovers the full cost of water and wastewater services could address the infrastructure funding gap in two ways. First, full-cost pricing would tend to increase system revenue. Moving to full-cost pricing may require changes in accounting and management to ensure the rate covers the cost of future investment needs as well as current operations (see the discussion of asset management, above). With these changes in place, the revenue generated through full-cost pricing can provide systems with much of the funding necessary to finance infrastructure investment. Second, full-cost pricing can reduce future investment needs. The elimination of rate subsidies (explicit or otherwise) will send a clear signal of the value of water to consumers. The clear price signal can play an important role in demand-side management, encouraging conservation. Reduced demand, in turn, can reduce or delay planned investments.

This dual effect of raising funds for investment and reducing the level of investment required is a theme that was present throughout the forum. The gap is analogous to the open jaw of an alligator. The top of the jaw represents the projected investment need over the next 20 years, which, if not addressed, threatens to imperil the service level of existing water infrastructure. The bottom jaw represents the projected level of funding available to finance this investment which, if not sufficient, will not mobilize the necessary resources. The challenge for systems (and for public policy) is to close this jaw. It was argued by some that full-cost pricing works on both the top and bottom of the jaw, generating funds for investment, and reducing the amount of investment required.

Appropriate economic incentives can encourage efficient allocation of resources for both publicly and privately owned water systems. Because of the requirements of the market, privately owned systems are more likely to use full-cost pricing. Privately owned systems tend to charge higher rates than publicly owned systems, because they must provide a return for investors and pay taxes. (Privately owned systems also are regulated by State public utility commissions, which approve their rates and hence provide political support not necessarily available to publicly owned systems.) Full-cost pricing helps make privately owned systems self-sustaining by providing them with the means for necessary infrastructure investment.

It often is assumed that private companies are very good at project delivery and management. But privatization is not a panacea; it is not appropriate in all circumstances and must be evaluated on a case-by-case basis, considering service received for the price paid. Private firms can produce good results, but a bad contract can leave a community worse off. Whether publicly or privately owned, drinking water and wastewater utilities must recognize both the public service and business aspects of their systems. Some argue that publicly owned systems can benefit by using private sector management approaches, including full cost-pricing and asset management. The public has demanded input into decisions of privately owned systems regarding traditional public-sector issues like land use. A privately owned or operated system must provide service that is at least as good as a publicly owned and operated system. If service is not as good, it will be penalized; if it performs better than the public system, it may benefit.

The issue raised by pricing is not simply one of ownership, but the incentives facing the system. Many publicly owned systems recover their costs through full-cost pricing. On the other hand, some privately owned systems do not face the incentive needed to adequately plan for investment. For example, a smaller privately owned system did not adequately plan for investment until it was acquired by a larger company and changes were made that affected how management made investment decisions. Both publicly and privately owned systems will need to address issues raised by more efficient operations, including operators' fear of job loss, changes in relationships with unions and other institutions, and the cost impact for households.

Some systems have moved to full-cost pricing, and many systems have dramatically increased rates. For most households, water remains relatively inexpensive, comprising less than 1 percent of household income. However, many households will not be able to afford higher water rates. Furthermore, some households may be able to reduce water expenses through conservation, but others will not. For example, some systems have found that successful conservation programs can create revenue shortfalls, necessitating rate increases. As consumers had already implemented conservation measures, they could not further reduce their water use in response to the rate increase, and they saw their monthly water bill increase. The increased expenses can have a substantial impact, especially on low-income households which may have an inelastic demand for water and may not be able to reduce consumption further. Rate reduction programs are needed to cushion the impact of rate increases on low income households. These programs may include direct assistance for low-income households, similar to the U.S. Department of Health and Human Services' Low-Income Home Energy Assistance Program (LIHEAP). They also may include the use of lifeline rates or other rate structures that can reduce the cost of water to low-income households.

PUBLIC EDUCATION

While full-cost pricing may be a necessary component of addressing the funding gap, public education is needed to explain to rate payers the need for rate increases. In fact, the move to full-cost pricing is itself part of public education, as it provides information to rate payers about the cost of the provision of drinking water and wastewater services. But other educational efforts also are needed. The need for rate increases may be promoted for water systems and accepted by consensus because they systems provide a high quality, reliable product at a relatively low price. Household spending on water is a fraction of what is spent on cable television, telecommunication services, or even bottled water. With public education and outreach, customers may be willing to pay higher rates for maintaining and improving their water infrastructure. Unfortunately, many of these improvements, such as replacement or repair of pipes, are installed below ground and cannot be seen or appreciated by the public. There are ways that utilities can create positive value as part of their infrastructure projects by making people aware of the importance of the projects.

On the other hand, marketing water can be difficult. Regulated systems may not be allowed to expend funds to market because they are monopolies. Publicly-owned

systems may find it politically difficult to launch an advertising campaign as well. And while households spend a larger share of their income on other goods and services, the comparison of water costs to other services is not simple. Furthermore, systems will ask customers to pay higher rates to maintain what may be perceived to be the same level of service (reliable, safe water), rather than to receive a new improved service in the form of higher quality water or more reliable but less (conserved) water supply. Finally, the public usually pays attention only when things go wrong. Utilities need to find opportunities to promote themselves when things go right.

CONCLUSION

Drinking water and wastewater systems, local regulators, the States, and the Federal Government will face many challenges over the next 20 years as they try to meet the Nation's water infrastructure investment need. Innovative responses are needed by both water systems, government authorities and consumers to close the gap. These may include the use of changes in system management, the adoption of new technologies, increases in external funding and full-cost pricing by systems. Public education also can play an important role as systems, the States, and the Federal Government all address the Nation's water infrastructure need. These responses can be divided into managerial, financial and technical approaches for closing the gap.

SUGGESTIONS DISCUSSED BY FORUM PARTICIPANTS FOR MANAGERIAL RESPONSES

Promote Asset Management Through Incentives and Assistance.—Integrated approach to management of water systems can help reduce the need for future investment in infrastructure. Asset management can help systems plan for needed investment and ensure the investment is timely and cost-effective. While asset management involves a substantial commitment by systems to develop and maintain information about the age, condition, and criticality of their systems, it presents an important source of potential savings. The government may play an important role by facilitating the adoption of asset management and by providing technical assistance to help systems implement an asset management program.

Integrate Watershed Management with Asset Management.—An integrated approach to the management of an entire watershed also can help reduce the cost of future investments. A watershed approach that coordinates management across all aspects of policy that affect water can help ensure systems provide water that is clean and safe at the lowest possible cost. This may require additional regulatory flexibility by both the Federal Government and State regulators.

Support Public Education on Water Value and Costs.—An important component of effective system management will be public education. To close the infrastructure gap, customers may be asked to pay higher rates and to take steps to use water more efficiently. Water systems need to inform their customers about the overall value of water as well as the systems' investment needs to garner their support for the steps needed to meet the Nation's water infrastructure needs.

SUGGESTIONS DISCUSSED BY FORUM PARTICIPANTS FOR FINANCIAL RESPONSES

Provide Incentives from Government.—Some argued that the government can play an important role in helping systems adopt full-cost pricing by providing incentives to encourage its adoption, technical assistance with rate design, and financial assistance to help cushion its impact on low-income households.

Continue Low-interest Government Loans.—The public sector will continue to play an important role in funding water infrastructure investment. The Drinking Water and Clean Water State Revolving Funds will continue to be an important source of funds for systems, providing loans at below-market rates.

Increase Leveraging Funds by States.—States may leverage the funds more aggressively to increase the funding available for investment in infrastructure; it was argued by some that the Federal Government should consider an increase in the level of capitalization of these funds.

Establish a Water Infrastructure Trust Fund.—The idea was brought up that the Federal Government also may want to consider the establishment of a water trust fund, funded through water-related fees.

Change Tax Laws to Increase Access to Capital.—Some participants brought up that other changes, including changes in tax laws, should be considered to level the playing field and increase systems' access to capital markets.

Price Water at Full Cost.—Discussion included the idea that full-cost pricing could be one of the main tools available to systems to help address future investment needs. Full-cost pricing can help raise the revenue needed to finance infrastructure

investment; it also may reduce the amount of investment required by encouraging efficient use of water.

Incorporate Equity Considerations for Low-income Households—Some form of assistance may be needed to cushion the impact of rate increases on low-income households, through either innovative rate design or direct financial assistance.

SUGGESTIONS DISCUSSED BY FORUM PARTICIPANTS FOR TECHNOLOGICAL RESPONSES

Research and Develop Innovative Technologies.—New technologies may help reduce the cost of replacing existing infrastructure. Systems may need to explore innovative technologies when upgrading their infrastructure and managing their assets. Additional research and development, including full-scale demonstration of new technologies, can help reduce future investment needs. The public sector can play an important role in promoting this research and in disseminating its results to systems.

SUMMARY

The integrity of the Nation's water infrastructure is critical to public health, environmental quality, and economic vitality across the country. The forum focused on the challenges faced by water suppliers, wastewater managers, State and local officials, the Federal government, and consumers in addressing the growing needs to maintain, replace, and improve water infrastructure. In addition to identifying some of the myriad of challenges facing water systems, it fostered a discussion of innovative approaches for meeting these challenges. New management practices, consolidation, asset management, water conservation, public-private partnerships, environmental watershed management, full-cost pricing, and consumer education are some of the promising tools available to help meet future investment needs.

REMARKS OF GOVERNOR CHRISTINE TODD WHITMAN TO THE NATIONAL WATER INFRASTRUCTURE FORUM

Thank you, Tracy (Mehan), for that introduction and for convening this forum. I hope this meeting will provide the opportunity to explore—and perhaps even begin to solve—some of the challenges posed by America's aging water infrastructure.

About 2,300 years ago, the Roman Empire began construction of its amazing aqueduct system. By the time the system was completed—some 500 years later—Rome's 260 miles of water infrastructure were capable of delivering 85 million gallons of water a day to the 1 million citizens of the ancient city.

Yet, within about 100 years of the creation of this engineering marvel of the ancient world, Rome's ability to maintain its water infrastructure began to erode. The aqueduct system fell into disrepair, and eventually people who once had their water piped right into their homes had to dig wells and haul water from nearby rivers and lakes.

The decline of Rome's water infrastructure and the fall of its Empire followed parallel tracks. For a whole host of reasons, that's history we do not want to repeat—and we won't.

A safe, affordable, and abundant supply of drinking water is something we take for granted in America. We turn on the tap, and we don't have to worry whether what comes out will make us or our families sick. But there's no doubt that America's water infrastructure faces some critical needs in the years ahead.

The full dimension of those needs is outlined in the Clean Water and Drinking Water Infrastructure Gap Analysis EPA released last fall. Our report takes a good, hard look at what America's water infrastructure needs will be through the year 2019.

This report looks at infrastructure in the broad sense—everything it takes to deliver clean, safe water to America's homes and businesses and then remove and treat the waste water that results. From the water intake valve to the tap, from the kitchen sink drain to the outflow at the treatment plant, we looked at the entire picture.

As you know, the funding gap we identified from now through 2019 is significant. Assuming no growth in revenues, the total needed for clean water—in both capital and operations and maintenance—exceeds $270 billion. For drinking water, the gap approaches $265 billion.

The size of the projected gap can be reduced substantially if we project real growth in revenues over the same period. Assuming a 3 percent annual real growth in revenues, for example, the gap shrinks by nearly 90 percent on the clean water side and by about 80 percent on the drinking water side.

The actual gap may end up somewhere in between these numbers—and there are an enormous number of considerations that will go into determining exactly how big the gap will be over time. But what's important now is that we begin the discussion of how to close the gap with a better understanding of what the dimensions of the challenge really are.

As I said when I announced this forum last September in Chicago, the purpose of the forum is not simply to ask for more money from Washington. Instead, we've convened this meeting to give all the interested parties the opportunity to discuss how best to close the gap.

One thing is clear—the challenge we face is clearly beyond the ability of any one entity to address. It will require the participation and contribution of government at all levels, utilities, and users.

There's no doubt that this administration is committed to doing its part. We will continue to ensure the State Revolving Funds are robust and up to the job.

After all, history has shown the SRFs to be the most effective tool we have to support your work. To date, the Federal Government has provided more than $19.7 billion in capitalization funding to States for the Clean Water SRFs and $3.6 billion for the Drinking Water SRFs.

Because of the revolving nature of these funds, each Federal dollar invested leverages considerably more loans and assistance than would a traditional grant program. In fact, for every Federal dollar invested in the SRFs, we see a return on investment of $1.90. In addition, the SRF program gives the States flexibility to direct money to where it is most needed.

The Bush Administration is committed to ensuring that the Federal Government does its fair share, and I know Congress is also considering various methods to address the situation. Of course, States, municipalities, and utilities will also need to do their part. Given the gap, we estimate that utilities will have to increase their own investment at an annual real rate of growth of 3 percent.

Of course, money alone is not the answer. We need to tap into the creative, innovative thinking of the water community to find less costly and more efficient ways to narrow the gap. Only by embracing innovations that have been resisted by some in the past can we make the progress we need.

Adopting new, innovative management practices is one way to help ensure the resources are available to meet our future infrastructure needs. Such practices include taking an asset management approach, forging a new public-private partnership, consolidating ownership or management, or starting an Environmental Management System.

Another area of innovation that holds promise is reaching across existing local political boundaries to promote intergovernmental cooperation across entire watersheds. There are 168,000 public drinking water systems in the United States and 16,000 waste water utilities. EPA will continue to encourage utilities to consider ways to work together to achieve economies of scale or to ensure that they are working together to promote the health of the watershed they share.

The innovations we need should also include efforts to promote conservation and smart water use, not just by the user, but by the utility as well. A faucet in someone's home that leaks just a drop every 3 seconds wastes more than 1,000 gallons of water a year. But a leaky water delivery system can waste billions of gallons of water annually.

In the Detroit area, for example, it is estimated that every year more than 35 billion gallons of clean, fresh water leaks from water delivery pipes before it ever reaches the consumer. That's enough water to fill Yankee Stadium to overflowing more than 130 times. And while that probably wouldn't bother Tiger fans—or this Mets fan—if it would keep the Yankees out of the playoffs, there's got to be a better way.

When we come down to it, that's why we're here today, to begin to find the better way to close the water infrastructure gap, not just through a flood of money, but through a tidal wave of good, creative ideas.

The great Roman poet, Horace, who enjoyed the water brought to his city by the aqueducts I spoke of earlier, said, "To have begun is half the job: be bold and be sensible." That would be my charge to you. We have begun the job of addressing the infrastructure gap by defining it. Now is the time to be both bold and sensible in tackling the next half of the job that confronts us.

I look forward to learning from Tracy the results of this forum. And while neither Rome—nor its water infrastructure was built in a day—I believe today's efforts will help ensure that here in the United States, we will continue to provide all our people with a clean, safe water system that is the envy of the world—both ancient and modern—for many decades to come. Thank you.

SUSTAINING OUR WATER INFRASTRUCTURE

REMARKS DELIVERED BY G. TRACY MEHAN III, AT THE EPA FORUM ON CLOSING THE GAP: INNOVATIVE RESPONSES FOR SUSTAINABLE WATER INFRASTRUCTURE

JANUARY 31, 2003

On behalf of the Office of Water, I want to thank you for your willingness to participate in this crucial dialogue on the future of America's water infrastructure.

First, I want to thank the Administrator for convening this forum. Her leadership on this issue is very much appreciated by all of us in the national water program, especially her focus on innovation as one element of the solution to our investment needs in the years ahead.

Let me build on the Administrator's introduction and sketch for you some of the promising developments in the public and private sector that will enhance our management of the infrastructure that ensures the protection of our water and the delivery of safe drinking water. These innovations will either reduce the need for infrastructure or bring down the costs of infrastructure—and hence "close the gap", the title of today's forum.

Before we talk about ways of closing the "gap," let's talk about what the "gap" is. This term "gap", I'm afraid, may be more a term of bureaucracy than a commonly understood phenomena. Two years ago, *U.S. News and World Report* (6/12/00) called it the "sickening sewer crisis" in an article that began with a description of an ordinary suburban family waking up to a basement flooded by a broken sewer line. *U.S. News* suggested that, without preventive action, this scenario represents our future all across America. Other magazines and newspapers across the country have published a number of stories on the emerging problems in the Nation's plumbing.

EPA's report issued a few months ago was a bit more clinical.[1] We talked about "a gap between projected clean water and drinking water investment needs over the 20-year period from 2000–2019 and current levels of spending." Wall Street might call it an "investment gap." An economist might even call it a "pricing gap." There are also different estimates of the size of this gap—the magnitude of our investment needs. But whatever our numbers and whatever our language, the problem we're here to discuss today is that our water and sewer systems are aging—even as our population is growing; and our clean water and drinking water rules are tightening.

Our hope is that today's forum will cover a range of solutions that will speak to everyone—whether you're from a small system facing new drinking water standards requiring treatment for the first time, a large system with a billion dollar combined sewer overflow (CSO) repair bill or a system in the arid West facing the worst drought in a decade. Today's challenges demand a multi-faceted approach to managing and sustaining our infrastructure assets. Not only are we going to have to manage better in both the public and private sectors, we're going to have to use less water and, yes, pay an adequate price for our infrastructure in our role as ratepayers. There is, as the saying goes, no free lunch in our future.

The subjects I'd like to offer up for today's discussion include (but are not limited to) the following four areas.

Better Management.—Better management practices like asset management, environmental management systems, consolidation, and public-private partnerships offer significant savings.

Smart Water Use.—We need to create incentives to conserve and to protect our sources of drinking water.

Full Cost Pricing.—Full cost pricing and rate restructuring can capture the actual costs of our water systems, raise revenues and provide incentives to conserve.

The Watershed Approach.—We need to use a watershed approach, looking more broadly at water resources in a coordinated way.

Better Management

The 1996 Safe Drinking Water Act Amendments stressed capacity development—the proposition being that when drinking water utilities possess adequate technical, financial, and managerial capacity, they are better able to provide safe drinking water. States are using the capacity development provisions in the law to improve utility management. More recently, in the Office of Water, we've been looking at the potential for asset management techniques to reduce a utility's long-term costs and improve performance. This is a structured management approach that is based on information about the condition of a system's assets. Knowing the condition of your assets and linking that information to inventory, service levels, useful life, and re-

[1] EPA–816–R–02–020, *The Clean Water and Drinking Water Infrastructure Gap Analysis*, Office of Water, September 2002. Website: http://www.epa.gov/owm/gapreport.pdf.

pair costs will provide the information needed to make optimal management decisions—including decisions about funding future renewal and replacement.

Recently, working with Australian and U.S. consultants, the Orange County Sanitation District approved an investment of $22–38 million, over a 6-year period, to implement its Asset Management Plan, as part of a $2 billion investment strategy over the next 20 years. This front-end investment in manpower, planning and assistance, information systems, software, training and other process changes will yield a 20-year return on investment (ROI) in the range of 9:1 to 16:1. This translates into a reduction of $150 million in their capital improvements program and a total life cycle cost savings of at least $200 million.

This 10 percent savings from just one utility, admittedly a very large one, is equivalent to the current full amount of the Federal contribution to California's Clean Water State Revolving Fund (SRF) over 2 years!

Environmental management systems (EMS) are another important tool to help utilities manage better and reduce costs. The EMS approach involves a comprehensive assessment of an organization's impact on the environment followed by specific targets and objectives and continual checking to make sure the desired results are achieved. EMS and asset management can complement each other and give utilities a powerful way to continually manage for better results and greater efficiency.

EPA has also looked at cost savings that can be achieved by small systems through consolidating ownership or management with other small systems. Although consolidation is not always a viable option, by combining resources, systems can achieve a more sustainable level of technical, financial and managerial capacity. For instance, the system serving the city of Panora, Iowa consistently violated the public health standards for nitrate in drinking water. Rather than incur the cost of installing treatment, the city decided to purchase raw water of a higher quality from a neighboring system. In addition, the city pursued a partnership agreement with another neighboring system to assist with operating and monitoring its water treatment plant. This agreement enabled the city to take advantage of the other system's technical expertise and reduced the need for on-site operators.

Public-private partnerships have helped a number of communities provide water and wastewater treatment at reduced cost. Whether providing basic wastewater treatment supplies (e.g., chemicals), maintaining a portion of the collection or treatment system under a contract, or providing contract operation and maintenance for all of a municipality's facilities, the private sector can serve an important role in the effort to control water pollution across the country. Over the past decade, we've seen an increased interest in using the private sector to meet water and wastewater funding needs. In fact, a Presidential Executive Order (12803) was issued in 1992 directing Federal agencies to remove obstacles to privatization, which offers one approach to improving the efficiency and sustainability of our drinking water and wastewater systems.

The ultimate key to success lies in better management—irrespective of ownership.

Smart Water Use

In addition to managing better, we're going to have to learn to use water more efficiently. At the end of 2002, nearly half of the continental United States was in drought. In addition to reduced rainfall, most of our water systems also face a growing population and a growing economy. Moreover, we're reaching the end of the era in which we could always expand water supply—the era in which we built large dams and conveyance systems. Just this month, Secretary of Interior Gale Norton had to step in to reduce California's withdrawals of water from the Colorado River. As our waters are more stretched across competing demands, our supply side approach will have to be coupled with demand side management. During the next 100 years, we're going to have to become experts on the demand side of the equation: conservation, recycling, reuse and improved water-use efficiency. If we can reuse our treated wastewater for beneficial purposes such as irrigation, manufacturing or groundwater recharge, the environmental and economic benefits are manifold. If all communities would implement metering to measure their consumption, then there would be a basis for price incentives to begin to work. For example, Westfield, Massachusetts went from no meters to a fully metered system. The installation of meters enabled the city to set a metered water rate that allowed for complete cost recovery of its existing and projected expenses. Also the city found that it could abandon plans to develop a new surface water source, as its customers began to conserve water. Imagine the water savings if cities the size of Chicago and Sacramento fully metered their systems.

Metering and reuse aren't the only ways to save water. Many of you probably know the other options available for enhancing water efficiency: plumbing retrofits, leak detection and repair, irrigation improvements, water-saving appliances, land-

scaping measures and public education. Using these measures, a number of American cities have reduced their water use by as much as 20 percent and still haven't exhausted all their conservation options. Many of these cities are featured in our publication, Cases in Water Conservation.[2]

EPA has a number of resources available to assist water efficiency efforts. We published the *Water Conservation Plan Guidelines* in 1998 for public water systems and we sponsor a voluntary partnership program for businesses and institutions called WAVE (Water Alliances for Voluntary Efficiency). On our website[3] you can also find a number of other publications and links to our water conservation clearinghouse and software.

Full Cost Pricing

In addition to managing better and using less, I believe we're going to have to pay more of the actual costs of maintaining our water systems over time. The Congressional Budget Office recently issued a report entitled *Future Investment in Drinking Water and Wastewater Infrastructure*[4] which points out that increased future infrastructure costs will either have to be paid by taxpayers or ratepayers. To quote CBO: "Ultimately, society as a whole pays 100 percent of the costs of water services, whether through ratepayers' bills or through Federal, State, or local taxes." CBO raises strong efficiency arguments for ratepayers picking up the increased costs rather than taxpayers. Certainly the most direct route for funds to flow is straight from the ratepayer to the utility. In addition, we know that when prices rise, quantity demanded falls. Moreover, in this same report, CBO estimates that combined water and sewer bills currently average 0.5 percent of income in this country (i.e. one-half of 1 percent of average household income). There appears to be room for higher water bills among most households. In a recent draft report from the Organization for Economic Cooperation and Development,[5] the United States had the lowest percentage of income going to water charges among the 18 OECD countries. CBO, in its report, calculated that even if future infrastructure needs fall into the very high range, average water bills will still only account for 0.9 percent of income on average. In a recent article, Harvard economist Robert Stavins describes our water prices as "muffled".[6] He suggests that ratepayers need to hear stronger price signals so that they see a connection between their consumption and their water bill.

This is not to overlook the affordability problems that low-income households may face. To alleviate these hardships, communities can offer rate structures that mitigate impacts on low-income customers. The most prominent example is "lifeline rates" where the charge for an amount of service considered non-discretionary (the minimum sanitary requirement) is kept low, but then higher unit charges are levied on water consumption beyond that amount. While affordability programs are offered by 14 percent of water utilities,[7] there is still much to learn from the gas and electric utilities in their many years' experience in offering low-income assistance. We want rates that are affordable for most households, but not so "muffled" that we can't hear a price signal, a signal which conveys important information on the condition of the infrastructure which it supports.

The Watershed Approach

Finally, in addition to managing better, using less and adequately pricing services, we're going to have to use the watershed approach. EPA views watersheds as the basic unit to define and gauge the Nation's water quality. The watershed approach is a term generally invoked to mean broad stakeholder involvement, hydrologically defined boundaries, and coordinated management across all aspects of policy that affect water. Leading the way are over 4,000 local watershed organizations in the United States working to advocate watershed restoration, source water protection, improved site design, erosion control, land conservation, stormwater management and many other aspects of water resource management. I have asked our senior managers to identify ways to advance the watershed approach, including how to increase our training and technical assistance for these local, State, and tribal watershed partnerships.

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[2] EPA832–B–02–003, *Cases in Water Conservation*, Office of Water, July 2002. Website: http://www.epa.gov/OW-OWM.html/water-efficiency/utilityconservation.pdf.

[3] The Office of Water's website is http://www.epa.gov/ow.

[4] Congressional Budget Office, *Future Investment in Drinking Water and Wastewater Infrastructure*, November 2002, ISBN 0–16–01243–3.

[5] OECD, 11–20–02 Draft, "Social Issues in the Provision of Water Services" Table 2–2.

[6] Sheila M. Cavanagh, W. Michael Hanemann, and Robert N. Stavins, "Muffled Price Signals: Household Water Demand Under Increasing-Block Prices," December 31, 2001 ASSA Paper.

[7] Survey by Raftelis Environmental Consulting (2002).

Several facets of the watershed approach can be advanced by jurisdictions at all levels to reduce the cost of future infrastructure. I'll mention three areas:

Targeting.—In the 1987 Amendments to the Clean Water Act, Congress created the Clean Water State Revolving Fund (SRF), and later, in the 1996 Amendments, Congress created its sister program, the Drinking Water State Revolving Fund, to provide a water infrastructure funding resource in perpetuity. To the extent that flexibility is available under these Amendments, Federal, State, local and tribal governments need to target those watersheds and projects that have the greatest impact on human health issues, sources of drinking water and ecosystem protection. Some 19 States use integrated planning and priority setting so that highest priority water quality problems are addressed first with Clean Water SRF funds. This integrated approach helps direct SRF funds toward projects with the greatest water quality benefit.

The Safe Drinking Water Act Amendments of 1996 encourage a watershed approach to drinking water protection. As directed by the Amendments, each of the States has developed a Source Water Assessment Program which analyzes existing and potential threats to the quality of drinking water. States may use funds from the Drinking Water SRF to conduct source water assessment and protection activities including land acquisition and wellhead protection. Protecting drinking water sources from contamination in the first place has been shown to reduce costs significantly. An EPA study has shown that prevention can be up to 40 times more cost effective than remediating or finding new drinking water sources.[8] Clearly, targeting our assistance to control nonpoint sources and protect source waters are promising ways of bringing down the costs of future infrastructure.

Watershed-based Permitting.—A number of States are adopting a State-wide watershed approach and I want to expand our efforts to assist those States. I have directed our Office of Wastewater Management to accelerate its efforts to support authorized States and regions to issue NPDES permits on a watershed basis. Integrating our NPDES permitting system into a community's watershed management plan, we will have more efficient and environmentally focused management.

Watershed Trading.—Watersheds are ideal for experimenting with market-based incentives; and our Water Quality Trading Policy[9] released on January 13th of this year renews our efforts to pursue water-quality trading for nutrients, sediments and other pollutants to reduce the cost of compliance with water-quality based requirements. With this policy, we're supporting States and tribes in developing trading programs that meet the requirements of the Clean Water Act. A water quality "credit" could be created by reducing pollution loads beyond the level required by the most stringent technology requirement. For example, an unregulated landowner or a farmer could create credits by changing cropping practices and planting shrubs and trees next to a stream. A municipal wastewater treatment plant then could purchase and use these credits to meet water quality limits in its permit. Trading for TMDL (Total Maximum Daily Load) implementation offers particular promise for its water quality and economic benefits. Our policy supports trading among and between regulated and unregulated sources.

In its analysis of the Clinton Administration's Clean Water Initiative, EPA concluded that the total potential savings from all types of trading range from $658 million to $7.5 billion annually.[10] A current example of a successful trading effort, between point sources only, can be found on Long Island Sound where nitrogen trading among publicly owned treatment works in Connecticut is expected to save over $200 million in control costs.

A study of three watersheds in Minnesota, Michigan and Wisconsin by the World Resources Institute (2000)[11] found that the cost of reducing phosphorous from point sources, traditional pipe-in-the-water dischargers, was considerably higher than those based on trading between point and non-point, or diffuse, sources of runoff which are not regulated by the Clean Water Act. The estimates for point source controls ranged from $10.38 per pound of phosphorus in the Wisconsin watershed to $23.89 in the Michigan watershed. Using trading between point and non-point sources, these costs could be lowered to $5.95 per pound in Wisconsin, a reduction of over 40 percent, and to $4.04 in Michigan, a reduction of over 80 percent.

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[8] EPA–813–B–95–005, Office of Water, *Benefits and Costs of Prevention: Case Studies of Community Wellhead Protection—Volume I.* 1996.

[9] EPA, Office of Water, *Final Water Quality Trading Policy*, January 13, 2003. Website: http://www.epa.gov/owow/watershed/trading/finalpolicy2003.html.

[10] EPA–800–R–94–002, Office of Water, *President Clinton's Clean Water Initiative: Analysis of Benefits and Costs*, March 1994.

[11] Paul Faeth, *Fertile Ground: Nutrient Trading's Potential to Cost-effectively Improve Water Quality*, Washington, DC: World Resources Institute, 2000.

Clearly, if we use some or all of these facets of the watershed approach—prioritizing, permitting or trading—we can more efficiently address clean water and drinking water needs.

Conclusion

In conclusion, I've suggested four broad directions that will help us meet future infrastructure needs: better management, smart water use, full cost pricing, and the watershed approach. I invite your thoughts on each of four parallel questions:

—How can we manage better?

—How can we foster smarter water use?

—How can we use the price mechanism?

—How can we use the watershed approach?

My list is, by no means, all-inclusive; I offer it merely as a rough outline for our discussion here today, focusing on the innovative aspects of these concepts. I look forward to hearing your thoughts on these and other matters. Moreover, I look forward to working with all of you to ensure clean and safe water for the 21st century. Again, thank you for your contribution of time and expertise to this concerted effort to close the gap in America's investment in our water infrastructure.

HOMELAND SECURITY

Senator MIKULSKI. Second, we have looked at homeland security and we know that this is a work in progress. Could you share with us how we can support EPA, not only for dealing with those terrible things like anthrax, but to help EPA help local communities with homeland security issues, whether it is water and sewer, water protection, or others? We know that they are going to turn to you for science, they are going to turn to you for expertise on contamination and they are going to turn to you for infrastructure protection.

How can we help you in this appropriation cycle help our communities with homeland security? And I thank you for what you have already done.

Ms. WHITMAN. Well, thank you. I will be happy to give you more detail on that for the record, but I do want to thank you and thank the committee for the support that you have given the Agency in our needs in meeting homeland security.

We believe that the President's request in the fiscal year 2004 budget will help EPA and will provide the Agency with what we need to be able to continue the outreach that we are doing to local communities and to strengthen our response. We have established a response, an emergency response team, out west so that we have a better distribution of our technology and we have provided additional training for ourselves.

But we are working very closely with the Department of Homeland Security as appropriate and coordinating all that through them. So we do have additional dollars in this budget requested for homeland security. Your support of that obviously would be very much appreciated.

Much of it, as you say, though, comes on an ad hoc basis. As people get into a problem, they suddenly look to the Agency. Thus far we have been able to meet their needs. We are very active in picking up the shuttle disaster debris and we are being reimbursed for that through FEMA. That normal process is working to date. So our needs are in our budget.

[The information follows:]

HOMELAND SECURITY

The Environmental Protection Agency's fiscal year 2004 Annual Plan and Budget requests $123 million and 142 FTE to support the Agency's Homeland Security responsibilities in accordance with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, the National Strategy for Homeland Security, and Presidential Directives (PDD) 39, 62, 63. This request allows the Agency to continue providing leadership for the protection of the Nation's critical water infrastructure while upgrading and improving our emergency response capabilities. In addition, EPA will conduct research and provide guidance and technical support for Federal, State, local governments, and other institutions in the areas of building decontamination, water security, and rapid risk assessment.

PROTECT AMBIENT AND INDOOR AIR ENVIRONMENTS

Monitoring ambient air plays an important role in detecting and responding to threats from potential terrorist actions. In fiscal year 2004 the Agency is requesting $4.4 million for ambient and indoor air monitoring activities. With these resources EPA will enhance its capability to collect ambient air monitoring data for all Federal and State agencies with threat detection responsibilities. EPA will ensure that the Agency's monitoring expertise, standards, capabilities, and data will help our partners to detect terrorist threats. EPA will also develop mobile air laboratories to provide rapid response support to EPA's air monitoring for general population exposures and for coordination with local and State monitoring agencies on public health protection.

In addition, the fiscal year 2004 requested resources will provide system improvements to prepare and respond to terrorist threats and other incidents. The Environmental Radiation Ambient Monitoring System (ERAMS) will be expanded and upgraded to increase its reliability and population coverage. A telemetry database will be improved to provide radiation data to Agency decision-makers and the public if a terrorist or other type of radiological incident occurs.

PROTECT DRINKING WATER AND WASTEWATER FACILITIES

Protecting critical water infrastructure (drinking water and wastewater utilities) from terrorist and other intentional acts will continue to be a high priority in fiscal year 2004. As a result, the Agency is requesting $32.3 million for critical water infrastructure protection in fiscal year 2004. In accordance with the requirements of the Public Health Security and Bioterrorism Emergency and Response Act of 2002 (hereafter referred to as the Bioterrorism Act of 2002), drinking water systems that provide water to more than 3,300 people, 90 percent of the community water systems, will assess their vulnerability to terrorist or other intentional attacks, certify the completion of such vulnerability assessments, and submit copies of final vulnerability assessments to EPA for secure and confidential storage. Based upon the findings of the assessments the systems must prepare or revise their emergency response plans and certify to EPA that they met the requirement.

EPA will focus on the approximately 8,000 medium community water systems that serve more than 3,300 but less than 100,000 people. These systems will conduct vulnerability assessments over the course of the year and prepare/revise emergency response plans in fiscal year 2004. The vulnerability assessment models and self assessment tools already previously used by large and very large drinking will be adapted to accommodate the medium systems. Wastewater systems, especially the some 6,000 systems that serve more than 10,000 but fewer than 150,000 people, will also conduct vulnerability assessments and develop or revise emergency response plans. Medium and small systems may not have sufficient technical capacity on hand to carry out the many activities related to vulnerability assessments and emergency response plans. Consequently, EPA, in collaboration with the States and stakeholders, will support the full menu of technical assistance and training approaches to ensure that a comprehensive vulnerability assessment and a robust emergency response plan have been achieved by all of these systems.

PROMOTE SAFER CHEMICALS AND STRENGTHEN LABORATORIES

As part of our preparedness efforts, EPA is requesting $2.3 million in fiscal year 2004 to promote safer chemicals and strengthen the State laboratory network. EPA is working with USDA to identify critical pesticides that could be needed to control exotic pests or threat agents in livestock, crops, and other food supplies. In addition, EPA has increased its lab capability to perform the necessary efficacy testing of decontamination products to address bioterrorism agents (e.g., anthrax) and to assist in the analyses of samples after remediation.

A critical element of ensuring security for communities is the State laboratory network. Along with Federal and local partners, adequate State lab capacity is essential to ensuring timely response and clean-up of threat agents in America's communities. EPA has been working with HHS and other agencies to identify support for this vital link.

ENHANCE PREPAREDNESS AND RESPONSE

In preparation for potential multiple terrorist events, the Agency has requested $27.9 million in funding for our emergency response capabilities. In addition to increasing our overall capacity, the Agency plans to form a specialized decontamination team to prepare for potential events involving chemical, biological, or radiological agents.

Through the Chemical Emergency Preparedness and Prevention Office, the Agency works to provide local communities with information and tools to advance local chemical release preparedness and prevention. The Agency accomplishes this work primarily through State Emergency Response Commissions and Local Emergency Committees. Much of the work that communities can do to prepare for and prevent accidental chemical releases is relevant to community efforts to prepare and prevent deliberate chemical releases. Support for the Agency's ongoing chemical accident preparedness and prevention community outreach work will have a positive impact on community security needs.

COMMIT TO STRONG ENVIRONMENTAL ENFORCEMENT

The Agency's Criminal Enforcement program has lead responsibility within EPA for coordinating law enforcement activities and delivering environmental crimes expertise necessary to support Federal, State, local, and tribal law enforcement homeland security planning and operational activities. In fiscal year 2004 the Agency has requested $3.8 million for these activities.

HOMELAND SECURITY RESEARCH

The Agency has also requested $29 million for continued Homeland Security research. EPA will provide guidance, technical expertise and support to Federal, State and local governments and other institutions on building contamination (chemical and biological) prevention, treatment and clean up activities, water security, and rapid risk assessment. The goal of this research is to rapidly develop tools, technologies and guidance for use by water system authorities, building owners, public officials and emergency responders to prepare for and respond to potential attacks.

EPA will also inventory Agency, Federal Government, and private sector expertise to provide quick access to nationally recognized, highly specialized experts in areas relevant to Homeland Security for more efficient emergency response efforts.

SAFEGUARD EPA PERSONNEL AND INFRASTRUCTURE

The fiscal year 2004 request includes $19.3 million to enhance security background checks and improve the background investigation process for employees, contractors, and grantees as well as activities to support increased efforts on strengthening the Agency's physical infrastructure security. Since September 11, 2001, many programs and offices are re-evaluating position sensitivity designations and security levels for staff to determine if a higher security clearance is needed to adequately support Homeland Security efforts and preparedness for emergency responses. The additional recruitment of emergency response personnel and the creation of additional emergency response command posts will also increase the number of employees that must be processed by the personnel security staff.

In addition, EPA is currently conducting physical security vulnerability risk assessments to develop a baseline on the physical security conditions of EPA's facilities. This includes gathering, assimilating and evaluating physical security data; identifying and documenting the security vulnerabilities, assessing human threat; and determining and prioritizing the qualitative risks.

ADVANCE INFORMATION SECURITY AND COMMUNICATION

In fiscal year 2004 the Agency has requested $3.8 million to strengthen and increase the security of its information infrastructure. Accurate information about EPA-regulated facilities and areas of environmental interest is critical to EPA's ability to support homeland security efforts. The ability to identify and report on regulated facilities, their location and spatial coordinates, their materials, and their corporate ownership is an important piece of the homeland security picture. Part of the Agency's homeland security role is to deliver secure, reliable, and timely data access

and communications to on-scene coordinators, emergency response teams, and investigators in the field.

Senator MIKULSKI. God bless.

Senator BOND. Thank you very much, Senator Mikulski.

Senator Leahy.

ELIZABETH MINE

Senator LEAHY. Thank you, Mr. Chairman.

I am always interested in what you find out on anthrax and such issues. When I mentioned Elizabeth Mine earlier, Governor, in Thetford, Vermont, the reason why I was concerned, if it did breach, I am told there would be a flood wave 8 to 9 feet high traveling at a velocity of 10 to 15 feet per second and would wipe out homes, property, and of course psychological damage as far as the Connecticut River.

So once a decision has been made on that—and again, I want to compliment your EPA people—please let us know, because there are a lot of apprehensive Vermonters.

Ms. WHITMAN. This has been on the national priority list since 2001, and we are very focused on it, Senator. We will continue to work closely with you. We appreciate your focus on this.

MERCURY EMISSIONS

Senator LEAHY. Thank you.

Governor, we talked about in the past the issues of mercury. I look at the report the EPA released—it was delayed for I think 8 months, but "America's Children and the Environment"—and I see a serious risk to pregnant women and children from mercury exposure.

Senator Snowe, Olympia Snowe of Maine, and I introduced a bill, the Omnibus Mercury Emissions Reduction Act, to control mercury emissions from coal-fired power plants and other sources. This would provide a tougher standard than the administration's Clear Skies proposal.

An EPA report has estimated 29 tons of mercury emissions released per year from coal and oil-fired commercial and industrial boiler units. A lot of them are grandfathered in under the Clean Air Act and were supposed to have cleaned up their boilers by now and have not. EPA is not regulating these emissions.

Within the mercury omnibus bill that we have suggested, it would require the EPA to set a maximum achievable control technology standard to reduce these emissions by at least 90 percent. Why didn't EPA just go ahead and regulate these emissions? The reason I ask, so many of them are out in the Midwest, but they come down along the Atlantic seaboard—your own State, my State, Senator Snowe's State, and others.

Ms. WHITMAN. Well, certainly, Senator, I am happy to answer that. First, just so that you are comfortable, there was not a delay. We were not holding back on the children's report. In fact, the children's health report that was recently released. There were a number of departments and agencies that were involved and it went through the normal process.

But this was the first children's health report that mentioned mercury. In the previous one, there had been no mention of mer-

cury. So this was a whole new field that we were getting into, and it clearly showed an area of concern. We have 8 percent of women of childbearing age showing elevated levels of mercury.

Senator LEAHY. I had the impression that the report came out after the New York Times basically reported on the report.

Ms. WHITMAN. The report was not held up. I do not remember exactly the sequence, whether the Times had written first, but they would not have written unless the report was just about to go because they would not have had it.

But anyway——

Senator LEAHY. It happens.

Ms. WHITMAN. Oh, it does happen.

Senator LEAHY. We had one of your colleagues before our committee, the Attorney General, who was explaining how there was no Patriot Act No. 2 because he had not specifically signed off on it. Unfortunately, the press had already reported and actually reprinted about 80 pages of it. But go ahead. It is not your Department.

Ms. WHITMAN. It was a different agency. But anyway, it does mention it. It is important to note that we have, over the years, done a great deal on mercury. In fact, the Agency, through regulatory actions, has reduced by 90 percent the mercury emissions from municipal waste incineration and medical waste incineration, which has reduced that a significant amount, leaving now the utilities as the biggest emitters.

We are in the process of establishing a mercury MACT. That process has started and as part of the regulatory process there are requirements to get the data.

There was never any 90 percent required reductions established at any time. There has never been any other scientific backup yet to establish that. I know it has been said in the papers and in fact it has been implied that there was a statutory requirement to say that there should be a 90 percent reduction. We have not set that MACT level yet. We do not know where it will come out. But we are moving forward to do that.

However, the best way to get the fastest reduction we believe is through Clear Skies, which would require a mandatory reduction. If the Congress sets those levels, there is not the same recourse to lawsuit that slows up the actual implementation.

We are to put out a preliminary number in December on the mercury MACT. We are on track to do that. It then would go final in 2004 and it would not be enforceable until 2007, and that is without any lawsuits. You know that we will probably be sued by both sides on something as controversial as this.

We believe reducing power plant mercury emissions is a very important issue. We believe it is an issue that we need to get at. That is why it is included as a major part of the Clear Skies legislation, as the best way to ensure that we get an immediate reduction. We are, however, continuing as we go forward on the mercury MACT to do additional studies on fish tissue. It will be the most comprehensive that the Agency has done, done in order to better understand pathways, both on how fish bioaccumulate mercury and how that may get into the bloodstream of people who eat the fish.

So we are being very active on mercury and we will continue to be active on mercury. It is an issue that we think is of immense importance.

Senator LEAHY. Thank you, Mr. Chairman. I will submit—I am sure the Governor will expect this—follow-up questions on this, especially the subject that I want to share some of the answers on with Senator Snowe. Thank you, and thank you, Mr. Chairman.

SUPERFUND—PRESIDENT'S REQUEST

Senator BOND. Thank you very much, Senator Leahy. We have got some questions on mercury as well, on a different problem.

Let me just clean up a few questions here. Superfund: EPA requests a $125 million increase for Superfund while we are cutting the Clean Water SRF. What is happening in the Superfund account that makes it more important? What is happening with the expiration of the taxes? Are you collecting money from responsible parties? Please give us a quick update on the Superfund status.

Ms. WHITMAN. Certainly. Well, Senator, as you know, the Superfund sites represent the most problematic and they represent those sites that pose the greatest and most imminent threat to public health and/or the environment. They really do require immediate attention. The additional dollars that we have asked for will enable us to begin another 10 to 15 sites in the coming year, to begin work on sites that we believe are in need of serious immediate attention.

We continue to go for polluter pays. In fact, last year 71 percent of the sites were paid for by the responsible parties. But as you know—and this has been traditional over the history of the Superfund—there are usually about 30 percent of the sites for which there is either no responsible party because they have gone out of business or we cannot identify them, and those have been paid for traditionally through the Superfund trust fund.

That trust fund, because the tax has not been reauthorized in a number of years, is diminishing. We are assuring that we keep the program moving forward at a healthy rate by including additional dollars from general revenues.

TMDL—STATUS OF RULE

Senator BOND. Thank you. I would say that some of our water needs also are critically important. Let me turn to TMDLs. We are hearing from the States a lack of ability to implement the TMDLs because of controversies on costs and burdens. EPA has delayed issuing the new TMDL rule until after May 2003.

What are the primary issues that you are having trouble addressing and what is the status of the rule?

Ms. WHITMAN. Right now we have repealed the 2000 rule that was promulgated under the previous administration because of extraordinary difficulties. Almost everyone agreed that the ability to——

Senator BOND. I would agree with that. I would agree with that myself.

Ms. WHITMAN. It was extremely difficult. We are continuing to move forward in establishing TMDLs. That is, they are continuing to happen. There has been no let-up on that. We are now looking

at all the existing regulations that have been approved. We approved 6,000 TMDLs in the last 2 years.

But we are trying now to make a decision. We are looking at whether or not we need to put out an additional regulation or not. We have told the regions to continue to work with the States under the current TMDL program, which, as I said, is continuing to work in an ongoing way to approve TMDLs.

We issued guidance on approving the list and coordination of TMDLs. But we are working very closely with the States and with the local governments to improve those qualities and ensure that we can continue to achieve the water quality goals while at the same time determining whether or not we need to issue new regulations.

CAFO RULE IMPLEMENTATION

Senator BOND. Thank you.

Let me turn now to confined animal feeding operations, what we affectionately know as "CAFO." The rules become effective April 14th. They require CAFOs have to develop nutrient management plans. It is going to affect some 15,500 livestock operations. I am concerned. The GAO report says neither EPA nor the States are equipped to implement the program. How are you responding to that?

Ms. WHITMAN. Well, the CAFO rule is one that I think shows a model of cooperation. We worked very, very closely with the Department of Agriculture in establishing these CAFOs in a way that recognized the burden that they put on the farmer and the operator of these facilities, but at the same time recognized the enormous importance of protecting the water supplies and the water in those areas.

We are continuing to work with the Department of Agriculture to identify dollars to help with the implementation, to work with the States to ensure that they can meet the needs, that they will be able to do this. Since we are being sued by both the Farm Bureau and the environmentalists, we feel we are probably right where we need to be, because we are getting it from both sides.

Senator BOND. Well, as I understand they are both sullen but not rebellious, which is I guess the greatest achievement one can hope in dealing with something like this.

I do want to ask that you look at the problems in Christian County, Missouri, basically that somebody would get back to us on that and see what we can do.

Speaking of water——

Ms. WHITMAN. Senator, I have one piece of information. I think the State attorney general is bringing suit against the responsible parties there now, but we will continue to look at it from an environmental point of view.

SRFS—STATE PRIORITIES

Senator BOND. Suits are fine, but I have never seen a court clean up a stinkhole yet. It requires somebody doing the work. Lawsuits are great. I used to be a lawyer. But it does not get your hands dirty. I want to figure out who is going to get their hands dirty to clean it up.

Does EPA review the State decisions on SRFs to ensure that communities with greatest needs are getting needed funds?

Ms. WHITMAN. We do not review the States' priority lists. We do reviews to make sure that the dollars are reaching communities and that they are being spent as they were meant to be spent. But as far as prioritizing which community is the neediest within a State, that is the priority and prerogative of the State.

ST. LOUIS—ATTAINMENT STATUS

Senator BOND. The 11-hour ozone containment date is of some concern for St. Louis. On July 26th of 2001, EPA granted St. Louis additional time to meet the 1-hour standard and EPA made the determination that regional transport was the only way you could solve it.

On November 25 of last year, the U.S. Court of Appeals for the Seventh Circuit ruled, and of course all St. Louis is all in the Eighth Circuit, so we are a little concerned about why the Seventh Circuit was in there, even though it is downwind. They remanded the case to EPA to bump up the designation from moderate to serious.

However, St. Louis I think can avoid the additional measures because St. Louis is now meeting the 1-hour standard. It has been improving since 1991. We will know for certain soon if they have met the standard for the 2000 to 2002 data. There are other options regarding area redesignations.

What is the current status of St. Louis' CAA classification?

Ms. WHITMAN. The current status is that we did have to issue that notification of the bump-up. But also, at the same time, we have moved forward with the new data that we had received that shows that in fact St. Louis is in attainment. We expect to take final action to redesignate 3 to 4 months from now unless we get some unusual comment back on it. It is out there for comment, which is what usually gets us the lawsuits that end up on this situation.

But we are very comfortable with the actions that St. Louis has taken and that the data will support and show that it is in fact in attainment for this standard, and we are continuing to work with the State and we are working with all States on the new standards that will come into effect.

Senator BOND. Thank you very much, Madam Administrator. We appreciate the fact that you are staying on to make sure that the air is clean and also once they do that they do not suffer inappropriate penalties. We want the air cleaned up and we do not want the economy killed, and if we can move forward on both of them. We appreciate your good work.

ADDITIONAL COMMITTEE QUESTIONS

I will have a number of questions for the record.

[The following questions were not asked at the hearing, but were submitted to the Agency for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

CLEAN WATER SRF: REDUCTION

Question. How does the Environmental Protection Agency (EPA) justify this reduction in funding for the Clean Water SRF?

Answer. In 1997, the Federal Government promised to help States establish a $2 billion projected long-term target annual revolving level for building new wastewater treatment plants and other infrastructure to keep our waters clean. With the funding appropriated by Congress to date, the $2 billion goal has been reached and, in fact, exceeded. The fiscal year 2004 budget request expands this commitment from $2 billion to $2.8 billion, an increase of 40 percent. This level of funding is achieved by an appropriation of $850 million a year from fiscal year 2004 through fiscal year 2011. Administration analyses using historical information indicate that, by extending Federal capitalization of the CWSRF program through 2011 at $850 million per year, the President's proposal is projected to increase SRF loan assistance by $21 billion in 20 years, equivalent to the 20-year additional need identified by the Clean Water and Drinking Water Gap Analysis Report. By also utilizing other Federal, State and local sources of funding and improved management practices, we believe the infrastructure gap can be eliminated.

With the $800 million increase in the revolving level, States will be able to fund nearly 600 more projects each year on a long-term basis. In addition to funding more publicly financed projects, EPA will continue to focus on ways to utilize private funds to clean waterways by encouraging privatization and promoting technology innovation while maintaining affordability for consumers.

WATER INFRASTRUCTURE NEEDS

Question. Is there some point in time where we can expect to meet our water infrastructure needs? What should be the State role? What should be the Federal role?

Answer. The needs continue to change due to demographic pressures, aging infrastructure and new treatment requirements. Generally, it is the responsibility of local governments to pay for drinking water supply and wastewater disposal. However, Federal programs, including the Drinking Water SRF, established by the Safe Drinking Water Act (SDWA) and the Clean Water SRF established by the Clean Water Act (CWA) help local governments meet the costs of abiding by water quality standards and cleaning up waterways.

The Federal Government and States work together through these programs to encourage investment in water and wastewater infrastructure that mitigates public health threats and creates sustainable water and wastewater treatment systems. Through Federal, State and local partnerships, EPA supports affordable, cost-based rate structures and encourages technology innovation, smart water use, and watershed-based decisionmaking. EPA is pursuing innovative ideas such as watershed-based trading and sustainable management systems. Together, these efforts will meet water and wastewater infrastructure needs and, more importantly, will help assure safe and clean water for the Nation.

CSO AND SSO INFRASTRUCTURE

Question. A total of 772 municipalities have combined sewers where domestic sanitary sewage, industrial wastes, infiltration from groundwater and storm water are collected. These systems serve some 40 million persons, mostly in older and coastal cities. However, many of these systems are becoming overloaded and need to be rebuilt or reconstructed.

What is the cost to address these infrastructure needs and how should these needs be paid for?

Answer. In its 1996 Clean Water Needs Survey Report, EPA reported that the estimated national costs to control combined sewer overflows was $44.7 billion ($49.6 billion in 2000 dollars). These costs are based on controlling CSOs to a level of 4 to 6 untreated overflows annually.

Communities that need to control CSOs can apply for low-interest loans under the Clean Water State Revolving Fund. Other sources of funding are bonds, loans, grants and privatization. More information on the available sources of funding is presented in *Combined Sewer Overflows: Guidance For Funding Options* (EPA 832–B–95–007, August 1995).

CSO AND SSO INFRASTRUCTURE: U.S. CITIES

Question. What are the estimated needs for the U.S. Cities with the 50 highest populations? Are there individual plans in place for each of these cities and what is the status of these plans?

Answer. The attached table lists, in descending order, the 47 CSO municipalities with the largest populations. The table presents the status of the municipalities' efforts to develop and implement long-term control plans (LTCP) for controlling their CSOs. The last column of the table, "Controls Outside LTCP?", identifies those municipalities that developed control plans that predate EPA's 1994 CSO Control Policy or have included CSO control measures in other wastewater facility plans.

To develop this table we cross-checked our list of the largest CSO municipalities developing LTCPs against the data and information collected for the 2000 Clean Watersheds Needs Survey. Forty-seven communities appeared in both databases. The estimated cost for these communities to control their CSOs is approximately $29 billion (2000 dollars). These costs are based on controlling CSOs to a level of 4 to 6 untreated overflows annually.

MAJOR COMBINED SEWER OVERFLOW CITIES:
NPDES PERMITS WITH STATUS OF LONG TERM CONTROL PLAN

City Name	NPDES Permit	Facility Name	LTCP Submitted?	LTCP Approval?	LTCP Implementation Started?	Controls Outside LTCP?
New York	NY0026247	North River WPCF	YES	YES	YES	YES
	NY0026204	Newtown Creek WPCP	YES	YES	YES	YES
	NY0026182	NYCDEP Coney Island WPCP	YES	YES	YES	YES
	NY0026239	Tallman Island WPCP	YES	YES	YES	YES
	NY0026166	NYCDEP Owls Head WPCP	YES	YES	YES	YES
	NY0026131	Ward Island WPCP	YES	YES	YES	YES
	NY0026107	Port Richmond WPCF	YES	YES	YES	YES
Chicago	IL0045012	Chicago CSOs				YES
	IL0047741	MWRDGC James C. Kire WRP				YES
	IL0028053	MWRDGC Stickney, West-Southwest STP				YES
	IL0028061	MWRDGC Calumet Water Reclamation Plant				YES
	IL0028088	MWRDGC-Northside Water Reclamation Plant				YES
Philadelphia	PA0026662	Philadelphia Water Department-Southeast	YES	YES		
	PA0026671	Philadelphia Water Department-Southwest	YES	YES		
	PA0026689	Philadelphia Water Department-Northeast	YES	YES		
Detroit	MI0051462	Wayne County/ Inkster/Dearborn Heights CSO	NO			
	MI0051489	Wayne County/Dearborn Heights CSO	YES	YES	YES	
	MI0051497	Wayne County/Westland CSO	YES	YES	YES	
	MI0051501	Wayne County/Westland/Wayne CSO	YES	YES	YES	
	MI0051519	Wayne County/Wayne CSO	YES	YES	YES	
	MI0051535	Wayne County/Redford/ Livonia CSO	YES	YES	YES	
	MI0051543	Wayne County/Garden City/Westland CSO	YES	YES	YES	
	MI0051551	Wayne County/ Livonia CSO	YES	YES	NO	
	MI0051560	Wayne County/Livonia/Westland CSO	YES	YES	YES	
	MI0022802	Detroit WWTP	YES		YES	
	MI0025500	Milk River CSO	YES	YES	YES	
Indianapolis	IN0023183	Indianapolis-Belmont	YES			YES
	IN0031950	Indianapolis-South Port				
San Francisco	CA0037681	Oceanside WPCP and Westside Wet Weather CSO System				YES
	CA0038610	Bayside Wet Weather Facilities WPCP				YES
Columbus	OH0024741	Columbus-Southerly	YES	NO	YES	
	OH0024732	Columbus-Jackson Pike	YES	NO	YES	
Baltimore	MD0021601	Patapsco WWTP	YES			
Milwaukee	WIL024767	Milwaukee MSD-Jones Island				YES
Boston	MA0102351	MWRA, Deer Island WWTP	YES	YES	YES	

list sorted by descending city population per 2000 US Census

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MAJOR COMBINED SEWER OVERFLOW CITIES:
NPDES PERMITS WITH STATUS OF LONG TERM CONTROL PLAN

City Name	NPDES Permit	Facility Name	LTCP Submitted?	LTCP Approval?	LTCP Implementation Started?	Controls Outside LTCP?
	MA0101192	Boston Water and Sewer Commission	YES	YES	YES	
Washington	DC0021199	District of Columbia WWTP	YES	NO		
Nashville	TN0020575	Nashville	YES		YES	
Seattle	WA0029181	Metropolitan King County	YES	YES	YES	
	WA0031682	City of Seattle	NO			
Portland	OR0026905	City of Portland Columbia Blvd WWTP	YES	YES	YES	YES
Cleveland	OH0043991	Northeast Ohio Regional Sewer District	NO	NO		
Kansas City	MO0024929	Kansas City, Westside STP	YES	NO		
	MO0024911	Kansas City, Blue River STP	YES	NO		
Atlanta	GA0037109	Atlanta-Tanyard Creek	YES	NO	YES	
	GA0037168	Atlanta-Intrenchment and Custer Avenue	YES	NO	YES	
	GA0037133	Atlanta-McDaniel Street	YES	NO	YES	
	GA0037117	Atlanta-Proctor Creek/North	YES	NO	YES	
	GA0036871	Atlanta-Clear Creek	YES	NO	YES	
	GA0037125	Atlanta-Proctor Creek/Greenferry	YES	NO	YES	
Omaha	NE0036358	Omaha Missouri River WWTF				YES
Minneapolis	MN0046744	MCWS-Minneapolis				YES
St. Louis	MO0025178	MSD, Bissell Point WWTP	YES	NO		
	MO0025151	MSD, Lemay WWTP	YES	NO		
Pittsburgh	PAG066128	Borough of Swissvale	NO	NO		
	PAG066125	Sharpsburg Borough	NO	NO		
	PAG066106	Girty's Run JSA, Millvale	NO	NO		
	PAG066116	West View Borough	NO	NO		
	PAG066110	Borough of Crafton	YES	NO		
	PAG066111	Emsworth Borough	NO	NO		
	PA0217611	City of Pittsburgh	NO	NO		
	PA0025984	Allegheny County Sanitary Authority	YES	NO		
Cincinnati	OH0105457	Hamilton County Commissioners	YES		YES	YES
Toledo	OH0027740	Toledo	NO		YES	YES
Buffalo	NY0028410	Bird Island WWTF	NO			YES
	NY0022136	Erie County S.D. #6				
St. Paul	MN0025470	MCWS-St. Paul				YES
	MN0046744	MCWS-Minneapolis				YES
Newark	NJ0108707	Passaic Valley				
	NJ0021016	Passaic Valley Sewerage Commission				YES

list sorted by descending city population per 2000 US Census

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MAJOR COMBINED SEWER OVERFLOW CITIES:
NPDES PERMITS WITH STATUS OF LONG TERM CONTROL PLAN

City Name	NPDES Permit	Facility Name	LTCP Submitted?	LTCP Approval?	LTCP Implementation Started?	Controls Outside LTCP?
	NJ0108758	Newark	NO			YES
Louisville	KY0022411	Morris Forman WWTF	YES	NO	YES	
Jersey City	NJ0108723	Jersey City MUA	NO			YES
Rochester	NY0028339	Frank E. VanLare STP	YES	YES	YES	
Akron	OH0023833	City of Akron	YES	NO		
Fort Wayne	IN0032191	City of Fort Wayne WWTP	YES			YES
Des Moines	IA0076601	Des Moines CSOs				
Grand Rapids	MI0026069	Grand Rapids WWTP	YES	YES	YES	
Richmond	VA0063177	Richmond WWTW	YES	YES		
Yonkers	NY0026689	Yonkers Joint WWTP	YES	YES	YES	
Spokane	WA0024473	City of Spokane	YES	YES	YES	YES
Providence	RI0100315	Narragansett Bay	NO			
	RI0100072	Narragansett Bay-Pawtucket	NO			
Worcester	MA0102997	Worcester Combined Overflow Facility	NO			YES
Springfield	MA0101613	Springfield Regional WWTF				
	MA0103331	Springfield CSOs	YES	NO	NO	
Paterson	NJ0108880	City of Paterson	NO			YES
Syracuse	NY0027081	Syracuse Metro WWTP	YES	YES	YES	YES
Kansas City	KS0038563	Kansas City WWTP	YES	NO		YES
Bridgeport	CT0100056	Bridgeport-West WPCF	YES	NO	YES	
	CT0101010	Bridgeport-East WPCF	YES	NO		
Alexandria	VA0087068	Alexandria CSOs	YES	YES		
Hartford	CT0100251	Hartford MDC WPCF	YES	NO		
Elizabeth	NJ0024741	Essex and Union Joint Meeting Sewage Treatment				YES
	NJ0108782	City of Elizabeth	NO			YES
	NJ0108740	Joint Mt. Of Essex and Union				
Lansing	MI0023400	Lansing WWTP	YES	YES	YES	

list sorted by descending city population per 2000 US Census

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ARSENIC STANDARD: EPA FACILITATION

Question. What steps is EPA taking to ensure that communities with water that exceeds the current standards for arsenic will be able to convert and rebuild their water systems to meet these requirements?

Answer. Following the promulgation of the revised arsenic standard in January 2001, EPA has implemented a comprehensive strategy to ensure that communities can meet the new standard. This strategy is designed to: (1) enhance small systems' access to financial assistance; (2) fund the research, development, testing and implementation of effective, practical, and affordable treatment technologies to reduce compliance costs for drinking water systems affected by the revised standard; (3) provide Federal technical assistance and training on the new arsenic regulation to small community water systems; and, (4) use a variety of approaches to inform communities of their treatment options, and how and where to get help building their technical, managerial and financial capacity.

A key component of the Agency's support for small systems is to work with our State partners to maximize the availability of financial assistance under the Drinking Water State Revolving Fund (DWSRF) program. Through the DWSRF program, States may offer principal forgiveness, reduced interest rates, or extended loan terms to systems identified by the State as serving disadvantaged communities. States also have the ability to set aside a portion of their Federal DWSRF allocation for technical assistance to small community water systems affected by the new arsenic rule. As of June 30, 2002, 74 percent of all DWSRF loan agreements, totaling just over $2 billion, have been allocated to small systems serving 10,000 or fewer consumers.

In addition to maximizing the availability of DWSRF funds for infrastructure improvement loans and technical assistance, EPA and the U.S. Department of Agriculture (USDA) signed a 4-year Memorandum of Agreement (MOA) in 2002, under which USDA's Rural Utilities Service (RUS) will identify as high funding priorities projects that assist small communities in complying with the revised arsenic standard for drinking water. Likewise, EPA will strongly encourage State agencies administering the DWSRF to coordinate loan funding decisions with RUS through Rural Development State staff. Further, under this agreement both agencies will make providing technical assistance resources to small systems a top priority.

Fiscal year 2003 is the second year of EPA's 2-year, $20 million research and development program to identify more cost effective technologies to help small systems comply with the new arsenic standard. Also in fiscal year 2003, Congress directed EPA to utilize $5 million in additional funds to carry out demonstrations of low-cost arsenic removal technologies. With this overall funding, the Agency anticipates that some 26–32 demonstrations will be conducted at small water utilities with arsenic problems under the research program. EPA also is verifying the performance of arsenic treatment technologies under the Environmental Technology Verification Program to provide small utilities information to select technologies appropriate for their water quality problem.

Further, the Agency will continue its ongoing work with States to take full advantage of the suite of tools that the Safe Drinking Water Act (SDWA) provides to help small systems achieve compliance with the new arsenic standard. For example, EPA is phasing in the arsenic rule over a longer time-period by encouraging States to use the exemption authority provided by the SDWA. Under this authority, States can give eligible small systems (those serving fewer than 3,300 people) up to an additional 9 years to come into compliance, and allow Point-of-Use devices as a treatment option for very small systems.

Finally, EPA has provided arsenic implementation guidance to State regulators, and made fact sheets, plain language guidance documents, and technology assistance manuals available to the public. This guidance is available both in printed form and electronically at EPA's web site, at the National Drinking Water Clearinghouse, and through the Local Government Environmental Assistance Network.

ARSENIC COST

Question. What is the estimated cost per State to meet the infrastructure requirements of these new standards (i.e. Arsenic)?

Answer. EPA did not develop a State-by-State cost analysis for the arsenic rule. Instead, the Agency developed national cost estimates based on arsenic occurrence data from 25 States. EPA used these occurrence data to make projections for the number of systems that exceed 10 μg/L. To make those projections, EPA had to make estimates for the 25 States that did not provide occurrence data by using data from neighboring States. Because EPA did not have complete data for each State,

it is not possible to provide an estimated cost per State to meet the infrastructure requirements of the new standard.

Also, a key component of EPA's approach to developing a national cost estimate is the compliance forecast, which assigns treatment technologies to systems projected to exceed the revised MCL based on water quality considerations, system size, and other factors that vary significantly by State. There are significant differences in costs between ion exchange, activated alumina, and membrane (filtering) arsenic treatment technologies. For example, for all but the smallest of systems, the cost of disposable activated alumina technology is relatively inexpensive compared to other treatment technologies. Further, the 2001 arsenic rule allows small systems to comply with the standard using a centrally managed Point-of-Use (POU) technology, either reverse osmosis or activated alumina units.

And since January 2001, a number of additional technologies have been identified that may be even more cost effective, such as iron-based adsorptive media, that have demonstrated superior performance in removing arsenic in water supplies over a range of water quality conditions. The State of Arizona has evaluated these technologies and has determined that iron-based media are the lowest cost alternatives for many of their systems that must comply with the new arsenic standard. These results suggest that the 2001 estimate of the infrastructure costs may be overstated, and that any estimate of costs per State must take into account improvements in arsenic removal technologies.

ARSENIC COST: RURAL COMMUNITIES

Question. Please identify the cost for rural communities (those with populations of 20,000 or less)? What is the basis for the information requested in these questions?

Answer. While EPA's capital cost estimates do not break out the costs for a category of community water systems serving 10,001–20,000, the Agency has estimated costs for those systems serving 10,000 or fewer, defined as "small" under the Safe Drinking Water Act (SDWA). The three small system size categories include those serving: (1) a population of 10,000 or fewer but more than 3,300; (2) a population of 3,300 or fewer but more than 500; and (3) a population of 500 or fewer but more than 25. The following table lists the capital costs (cost to install treatment technology to comply with the revised arsenic standard) for each small system category:

Size category	Capital cost ($)
25–500	53,000,000
501–3,300	165,000,000
3,301–10,000	133,000,000
TOTAL	351,000,000

The source for these capital cost estimates is the December 2000 "Arsenic in Drinking Water Rule Economic Analysis." The validity of the Agency's approach to estimating these costs was supported by the independent National Drinking Water Advisory Council in the Fall of 2001 as part of the Agency's comprehensive review of the science and cost data underlying the January 2001 rule.

As noted above, there are a number of new technologies that have come into the marketplace since the arsenic rule was promulgated in January 2001. These technologies appear to be more cost-effective than some of the technologies identified in the rule, and thus would likely result in lower capital costs than those presented in the table.

AGING WATER INFRASTRUCTURE

Question. How should we prioritize the funding needs in the Nation? For example, what do we do about the aging and obsolete water infrastructure, which is a concern of many cities and communities in the East and Midwest?

Answer. The Agency believes that the touchstone of a long-term strategy to close the infrastructure gap should be fiscal sustainability. Several basic principles should guide our pursuit of fiscal sustainability, including:

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

—*Promoting sustainable systems.*—Ensuring the technical, financial, and managerial capacity of water and wastewater systems, and creating incentives for service providers to avoid future gaps by adopting best management practices to im-

prove efficiency and economies of scale, and reducing the average cost of service for providers.

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

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

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

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

PRIORITIZING WATER NEEDS WITH ARSENIC STANDARD

Question. How do we prioritize these funding needs with new infrastructure requirements, which have been created by the new arsenic standards?

Answer. State DWSRF programs prioritize infrastructure funding needs according to SDWA Section 1452 criteria and the amounts and types of contaminants occurring in their drinking water supplies. With respect to the January 2001 arsenic in drinking water standard, EPA has taken several steps to help the 4,100 community and non-transient, non-community systems that must install arsenic removal technologies comply with the revised standard. These steps include: (1) enhancing small systems' access to financial assistance; (2) funding the research, development, testing and implementation of effective, practical, and affordable treatment technologies to reduce compliance costs for drinking water systems affected by the revised standard; (3) providing Federal technical assistance and training on the new arsenic regulation to small community water systems; and, (4) using a variety of approaches to inform communities of their treatment options, and how and where to get help building their technical, managerial and financial capacity.

SUPERFUND FUNDING: VERSUS CWSRF FUNDING

Question. What is the justification for this increase as opposed to including this additional funding in the Clean Water SRF?

Answer. EPA has been cleaning up "orphan" sites for more than 20 years. Now that well over half of the sites on the NPL are construction complete, many of the most difficult sites remain and these will be more challenging and expensive to cleanup. Recognizing this, the administration has proposed a $150 million increase for remedial action. The immediate benefit in fiscal year 2004 will be the ability to initiate an additional 10 to 15 new remedial action projects that would have to wait longer for cleanup otherwise. With the support of these additional resources, EPA will increase the number of sites where potential human exposures and the migration of contaminated groundwater are under control, which can help reduce the exposure of people living and working in the immediate vicinity of the sites to site contaminants.

SUPERFUND FUNDING: RESPONSIBLE PARTIES

Question. While it is not clear that these taxes result in the cost of clean-up being paid for by the responsible parties, what is EPA doing to collect the cost of these clean-ups from the responsible parties and how much funding is collected each year?

Answer. The administration remains strongly committed to the "Polluter Pays" principle. EPA has been very successful in getting responsible parties to clean up a majority of the Nation's worst hazardous waste sites (approximately 70 percent over the past several years), preserving fund monies for sites where there are no viable responsible parties. In instances where settlements cannot be reached, EPA prefers to issue unilateral administrative orders (UAOs) instead undertaking a fund-lead clean-up. Over the past 3 years, an average of 24 percent of clean-up agreements reached with responsible parties have been the result of EPA issuing UAOs. The cumulative value of private party commitments for clean-up and cost recoveries is approximately $20.6 billion, $627 million during fiscal year 2002 alone. Since the inception of the Superfund program, EPA has achieved $8 in private party commitments for every $1 spent on Superfund enforcement.

SUPERFUND FUNDING: RECOVERIES

Question. What has been the amount of recoveries over the last few years and what are the projected recoveries for the next few years?

Answer. Over the past 3 years collections have averaged approximately $227,000,000. Recent rates indicate the fiscal year 2004 budget estimates of $175,000,000 is a conservative estimate.

Actual collections between fiscal year 1997 and fiscal year 2002 and estimates for fiscal year 2003 and fiscal year 2004 are as follows:

Fiscal year 1997	$313,300,000
Fiscal year 1998	319,600,000
Fiscal year 1999	319,700,000
Fiscal year 2000	230,500,000
Fiscal year 2001	202,100,000
Fiscal year 2002	248,300,000
Fiscal year 2003 est.	175,000,000
Fiscal year 2004 est.	175,000,000

SUPERFUND: STATE CONTROL

Question. I understand that some States are pushing for greater control over the Superfund program. To what extent [do you] to support this approach and what are the pluses and minuses to greater State control?

Answer. EPA Superfund is not aware of any current activity by States pushing for greater control over the Superfund program. The inception of Governor's letters to support listing on the NPL by States and a multitude of work-sharing agreements between EPA Regions and States has led to cooperative and less adversarial relationships, which are generally beneficial to site-cleanup. EPA's impression is that, in general, the States consider their degree of involvement and control is appropriate, especially considering their resource constraints in dealing with contaminated waste sites.

NEW SOURCE REVIEW

Question. While the New Source Review rules were only recently issued on December 31, 2002, what benchmarks will EPA use to measure the success of the program?

Answer. The New Source Review Program is one part of a State's overall plan to achieve or maintain attainment. Accordingly, the overall measure of success for the program is whether it is working collectively with other Clean Air Act programs to assure that nonattainment areas reach attainment, and that attainment and unclassifiable areas see no significant degradation in ambient air quality. Other measures for the program include whether the program is creating barriers to environmental improvement or the right incentives for such improvements, the level of resource burden it imposes for implementation on all parties, and how the public is involved in the process of issuing permits. Congress recently directed the National Academy of Science to conduct a study regarding the effectiveness of the recent improvement made to the NSR program. We plan to use this study and other measures as a starting point for evaluating future approaches for measuring the long-term success of the program.

NEW SOURCE REVIEW IMPROVEMENT RULES: PETITIONS FOR REVIEW FILED

Question. I understand that on the day the new regulations were issued some 9 northeastern States filed a lawsuit to block implementation of the new changes. What is the status of the lawsuit and what is the basis of the lawsuit?

Answer. On December 31, 2002, the day the final New Source Review Improvement rules were published in the Federal Register, 9 northeastern States filed a petition for review of those rules in the United States Court of Appeals for the District of Columbia Circuit. Since then, a number of additional petitions for review have been filed by additional State and local governments, environmental groups, and industry groups, for a total of 19 petitions for review. In addition, 9 States and a number of industry groups have intervened on EPA's behalf against the State and environmental petitioners, and most of the State and environmental petitioners have intervened on EPA's behalf against the industrial petitioners. The State petitioners filed a motion for a stay of the effectiveness of the final rules pending the outcome of the litigation. EPA opposed this motion, and the court denied it on March 6, 2003,

while at the same time ruling that the case met the criteria for expedited consideration.

Until the briefs of the parties are filed, we will not know precisely which issues they intend to raise. However, the parties have filed non-binding statements of issues, and we are enclosing copies of all such statements that we have received to date.

MTBE CONTAMINATION ISSUE

Question. As you know, under the Clean Air Act Amendments of 1990, numerous areas with poor air quality standards were required to add "oxygenates" to gasoline as a way to improve combustion and reduce emissions. The most commonly used oxygenate was MTBE. However, there has been significant controversy over the use of MTBE over the last few years, fueled by concerns that MTBE is contaminating groundwater, especially in California. What is the current status of this issue?

Answer. Although MTBE is a high quality blending component of gasoline, significant concern persists about its contamination of drinking water in many areas of the country. Most MTBE contamination is the result of leaks from underground storage tanks (USTs), but some contamination has resulted from fuel spills. We now know that MTBE, if leaked or spilled, can contaminate water supplies more readily than other components of gasoline. Public concern has focused on the issues of taste and odor associated with MTBE contamination. Current data on MTBE in ground and surface waters indicate numerous detections of MTBE at low levels that may affect taste and odor of drinking water. Some contamination has resulted in closure of both public and private wells. EPA is conducting research to determine potential effects of MTBE exposure to susceptible populations as well as evaluation of treatment technologies.

EPA and the States are working together to prevent future releases from USTs by identifying causes of releases and educating owners and operators about properly maintaining their UST systems to prevent future leaks.

MTBE can be a major impediment to completing LUST cleanups because it is complex, costly, and time-consuming to remediate. A national survey of leaking underground storage tank (LUST) State programs found that 23 States report MTBE contamination at more than 60 percent of all LUST sites. This survey is undergoing an update to include data on other fuel oxygenates. EPA has provided over $5 million in assistance to States with significant MTBE contamination. Information from these State pilots will be shared with other regulators, responsible parties and communities faced with similar problems to promote efficient use of resources and to reduce duplication of effort.

Additionally, EPA provides approximately 81 percent of its LUST Trust Fund annual appropriation to the States to address contamination from leaking USTs. Collectively, States use approximately $1 billion each year from their own revenues to address MTBE and other petroleum contamination. EPA will continue to assess the impact of MTBE contamination on the cost and duration of cleanup efforts. This assessment will enable the Agency to more effectively address the complex nature of groundwater and MTBE contamination cleanup efforts.

As a result of existing MTBE contamination and the potential for future occurrences, 17 States have taken action to ban the use of MTBE as a gasoline additive in the future. Over the next year, MTBE bans go into effect in the States of California, Connecticut and New York. At least 6 additional States are considering similar bans. At the Federal level, EPA published an Advance Notice of Proposed Rulemaking in 2000 requesting comments on a phase down or phase out of MTBE from gasoline under Section 6 of the Toxic Substances Control Act (TSCA). While the Clean Air Act allows for MTBE to be used as a fuel additive, TSCA is the only administrative mechanism available to EPA for limiting or eliminating the use of MTBE. TSCA gives EPA authority to ban, phase out, limit or control the manufacture of any chemical substance deemed to pose an unreasonable risk to public health or the environment. But the TSCA process is cumbersome and lengthy at best.

TMDL

Question. The Clean Water Act requires States to identify pollution-impaired water and develop "total maximum daily loads" that set the maximum amount of pollution that a water body can receive without violating water quality standards. Unfortunately, States lack the ability to effectively implement TMDLs and because of a number of controversies concerns costs and burdens, EPA has delayed issuing a new TMDL rule until after May 2003.

What is the status of this rule and what are the primary issues that EPA is attempting to address?

Answer. The Agency has prepared a draft proposal which is undergoing an informal review at OMB in order to determine what significant issues this proposal may pose for other Federal agencies. At the end of this process, the Agency will make a determination whether to go forward with the rulemaking or rely on additional guidance to continue shaping the TMDL program.

The primary issues the Agency is attempting to address are:

—How to improve monitoring and increase scientific rigor of water quality standards attainment determination;

—How to facilitate trading and enhance locally driven watershed efforts; and

—How to improve and streamline State water quality management planning processes to ensure that TMDLs are integrated with other all water program activities and result in water quality improvement.

CONCENTRATED ANIMAL FEEDING OPERATIONS

Question. EPA issued final, revised CAFO rules on December 16, 2002. The final rules, effective April 14, 2003, will require CAFOs to develop nutrient management plans that are intended to keep livestock waste from entering nearby waters. The new rule will apply to some 15,500 livestock operations across the country. A recent GAO report concluded that neither the EPA nor the States are equipped to implement this program. What is the EPA doing to respond to the GAO concerns?

Answer. The Agency is developing a comprehensive national implementation plan that ensures the new regulations are effectively implemented and enforced by EPA and the States. The plan is a comprehensive strategy that addresses key goals including communication and outreach, development of supplemental implementation guidance, revision of State programs, permit issuance, compliance assistance and enforcement. We are working in close partnership with our Regions and States as we develop this plan. We also expect that many elements of our implementation plan will be coordinated and integrated with efforts by United States Department of Agriculture (USDA), particularly with respect to tool development, technical support, and funding. A key part of this implementation plan will be the expectation that EPA Regions work closely with each of the States to develop a corresponding plan that includes activities and milestones to ensure that States revise their Concentrated Animal Feeding Operations programs and carry out the needed permitting, inspection and enforcement activities.

NEW CORN PEST CONTROL

Question. On February 25, 2003, EPA approved the use of a new genetically engineered corn developed by Monsanto. This new corn includes a gene from a soil bacteria that allows the roots to secrete a protein that kills the corn rootworm, the crop's number one pest. This is an important initiative. What other genetically engineered crops are being considered for approval by EPA?

Answer. The Environmental Protection Agency (EPA) regulates the pesticide produced by genetically engineered crops such as the insecticidal protein that controls the corn rootworm. Besides the product developed by Monsanto, other insecticidal proteins to control corn rootworm are being developed and tested by Dow AgroSciences (Mycogen Seeds) and Dupont (Pioneer Seeds). Monsanto also is testing a new variety of its corn rootworm product. Dow AgroSciences has a new variety of its corn borer control product being tested under an Experimental Use Permit which was just issued. Dow is also testing a new product to control tobacco budworm, bollworms, and other pests in cotton and Syngenta has applied for an Experimental Use Permit for a new type of insecticidal protein for use in cotton to control several important pests. There is also an Experimental Use Permit for an insecticidal protein in tomatoes. This protein is already registered and has a tolerance exemption for use in all crops.

APPROVAL PROCESS FOR GENETICALLY ENGINEERED CROPS

Question. What is the process for EPA to consider and approve a new genetically engineered crop?

Answer. The Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), and the Food and Drug Administration (FDA) have shared responsibility for regulating agricultural biotechnology in the United States. EPA regulates the pesticidal component of genetically engineered crops, called plant-incorporated protectants or PIPs. These pesticides created through biotechnology are addressed through the agency's regulatory jurisdiction over all pesticides marketed and used in the United States. Statutory authority for this regulation comes under

the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), the Federal Food, Drug, and Cosmetic Act, and the Food Quality Protection Act. All pesticides that pass EPA's evaluation under FIFRA are granted a license or "registration" that permits their sale and use according to the requirements set by EPA to protect human health and the environment. In making regulatory decisions, EPA evaluates the risks of pesticide use and balances these risks with the benefits derived from pesticide use. PIPs are handled this same way.

EPA has tailored its basic regulatory framework to fit the distinctive characteristics of these genetically engineered biological pesticides. Data required for the review of PIPs include product characterization, mammalian toxicity and allergenicity, and potential impacts on non-target organisms including birds, fish, earthworms, and many invertebrates that are either beneficial or representative of species that might be exposed to the PIP. EPA has developed these data requirements through a public process and after considering recommendations from the FIFRA Scientific Advisory Panel (SAP). The SAP is often consulted before EPA completes its risk assessment and makes a regulatory decision.

HUDSON RIVER DREDGING DELAY

Question. A recent article indicated that EPA was delaying the dredging of PCBs from the Hudson River until Spring 2006. What are the reasons for the delay?

Answer. The main causes of delay are due to project complexity, particularly the time required for negotiations with General Electric, and the need for meaningful community involvement with residents whose communities will be affected by the dredging operation. This means an additional year will be needed for planning and designing beyond the 3 years already allotted in the February 2002 Record of Decision.

A detailed discussion of the dredging start date adjustment can be found on EPA's web-site: www.epa.gov/hudson. The current issues section contains a hot link to a recently released document titled, "Hudson River Project Design Fact Sheet 2002–2006," which highlights the project schedule milestones, upcoming activities on the Hudson River, and opportunities for public involvement. The fact sheet includes a schematic for the sequence of key events from 2002–2006.

NEW CANCER RISK GUIDELINES FOR CHILDREN

Question. As I understand it, EPA issued proposed new guidelines on March 3rd for evaluating cancer risks to children on the grounds that the very young may be some 10 times more vulnerable than adults to certain chemicals. I understand that the final guidelines are to be reviewed by the EPA science advisory board in May. How would these guidelines be expected to be implemented?

Answer. EPA's draft final cancer guidelines set forth recommended principles and procedures to guide EPA scientists in assessing the cancer risks from chemicals or other agents in the environment. They are intended to promote high technical quality and Agency-wide consistency in the human health risk assessment process. EPA published final cancer guidelines in 1986 and is in the process of revising them to reflect advances in scientific understanding as well as experience in using the 1986 guidelines as well as the 1999 Interim Guidelines. As you noted, EPA's Draft Final "Guidelines for Carcinogen Risk Assessment" were released for public review and comment on March 3, 2003. Because previous draft versions of the guidelines have been reviewed by EPA's Science Advisory Board (SAB), this draft final version has not been re-submitted to the SAB. After addressing public comments, EPA plans to release final revised Guidelines.

On March 3, 2003, EPA also released an associated draft document for public review and comment entitled, "Supplemental Guidance for Assessing Cancer Susceptibility from Early-Life Exposure to Carcinogens." The draft supplemental guidance describes possible approaches that EPA could use to address certain aspects of cancer risk assessment, specifically focusing on assessing cancer susceptibility that may arise from exposure to carcinogens early in life. The EPA SAB began reviewing the draft supplemental guidance in May 2003. EPA will carefully consider SAB recommendations and public comments in revising the draft supplemental guidance.

The draft supplemental guidance proposes to adjust risk estimates that pertain to early-life exposure to certain kinds of carcinogens when specific data on risks from early life exposure are unavailable. The adjustment factors are meant to be applied only when data indicate that the carcinogens operate by a mutagenic mode of action (i.e., cause cancer by directly interacting with DNA). For carcinogens that act through other modes of action, or where the mode of action is unknown, no adjustment factors are recommended at this time due to insufficient information for such carcinogens.

The proposed adjustment factors do not address childhood cancers, but rather address risks of cancers during adulthood due to early-life exposures. The analysis of animal data presented in the draft supplemental guidance indicates that higher risks typically result from a given exposure to mutagenic carcinogens occurring early in life when compared with the same amount of exposure during adulthood. Information derived from human radiation exposures supports this finding. The biological differences between children and adults are believed to be greatest during the first years of life. To account for these differences, the document proposes a 10-fold adjustment for exposures before 2 years of age and a three-fold adjustment for exposures between 2 and 15 years of age. For exposures after 15 years of age, no adjustment factor is proposed. As noted previously, the proposed adjustment factors, as well as the entire guidance document, are being reviewed by the SAB.

Question. Are there any other EPA special guidelines being examined for implementation just for children?

Answer. No. There are no other Agency-wide risk assessment guidelines being examined for implementation just for children. The draft supplemental guidance document is designed to supplement the Guidelines for Carcinogen Risk Assessment. Issues involving pregnancy and the developing young are covered in EPA's 1991 Guidelines for Developmental Toxicity Risk Assessment and 1996 Guidelines for Reproductive Toxicity Risk Assessment; developmental neurotoxicity is addressed in the 1998 Guidelines for Neurotoxicity Risk Assessment. In terms of other documents that may assist in using the risk assessment guidelines, EPA is also in the process of preparing draft guidance on identifying the appropriate age groups for assessing childhood exposure to environmental contaminants.

HOMELAND SECURITY

Question. Please explain the role of EPA in the President's National Strategy for Homeland Security?

Answer. Under the President's National Homeland Security Plan, EPA has three primary areas of responsibility: Critical Infrastructure Protection; Preparedness, Response, and Recovery; and Communication and Information. EPA has developed specific tactics to accomplish each goal, which will be coordinated with the Department of Homeland Security, other Federal agencies, and EPA's partners at the State, local, and tribal levels. Additionally, as the responsibilities of the various agencies evolve, including the Department of Homeland Security, EPA will coordinate with those agencies to effectuate homeland security.

Critical Infrastructure Protection

EPA has unique programmatic responsibilities and expertise related to the water and wastewater industries; the use, handling, storage, release, and disposal of chemicals and chemical wastes at industrial facilities; and indoor air quality. In these areas, EPA is committed to assessing and reducing vulnerabilities and strengthening detection and response capabilities for critical infrastructures. In addition, EPA will contribute to similar efforts led by other Federal agencies addressing food, transportation, and energy industries, and will provide environmental expertise to support Federal law enforcement activities.

Preparedness, Response, and Recovery

EPA's role under the National Strategy for Homeland Security is to develop, disseminate, and exercise the use of new and improved tools and techniques to respond to chemical, biological and radiological releases that would protect public health and the environment through prevention and clean up of contamination. EPA is remaining vigilant in its readiness State and is training a larger cadre of personnel that will respond quickly in the event of multiple threats. EPA is also focusing its efforts on enhanced coordination within the Agency, regionally and with other Federal agencies.

Communication and Information

Comprehensive, accurate, well-organized, and timely information is critical to sound decision making. EPA possesses unique capabilities to collect, synthesize, interpret, manage, disseminate, and provide understanding to complex information about environmental and human-made contaminants and the condition of the environment. Effectively managing and sharing this information within the Agency and with our partners at all levels of government and industry will contribute to the Nation's capability to detect, prepare for, prevent, protect against, respond to, and recover from terrorist incidents.

HOMELAND SECURITY: CHEMICAL COMPANIES

Question. What is EPA doing to address the risks posed by chemical companies?

Answer. First, EPA monitors safety-related issues that are designed to prevent an accidental release of chemicals at facilities. EPA has worked in coordination with the Federal Bureau of Investigation's National Infrastructure Protection Center to provide the chemical industry with a number of site security advisories. In the months following September 11, 2001, EPA distributed advisories to the chemical industry primarily through the cooperation of chemical trade associations. More recently, the Agency has compiled an e-mail database for the purpose of rapidly sharing security advisory information with over 10,000 chemical facilities regulated under the Agency's Risk Management Program.

Over the last year, EPA has also visited 31 high-risk chemical facilities to discuss their efforts and to share information on assessment and vulnerability reduction. EPA selected facilities based on their Risk Management Plan data, geographic location, and other factors. These visits were conducted with the voluntary consent and cooperation of the chemical facilities.

Administrator Whitman has joined the Secretary of the Department of Homeland Security (DHS) in recognizing the need for new legislative authorities to address chemical site security concerns. Such concerns include employee training and background checks, protection of perimeters, intrusion detection of both physical plant and data systems, and securing and controlling chemical stores and potential release points. EPA is working with the Office of Homeland Security and DHS to produce draft legislation, which we anticipate will soon be transmitted in the Senate for its consideration.

GROUND ZERO AIR STATEMENTS

Question. Recent articles have indicated that ground zero tests in the days immediately after the WTC terrorist attacks did not support the EPA's statements that the site was safe to breathe. What tests did the EPA conduct and what statements were made?

Answer. EPA activities at or near the World Trade Center (WTC) site include air quality monitoring, air model development, meteorological measurements, laboratory analysis of WTC samples, analyses of the toxicological effects of fine particulate matter derived from the destruction of the WTC, and an assessment of the potential health risks associated with exposures to air pollutants released during the WTC disaster. Pages B–13 through B–22 of the attached report, *A Preliminary Survey of Air Quality and Related Health Studies Conducted in the Vicinity of Ground Zero*, describe these activities in detail. Information and results from these activities are available at the web sites included in the report.

EPA conducted an inhalation risk assessment based on the data from the activities described above and on numerous other air measurement efforts conducted by other Federal agencies and New York State and local government agencies. This assessment was released as an external review draft in December of 2002 and will be finalized during 2003 pending the completion of an external peer panel review.

EPA has maintained that people living and working in lower Manhattan were not exposed to levels of contaminants in the outdoor air that would pose a significant long-term health threat. The Agency further advised people experiencing acute health problems to see their physician. In addition, EPA stressed that workers at the site faced a higher risk and must wear protective respiratory gear, which was supplied by EPA and other agencies. We also emphasized that people returning to dusty homes and workplaces should have these spaces professionally cleaned by asbestos contractors.

WATER INFRASTRUCTURE

Question. I would like a breakdown on the amount of EPA funds, especially for infrastructure needs, are invested in rural areas as opposed to urban areas?

Answer. For the Clean Water SRF, the information EPA receives from the States on number of projects is broken out only by population size. Communities under 10,000 population might serve as a proxy for rural, or at least suburban, but this is a rudimentary way to report rural versus urban funding for wastewater infrastructure. For our most recent national data set (fiscal year 2002), about $9 billion has been made available to finance over 7,000 wastewater treatment projects serving communities with populations under 10,000.

Considering that rural communities often lack centralized wastewater treatment and rely on alternative technologies, such as septic systems and other on-lot decentralized treatment systems, it is reasonable to assume that a percentage of the

projects funded to correct polluted sources of runoff also support rural wastewater treatment needs. While EPA lacks specific numbers of the various categories of nonpoint source projects, from surveys taken previously we know that about 54 percent of the projects comprising about 4 percent of the funds are for correction of septage problems. Of the $1.6 billion of CWSRF funds, representing about 3,400 loans, that have been spent on correction of polluted runoff, EPA estimates that $64 million in approximately 1,800 loans might be attributable to serving the needs of rural communities. Because the alternative technologies that many employ in service to rural areas are less expensive than traditional centralized wastewater treatment systems for urban areas, numbers of loans are a more sensitive indicator than dollars spent.

Through June 30, 2002, $2 billion or 40 percent of DWSRF loan dollars were provided to drinking water projects serving communities with populations under 10,000, accounting for 74 percent of all DWSRF loans. The Safe Drinking Water Act also allows DWSRF funds to be used to help disadvantaged communities. Of the $5.1 billion in DWSRF assistance, $838 million has been provided to disadvantaged systems, however, the distribution between rural and urban communities is not known.

In addition to the SRF programs, rural communities receive financial support through the Clean Water Indian Set-aside Program; the Alaskan Native Villages program; the Mexican Border program; and Rural Water Technical Assistance activities for both water and wastewater.

CWSRF AND DWSRF OVERSIGHT

Question. What oversight is provided by EPA to ensure that the Clean Water SRF and the Drinking Water SRF are allocated within States based on need?

Answer. The Clean Water SRF (CWSRF) has no statutory oversight responsibility for allotment of funds to the States based on need. That allotment formula was developed by the Congress and is contained in statute. However, EPA believes it is very important that funds used within the States for high priority water quality projects. We provide oversight and encouragement to States to develop and use integrated planning and priority setting systems to make CWSRF funding decisions. EPA regions review, as part of each State's annual capitalization grant application, the long and short-term goals for the program and how their intended use plans relate to those priorities. They also assess during their annual oversight process for each State program how well the State adhered to its intended uses of funds.

The Safe Drinking Water Act requires EPA to assess the capital investment needs of water systems eligible to receive DWSRF assistance, which covers approximately 54,000 community water systems and 21,400 not-for-profit non-community water systems. The survey includes all infrastructure needs for systems to provide an adequate quality and quantity of drinking water. By law, EPA conducts the survey every 4 years and uses the latest results to allocate DWSRF funds to the States. Each State is allotted its proportional share of the total needs with the proviso that each State receives a minimum of 1 percent.

To determine how best to allocate its allotment, every year each State DWSRF program establishes short- and long-term infrastructure funding goals and priorities through Intended Use Plans (IUPs), as required by statute. These IUPs specify how each State's funding priorities are consistent with section 1452(b)(3) of the SDWA, which requires that States give funding priority to infrastructure projects that: (1) address the most serious human health risks; (2) are necessary to ensure compliance with the SDWA; and (3) assist systems most in need, on a per household basis, according to State affordability criteria. EPA reviews the IUPs to ensure that they are consistent with SDWA requirements.

GLOBAL POLLUTION

Question. Global and Cross-Border Environmental Risks. What is EPA doing to minimize pollution in the United States from pollution hazards originating outside the United States, such as from Mexico or Canada?

Answer. EPA is actively engaged in a range of activities intended to prevent, reduce, or otherwise minimize the impacts on the U.S. environment and public health from sources of pollution originating outside of our borders. The broad responses address a wide range of the contaminants of concern, a diversity of pollution source types and media transport mechanisms. EPA's activities include working along our borders with Canada and Mexico and cooperation with a substantial number of other countries across a wide area of the globe, for example by participating in multi-lateral agreements to address identified regional and global transboundary pollution threats. Many of EPA's major program offices, regional offices and labora-

tories are involved in these efforts and, in many of its endeavors, the Agency cooperates with other Federal and State agencies, non-governmental organizations and multilateral bodies.

EPA's international efforts include environmental protection capacity building, technical assistance, technical information exchange, international monitoring and assessment, cooperative research and development, and negotiation of international agreements. The specific efforts are a function of addressing a particular pollutant's chemical behavior, media transport mode, nature of the source types, or circumstances of the foreign involvement. The Agency also conducts research and assessments of new or unaddressed risks and improving the scientific basis of our general understanding of the known transboundary environmental threats, such as the global flows of mercury. EPA has both domestic and international cooperative efforts aimed at improving our understanding of the problems, including research into the chemical and physical processes involved in long-range transport and transformation of pollutants. The Agency also engages in technology development addressing international problems.

EPA's major efforts in addressing transboundary pollution impacting the U.S. mainly fall into the following four broad categories: (1) the U.S. border areas with Mexico and Canada and cooperation with these immediate U.S. neighbors on transboundary contamination problems; (2) addressing regional Arctic contamination and potential threats to Alaska and indigenous populations, mostly from pollution sources in Russia; (3) international cooperation and agreements addressing global sources of persistent organic pollutants (POPs) and other toxic substances; and (4) very long-range air transport of a variety of pollutants and the problem of global cycling of mercury.

Please refer to the Attachment for program specifics.

ATTACHMENT—GLOBAL POLLUTION

U.S. Border Areas with Mexico and Canada and General Transboundary Contamination Cooperation with These Immediate U.S. Neighbors

United States–Mexico

The United States and Mexico cooperate on a number of programs to protect the United States from transboundary pollution. Formal cooperation dates back to 1983, when the United States and Mexico signed the La Paz Agreement to promote cooperation for the protection and improvement of the environment in the border region. This agreement serves as the basis for joint activities to protect public health and the environment in both the United States and Mexico. Two formal "environmental plans" have been completed by EPA and its Mexican counterpart, SEMARNAT, and a new plan that will cover the next 10 years, called Border 2012, was announced on April 4, 2003. Detailed information on Border 2012 is available on the EPA website (www.epa.gov/usmexicoborder) and previous activities are described in the U.S.-Mexico Border XXI Program-Progress Report 1996–2000. Although not all activities under the new border program have yet been identified, examples of some are provided below:

—*Air*.—Bi-national air quality planning and management activities have been conducted in the sister cities of San Diego-Tijuana; Imperial Valley-Mexicali; Nogales-Nogales; and Douglas-Agua Prieta. Recent efforts have concentrated on establishing and operating air quality monitoring networks in Tijuana and Mexicali, similar to those operating in San Diego and Imperial Valley. The Joint Advisory Council for the Improvement of Air Quality in the Ciudad Juárez/El Paso/Doña Ana County Air Basin (JAC) was created to provide locally-based recommendations to the Air Workgroup on how to manage air quality in the region.

—*Hazardous Wastes*.—The EPA and Mexico's National Ecology Institute (Instituto Nacional de Ecologia, or INE) have operated the Hazardous Waste Tracking System (Haztraks) for several years. In 1998, Haztraks was replaced in Mexico with INE's version of a hazardous waste tracking system, known as SIRREP (Sistema de Rastreo de Residuos Peligrosos). The use of both systems has considerably improved the ability to monitor transboundary hazardous waste shipments in the U.S.-Mexico border region. It is worth noting that a 1999 study conducted by the Texas Natural Resources Conservation Commission (TNRCC) determined that the operation of SIRREP and the Haztraks systems is the most effective way of tracking the movement of hazardous wastes between the two countries.

A Consultative Mechanism for the Exchange of Information on New and Existing Facilities for the Management of Hazardous and Radioactive Waste within 100 Kilometers of the U.S.-Mexico Border has been developed. This mecha-

nism serves to address public concern on both sides of the border as it relates to the siting and operation of hazardous and radioactive waste facilities in the border region. The agreement will allow for both countries to exchange data and other information on new and existing treatment, storage, and disposal facilities for these types of waste in the border region.

In addition to the activities under the border plan, two bi-national institutions were set up between the United States and Mexico under a supplemental agreement to the North American Free Trade Agreement (NAFTA). These institutions are the North American Development Bank (NADBank) and the Border Environment Cooperation Commission (BECC), which were established to develop and finance solid waste, waste water and drinking water infrastructure in the border area to reduce the possibility of cross border pollution. To date, 55 projects have been certified and more than 30 are either operational or under construction. When all 55 projects are completed they will serve more than 9 million people. In Juarez, Mexico, a city of over 1 million, the first wastewater treatment systems are now operational. Since 1994, EPA has spent over $770 million on water and wastewater infrastructure in the Mexico Border area.

EPA also has a number of programs and activities concerned with the transport of agricultural products across the border. These actions have contributed to the reduction of pesticide residues on the imported agricultural products.

United States-Canada

The United States and Canada cooperate extensively on monitoring, assessment, reporting, and control of chemical, physical, and biological pollution, including increasing their focus and cooperation on biological pollution (e.g., invasive species of concern). A great deal of this cooperation includes overarching goals to better protect many diverse, shared ecosystems and the public health of populations (including indigenous peoples) particularly along the shared extensive border areas, but also in the inland areas of both countries. In addition, bi-national cooperation has been underway since the early 1990s to better protect U.S.-Canada marine regions such as the Gulf of Maine.

The United States and Canada have a long history of working together to control, reduce, and prevent cross border pollution. The Boundary Water Treaty of 1909, which applies along the entire 5,500-mile inland border area, was in part designed to protect transboundary waters and U.S.-Canada watersheds, including protecting the public health of populations in both countries from the adverse effects of water pollution. Many major projects and activities addressing actual or potential pollution of transboundary waters continue to be conducted under the water pollution control and prevention requirements of the 1909 treaty.

Specifically, cooperation is underway to fulfill the treaty requirements for bi-national surface waters: e.g., St. Croix River, Lake Champlain, Great Lakes Basin including the Upper St. Lawrence River, Rainy River, Red and Souris Rivers system, Poplar River, Flathead River, Columbia River, Puget Sound-Georgia Basin, Taku River, and the Yukon River. The U.S.-Canada International Joint Commission (IJC) assists both countries with boundary waters management and protection for a number of the listed watersheds. 1909 Treaty cooperative efforts protect the U.S. portions of many shared U.S.-Canada watersheds.

From the 1970's to the present, the United States and Canada have steadily increased their bi-national cooperative frameworks and attendant activities along the common border area. These activities, concerned with improved management and prevention of transboundary pollution, have been conducted between Federal, provincial, State, tribal, and some local governments, and frequently include involvement of the NGO community, the private sector and the general public as well.

Cooperation with Canada under the Great Lakes Water Quality Agreement, beginning in 1972, has resulted in substantial progress in restoring the quality of these important natural resources. Lake Erie, once considered an ecological wasteland, is now substantially restored, with fish eating birds, like eagles and ospreys, having made strong recoveries. DDT and PCB contamination has been reduced by 80 or 90 percent. U.S.-Canada cooperation to protect and restore the Great Lakes Basin ecosystem includes many goals that serve to better protect U.S. public health and the U.S. parts of the shared aquatic ecosystems.

Unfortunately, although a lot of progress has occurred, many large Great Lakes fish are still unsafe to eat due to their accumulating burden of toxic pollutants. The fiscal year 2004 President's Budget requests $15 million for the new Great Lakes Legacy program, which will help reduce toxic pollutant levels further through contaminated sediment remediation. Also, the Great Lakes basin ecosystem is subjected to harmful changes due to the effects of a substantial number of foreign alien invasive species, so that the two countries continue to address new challenges. Dur-

ing 2002 and 2003, the United States and Canada, in consultations at the IJC, started active consideration of measures to improve efforts addressing aquatic invasive species in the Great Lakes Basin.

Under the 1991 U.S.-Canada Air Quality Agreement, emissions of sulphur dioxide and nitrogen oxides (key contributors to acid rain) have been substantially reduced, benefiting the Northeastern United States. An annex to the Agreement, signed in December 2000, will lead to reductions in ground level ozone pollution. Priority cooperation under the Agreement also covers particulate matter, ensuring certain existing or proposed point sources of air pollution along the common area do not cause significant transboundary air pollution which can harm one side or the other. Efforts are also underway to protect visibility in natural areas along the border.

EPA also is furthering the existing bilateral agreements concerning mercury and other toxic substances, such as the 1997 Great Lakes Bi-national Strategy, with the goal of 50 percent reduction in use and emissions of mercury by 2006. The Northeast Mercury Study of the U.S. Northeast States and Eastern Canadian Provinces has focused on reduction of uses and emissions of mercury and safe management of the mercury life cycle. In 1997, Canada and the United States signed an agreement for the Virtual Elimination of Persistent Bioaccumulative Toxic Substances (PBTs) in the Great Lakes. The strategy sets long-term goals to promote emissions reductions of these toxic substances. EPA coordinates the U.S. activities by engaging all relevant stakeholders, developing action plans, coordinating reduction activities and reporting on progress.

The two governments have established three bi-national agreements that cover preparedness and response to pollution release accidents/emergencies that could arise along the border. These agreements could also be used by one country, in certain emergency instances, to call upon the other country to assist with a response to an emergency that may occur inland away from the bi-national border. One of the three agreements covers the four U.S.-Canada marine water regions and Great Lakes waters for oil and hazardous materials. Another one covers the rest of the inland border for oil and hazardous materials. The more recent one covers radiological emergencies.

North American Trilateral Cooperation Between the United States, Mexico and Canada

In the 1990s, the United States and Canada developed new trilateral cooperation with Mexico to increase multilateral cooperation on major issues such as PBTs, their sources, air transport, fate and deposition. Long-standing shared goals by the United States and Canada under their Great Lakes Water Quality Agreement on PBTs helped catalyze and focus larger trilateral efforts. The three countries are focusing together on PBTs and other pollutants, their environmental transport and other pathways. The United States, Canada and Mexico have increased their consultations and cooperation on the northward migration, or introduction, of animals, plants, and pathogens not native to North America (i.e., invasive species), with the shared goal of improving protection of the biological integrity of many North American ecosystems, and in the case of some invasive species, to protect the public health of populations of North America.

In 1993, Canada, Mexico, and the United States established the Commission for Environmental Cooperation (CEC) under the North American Agreement on Environmental Cooperation (the NAAEC) to address regional environmental concerns. The NAAEC complements the environmental provisions of the North American Free Trade Agreement (NAFTA). The CEC is facilitating tri-national coordination and cooperation on matters of cross-border flows of air pollutants, as well as invasive biological species. Capacity building, public participation, and facilitation of risk management actions through pollution prevention, market-based incentives, and technological controls are priorities of the organization.

In 2001, two meetings of air quality experts were sponsored by the CEC to address the exchange of emissions information for criteria air pollutants and greenhouse gases and to address air quality impacts of transboundary trade and transport corridors. To support environmental capacity building, a Mexican association of air quality experts has been established and a newsletter has been created to inform stakeholders in Mexico about the air quality program. The CEC is also providing funding for Mexican participation in the meetings of North American air quality experts addressing problems common to the three countries.

Under the auspices of the CEC, in 1995, Mexico, Canada and the United States developed a regional initiative on the sound management of chemicals. Under this initiative, CEC established regional action plans for PCBs, DDT, and chlordane and is developing an action plan for dioxins, furans and hexachlorobenzene. EPA provides technical input to these plans and coordinates relevant capacity building ac-

tivities, such as providing support for dioxin measurements, and assisting Mexico with obtaining international funding to address DDT stockpiles.

In 2001, the CEC air program collaborated with the Sound Management of Chemicals (SMOC) program and developed a national mercury air emissions inventory in Mexico. It is being combined with the national inventories in Canada and the United States to give a continental perspective for the globally cycling pollutant. Data comparability and information access are key to its success.

In addition to mercury, air quality experts in the three countries are developing inventories for sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, particulate aerosols, and greenhouse gases. They are also developing plans to obtain the needed information through monitoring and other implementation tools for any significant data gaps that may be identified.

Workshops facilitate the progress in the assessments and capacity building, and a leveraging of funds supports the implementation for phase 2 of the mercury NARAP, and those for DDT and PCBs, dioxins, furans and hexachlorobenzene. This year the NARAP on chlordane was completed, stopping production and use of chlordane in North America. Also building on NARAP activities, the DDT Task Force solicited and received funding from the Global Environmental Facility (GEF) to support a regional project to phase out DDT in Mexico and throughout Central America in 2000.

Consideration also is being given to how the CEC, and particularly SMOC, could facilitate the regional implementation by the Parties to the 2001 Stockholm Convention on Persistent Organic Pollutants. The effects of persistent toxics on wildlife are being monitored, as well as human health endpoints. A North American Pollutant Release and Transfer Register project addresses the sources, handling and stewardship of toxic chemicals from industrial activities in North America, and allows for better management of these transboundary pollutants.

Regional Cooperation Addressing Contamination Threats to Alaska and the Arctic, Including Indigenous Populations

The fragile Arctic environment and ecosystems, Alaska and indigenous populations are threatened by transboundary contamination mostly from sources in Russia. Transboundary transport mechanisms include atmospheric and ocean circulation and biological transmission through the Arctic food chain. The Russian contaminant sources are largely a legacy of the Soviet Union's armaments and military activities in the far North, the Cold War era industrial/agricultural infrastructure and practices, and related un-managed waste. The principal contaminant sources of concern include radioactive waste and spent nuclear fuel, PCBs mostly from the power grid system, dioxins/furans from incinerators and industrial sources, obsolete pesticides from huge collective farm era stockpiles, and heavy metals such as lead and mercury from industrial activities.

In the 1990's Russia had the highest concentrations of unsecured Cold War legacy radioactive waste in the world, and very little waste management infrastructure to address the deteriorating situation. The problems mounted rapidly as the nuclear submarine dismantlement program obligatory under the START treaty continued to generate large amounts of radioactive waste and unsecured spent nuclear fuel. Russia dumped the low-level liquid radioactive waste produced in the submarine decommissioning and dismantlement process in the Arctic, while the spent nuclear fuel accumulated in unsecured circumstance at Arctic coastal sites in Northwest Russia.

Under an EPA initiative responding to a Russian request for assistance, the United States (EPA, DOS/AID, DOD, and DOE) undertook in 1994 a multilateral project with Russia and Norway to upgrade and expand Russia's only operational radioactive liquid waste processing facility (originally developed for the Russian nuclear icebreaker fleet) to process the low-level liquid waste from the nuclear submarine disarmament program. Russia has terminated all ocean dumping of radioactive liquid waste since the start of the project and continues to work toward formal acceptance of the global ban on ocean disposal or radioactive waste under the London Dumping Convention.

Because unsecured spent nuclear fuel in the Russian Northwest constitutes 95 percent of the high level radioactive waste threat to the Arctic environment, EPA proposed the development of a prototype transportable spent nuclear fuel dry storage cask as a means of securing Russia's inventory of spent nuclear fuel arising from the decommissioning and dismantlement of large portions of their strategic submarine fleet under START. The U.S. nuclear power industry pioneered dry cask storage, and the EPA proposal was to develop a low-cost prototype transportable storage cask for use in Russia, based on a unique Russian concrete-metal cask concept.

The Transportable Spent Nuclear Fuel Storage Cask Project was organized as a trilateral effort between the United States, Russia and Norway under a military environmental cooperation declaration involving the three countries and lead by their respective defense establishments. For the United States, the effort has involved cooperation among DOD, EPA, DOE and DOS. The successful testing of the prototype cask has resulted in serial production to start under separate programs within Russia and, bilaterally, as part of the cooperative threat reduction efforts between Russia and the United States. A prototype concrete storage pad was proposed by EPA to hold the loaded casks. This portion of the cooperative program is also nearing completion and a completion event is scheduled in Murmansk, Russia, in the last half of 2003.

Since 1998, the EPA multilateral strategy on Arctic contamination has shifted emphasis to the problem of non-radioactive chemical threats to the Arctic environment and Alaska emanating from Russia's Cold war era legacy. The United States proposed a three phased project to the Arctic Council to assist Russia in addressing its PCB problems: (1) development of a PCB inventory for the Russian Federation, with emphasis on sources potentially impacting the Arctic; (2) assessment/feasibility of available technologies to address the particular major source problems identified by Russia; and (3) selection and demonstration of at least one technology addressing one or more major source categories.

The Russian PCB Project was endorsed as an official project of the Council's new Arctic Council Action Plan (ACAP) and EPA was asked to provide the project technical lead. The project has received funding from EPA and DOS plus all other Arctic nations and the Netherlands. The first (inventory) phase was completed in October 2000, with the results openly available. The second phase technology assessment and feasibility study concerned with evaluating alternative dielectric fluids to replace PCBs, as well as PCB decontamination and destruction technologies for application to the specific PCB source problems identified in the first phase effort was completed in October 2002. In 2003, work has started on the third and last phase of the project, to develop the first prototype demonstration for destruction of up to 200 tonnes of PCB liquids from electrical transformers and 200 tonnes of PCBs contained in 12,000 capacitors in Russia.

The project model is being applied to other Russian POPs problems under the Arctic Council: (1) "Russian Sources of Dioxin/Furans" under Swedish project lead and U.S./EPA co-lead, and (2) "Obsolete Pesticides in Russia" under U.S./EPA project lead. The Obsolete Pesticides project in Russia will assist Russia with management of its extensive stockpiles of Soviet Era pesticides, many of which are migrating into the Arctic. This is a cooperative project with Canada, Finland, Norway, Russia, Sweden and UNEP Chemicals. The three phases involve: (1) developing the inventory of obsolete pesticide stockpiles in the 19 priority Russian regions impacting the Arctic; (2) developing a strategy for safe interim storage and stabilization of stockpiles—this will include performing risk assessments for highest contaminated areas, evaluating destruction technologies, and designing a prototype storage facility that can be used throughout Russia; and (3) implementing a prototype demonstration for environmentally safe destruction of those pesticides stocks of greatest risk to the Arctic, including Alaska, and construction of a prototype storage facility.

The cooperative project, Reduction of Dioxins and Furans Releases in the Russian Federation, has as its primary objective the reduction of dioxins/furans releases to the Arctic from key industrial sectors, with particular focus on the pulp and paper industry and landfill incinerators. Initial activities completed include: translation into Russian of the UNEP Chemicals "Standardized Toolkit for Identification and Quantification of Dioxins and Furans Releases"; development of a draft Dioxins/Furans Fact Sheet for use in Russia; and a Workshop on Harmonization of Laboratory Methods between Russia and Western countries. This project also consists of three phases: (1) identify and verify sources of dioxins and furans in Russia, verify emissions and refine emission factor estimates, and modernize and harmonize Russian sampling and analytical techniques; (2) feasibility studies for technological improvements in the pulp and paper industry and industrial incineration; and (3) pilot demonstration project.

International Cooperation and Agreements Addressing Global Sources of Persistent Organic Pollutants (POPs) and Other Toxic Substances

Many Persistent Organic Pollutants (POPs) are subject to long-range transport processes, and consequently pose a common threat to human health and the environment (particularly sensitive ecosystems), all over the world. The United States is working to reduce and/or eliminate POPs and their releases on a regional and global basis. In 2001, the United States signed the Stockholm Convention on POPs and is working to ratify the treaty. The Stockholm Convention requires parties to

ban or restrict manufacture, use and release of 12 selected chemicals. The agreement also includes provisions on export and import restrictions, waste management, and the selection of additional substances for coverage.

Since the early 1990's, EPA has been involved with activities concerned with identifying and quantifying sources of contamination impacting the Arctic environment, ecosystems and populations under the Arctic Environmental Protection Strategy (AEPS). Subsequently, the AEPS was subsumed under the Arctic Council, a consultative mechanism whereby the eight Arctic nations collaborate and, for example, provide assistance to Russia in meeting environmental goals.

In 1998, the United States signed with other member nations of the United Nations Economic Commission for Europe (UNECE) a regional protocol on POPs under the Convention on Long-Range Transboundary Air Pollution and is working to ratify the Protocol. This regional agreement seeks to eliminate production and reduce emissions of POPs in the UNECE region and addresses 11 of the Stockholm Convention POPs and 5 additional chemicals. EPA would be involved in ensuring the United States meets the obligations of the protocol and is actively engaged in the scientific assessment of potential additional chemicals. The EPA also continues activities under the Convention on Long-Range Transboundary Air Pollutants (LRTAP Convention) Heavy Metals Protocol, signed by the United States in June 1998 and ratified in January 2001, whereby nations of the UN Economic Commission for Europe agree to control emissions of mercury, lead and cadmium.

EPA has initiated activities (previously described) under the Arctic Council/Arctic Council Action Plan (ACAP) intended to assist Russia in accepting and implementing the LRTAP protocols, as well as the Stockholm Convention. Russia has now signed the Stockholm Convention. The United States has also provided technical and financial assistance for POPs-related activities to a variety of countries besides Russia and regions other than the Arctic, including Mexico, Central and South America, Asia, and Africa. Examples of this assistance include projects led by the EPA on the development of dioxin and furan release inventories in Asia, the Chemicals Information Exchange and Networking Project for chemical managers in targeted countries in Africa and Central America, the destruction of pesticide stockpiles in Africa and Russia, and the reduction of PCB sources in the Philippines.

Very Long-Range Air Transport of Pollutants and Global Cycling of Mercury

Very long-range air transport of pollutants and the global cycling of mercury is a rapidly growing area of attention for the United States and other countries. At the present time these matters are heavily concerned with research, monitoring and development. EPA has taken many steps to better understand the sources and mechanisms of long-range transport of persistent bioaccumulative toxic (PBT) substances and other air pollutants, as well as undertaking some initial steps in developing co-benefit technologies for emissions control, promoting pollution prevention.

In July 2000, EPA sponsored the First International Conference on Trans-Pacific Transport of Atmospheric Contaminants, involving scientists from both sides of the Pacific Basin, including China, Japan, Russia, South Korea, Canada, and the United States. The conference discussed the state of science on long-range atmospheric transport in the North Pacific region, identified uncertainties and gaps in our knowledge, and promoted a network of individuals and organizations interested in these issues to further international collaboration.

In June 2001, EPA co-sponsored a workshop with Environment Canada entitled "Photo-oxidants, Particles, and Haze Across the Arctic and North Atlantic: Transport Observations and Models." This conference was conducted as part of the U.S. participation in the Convention on Long Range Transboundary Air Pollution (LRTAP Convention) and the Arctic Monitoring and Assessment Program (AMAP) under the Arctic Council. The meeting focused on identifying the research needed to quantify the sources-receptor relationships for ozone and fine particle transport across the North Atlantic and Arctic.

For mercury specifically, the Agency priority pollutant that cycles globally, EPA was instrumental in developing new methods for measuring the various species to assess long-range transport mechanisms. EPA is also developing state-of-the-art knowledge about transformation of mercury into various species in the atmosphere and the transport consequences. The species determines distance traveled and ultimate fate. Research utilizing these new analytical methods has been ongoing in South Florida, Cheeka Peak, Washington; Barrow, Alaska; and Mauna Loa, Hawaii to distinguish local sources of mercury from external sources. These studies have involved the first aerial measurements and studies at elevation as well as at ground level.

In regard to pollution emissions minimization abroad, EPA is sponsoring a mercury-SO_2 co-benefit demonstration project at a small coal-fired facility in Russia, in

order to evaluate the effectiveness of emissions reduction using an electrostatic precipitator (ESP) add-on system. If the expected minimum of 50 percent reduction in mercury is achieved, it will be possible to utilize this low-technology approach in many countries where similar Russian ESP systems are in place. Additionally, a higher technology, although higher cost, approach has also been identified which is expected to reduce mercury by 99 percent in conjunction with SO_2 reduction, is being considered for application in China.

In conjunction with the Department of State Cooperative Threat Reduction Program, EPA has initiated development of a proposal for mercury bioremediation at a former chloralkali facility in Kazakhstan, and in preparation for this project, sponsored a meeting in May 2002 of all scientists engaged in mercury research and pollution prevention in Kazakhstan and the neighboring countries of Kyrgystan, Azerbaijan, and Russia.

EPA also played an instrumental role with Department of State during the UNEP Governing Council session in February 2002, at which UNEP launched a global mercury assessment, with a technical report and set of alternatives for decisions presented to the February 2003 UNEP Governing Council.

OVERSIGHT AND ACCOUNTABILITY

Question. Most or all Federal agencies continue to have problems with ensuring that Federal funds are being used in a manner consistent with program requirements or grants requirements. What steps has the EPA taken in the last 2 years to improve accountability in the use of EPA funding?

Answer. Obligating appropriated funds in accordance with Congressional intent is something we have always emphasized in Agency communications, training and guidance. We have not noted a problem in this area at EPA. Nonetheless, the following steps have been taken in the last 2 years or are currently being undertaken to further underscore the proper utilization of funds for program and grant requirements:

Cost Accounting/Program Project

EPA developed approaches to provide greater program and project detail in the Agency's accounting system. Utilizing the principles of Cost Accounting, this additional level of reporting enables program managers to monitor more closely programmatic spending against budget targets and further serve to integrate the Agency's planning, budgeting and accountability systems.

To further integrate EPA's planning, budgeting and accountability systems, the Agency reached agreement on a plan to provide greater program and project detail in the Agency's accounting system. Critical elements of the approach have been agreed to by the Agency. As a result, Agency program managers will be better able to monitor programmatic spending against the goal/objective structure of the 2003 Strategic Plan and to link their operating budget to performance results.

Accountability

Agency budget estimates emphasizes prior year progress and the use of performance information as a key element in resource decision making. The Office of the Chief Financial Officer has been working with Agency managers to more clearly show the links between day-to-day activities and outcomes, to improve accountability between Headquarters and Regions, to build capacity of managers to use performance-based processes, to improve performance measures, and to expand Regional strategic planning.

EPA established a Managing for Improved Results Steering Group to come up with a comprehensive set of reforms on improving the Agency's use of performance and results information in all stages of the planning and budgeting process.

EPA launched an Agency-wide competition to support the development of improved performance measures. Forty proposals were submitted from a wide range of programs and Regional offices.

Program evaluations and performance measurement improvement projects that were competitively funded last summer yielded returns on the investment of extramural dollars and staff time.

For example, the Office of Solid Waste completed a program evaluation in April 2003, which identifies inefficiencies in the biennial reporting of hazardous waste generation, storage, transport and disposal by industry. Results include options for reducing States' and industries' reporting burdens by, for example, standardization of data and reporting protocols.

In another example, recommendations for Brownfields environmental indicators were developed for use by the Office of Brownfields Cleanup and Redevelopment as that program implements provisions of new legislation.

Grants Competition

With regard to grants requirements, EPA has aggressively promoted a new grants competition policy. The Agency also finalized and published guidance covering all areas of the EPA Order, published guidance clarifying the definition of Assistance programs, and continued to promote competition and provide technical support within the Agency.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

ARSENIC STANDARD: EPA FUNDING FOR COMMUNITIES

Question. Would you discuss what resources, if any, are being marshaled by EPA to assist communities faced with the extraordinary costs in meeting the new standards?

Answer: After promulgating the revised arsenic standard in January 2001, EPA has implemented a comprehensive strategy to assist communities that must install treatment technology to comply with the standard. This strategy is designed to: (1) enhance small systems' access to financial assistance; (2) fund the research, development, testing and implementation of effective, practical, and affordable treatment technologies to reduce compliance costs for drinking water systems affected by the revised standard; (3) provide Federal technical assistance and training on the new arsenic regulation to small community water systems; and, (4) use a variety of approaches to inform communities of their treatment options, and how and where to get help building their technical, managerial and financial capacity.

A key component of the Agency's support for small systems is to work with our State partners to maximize the availability of financial assistance under the Drinking Water State Revolving Fund (DWSRF) program. Through the DWSRF program, State SRF programs may offer principal forgiveness, reduced interest rates, or extended loan terms to systems identified by each State as serving disadvantaged communities. States also have the ability to set aside a portion of their Federal DWSRF allocation for technical assistance to small community water systems affected by the new arsenic rule. As of June 30, 2002, 74 percent of all DWSRF loan agreements, totaling just over $2 billion, have been completed with small systems serving 10,000 or fewer consumers.

In addition to maximizing the availability of DWSRF funds for infrastructure improvement loans and technical assistance, EPA and the U.S. Department of Agriculture (USDA) signed a 4-year Memorandum of Agreement (MOA) in 2002. Under this agreement, USDA's Rural Utilities Service (RUS) will identify as high funding priorities projects that assist small communities in complying with the revised arsenic standard for drinking water. Likewise, EPA will strongly encourage State agencies administering the DWSRF to coordinate funding decisions with RUS through Rural Development State staff. Further, under this agreement both agencies will make providing technical assistance resources to small systems a top priority.

Fiscal year 2003 is the second of EPA's 2-year, $20 million research and development and technical assistance program to identify more cost effective technologies to help small systems comply with the new arsenic standard. Also in fiscal year 2003, Congress directed EPA to utilize $5 million in additional funds to carry out demonstrations of low-cost arsenic removal technologies. With this overall funding, the Agency anticipates that some 26–32 demonstrations will be conducted at small water utilities with arsenic problems under the research program. EPA also is verifying the performance of arsenic treatment technologies under the Environmental Technology Verification Program to provide small utilities information to select technologies appropriate for their water quality problem. Four arsenic treatment technologies have been verified under the program.

Further, the Agency will continue its ongoing work with States to take full advantage of the suite of tools that the Safe Drinking Water Act (SDWA) provides to help small systems achieve compliance with the new arsenic standard. For example, EPA is phasing in the arsenic rule over a longer time-period by encouraging States to use the compliance extension authority provided by the SDWA. Under this authority, States can give eligible small systems (those serving fewer than 3,300 people) up to an additional 9 years to come into compliance, and allow Point-of-Use devices as a treatment option for very small systems

Finally, EPA has provided arsenic implementation guidance to State regulators, and made fact sheets, plain language guidance documents, and technology assistance manuals available to the public. This guidance is available both in printed

form and electronically at EPA's web site, at the National Drinking Water Clearinghouse, and through the Local Government Environmental Assistance Network.

ARSENIC STANDARD: LEGISLATIVE ASSISTANCE

Question. Would it be appropriate to try and assist those communities faced with debilitating costs in trying to meet the standard through some legislative means, perhaps in targeted assistance in treatment facility construction?

Answer. EPA believes the SDWA already provides the Agency and its partners with the appropriate flexibility to target resources to systems in need of compliance assistance, especially to small and disadvantaged communities. Under EPA's Drinking Water State Revolving Fund (DWSRF) program, States provide federally funded low-interest loans to eligible public water systems for infrastructure improvements or replacements. Collectively, these efforts help all public water systems, but they are particularly aimed at helping small systems, those that struggle the hardest to meet the demands placed on them. Of all DWSRF loan agreements completed since 1997, 74 percent have been established with small water systems that serve 10,000 or fewer persons, totaling 40 percent ($2 billion) of funds, well above the SDWA requirement that States provide a minimum of 15 percent of available funds to small systems.

Of the total DWSRF loans, 26 percent went to systems that States identified as serving disadvantaged communities. States provide disadvantaged assistance in the form of lower interest rates, principal forgiveness and extended loan terms of up to 30 years.

The Agency also has implemented a $20 million research and development program over the past 2 fiscal years to identify more cost effective technologies to help small systems comply with the new arsenic standard. The preliminary results of this research are encouraging: Since January 2001, a number of highly cost effective arsenic removal technologies have been identified, such as iron-based adsorptive media that have demonstrated superior performance in removing arsenic in water supplies over a range of water quality conditions. The State of Arizona has evaluated these technologies and has determined that iron-based media are the lowest cost alternatives for many of their systems that must comply with the new arsenic standard.

Further, the Agency will continue its ongoing work with States to take full advantage of the suite of tools that the Safe Drinking Water Act (SDWA) provides to help small systems achieve compliance with the new arsenic standard. For example, EPA is phasing in the arsenic rule over a longer time-period by encouraging States to use the exemption authority provided by the SDWA. Under this authority, States can give eligible small systems (those serving fewer than 3,300 people) up to an additional 9 years to come into compliance, and allow Point-of-Use devices as a treatment option for very small systems.

In addition to maximizing the availability of DWSRF funds for infrastructure improvement loans and technical assistance, in 2002 EPA and the U.S. Department of Agriculture (USDA) signed a 4-year Memorandum of Agreement (MOA). Under the MOA, USDA's Rural Utilities Service (RUS) commits to assigning high funding priority to projects that assist small communities in complying with the new arsenic in drinking water standard. Likewise, EPA will strongly encourage State agencies administering the DWSRF to coordinate funding decisions with RUS through Rural Development State staff. Further, under this agreement both agencies will make providing technical assistance resources to small systems a top priority.

CAFOS RULE: REGION 6 VERSUS NATIONAL RULE NO. 1

Question. Would you please comment on why Region 6 would, through its general permit, overrule the final CAFO national rule representing 5 years of work and millions of dollars in cost?

Answer. EPA issued revised CAFO regulations, on February 12, 2003, to take effect as of April 14, 2003. The regulations were developed with significant public input and with substantial involvement by the United States Department of Agriculture (USDA). EPA is currently in the process of working at the State and EPA Regional levels to implement the revised regulations. A key element of this implementation includes the development and issuance of permits consistent with the revised regulations. EPA Region 6 is currently in the process of preparing to develop a general permit consistent with the revised regulations for New Mexico and Oklahoma, but has not yet actually drafted a CAFO permit for public notice and comment.

In recent meetings, representatives of the livestock industry and Region 6 agreed that proper operation and maintenance of well-designed and constructed lagoons

(the basis of the technology standard for CAFO production areas) could alleviate most concerns regarding violations of water quality standards resulting from lagoon overflows. Region 6 and the livestock associations committed to work together to develop best management practices to ensure that water quality standards are met. EPA believes that this collegial approach will be constructive and effective.

CAFOS RULE: REGION 6 VERSUS NATIONAL RULE NO. 2

Question. Would it make sense for Region 6 to require a General Permit for Concentrated Animal Feeding Operations (CAFOs) in New Mexico that is more stringent than the national rule to protect water quality?

Answer. The revised regulations include technology standards for CAFOs, but do not specifically address water quality standards. In some cases, greater restrictions to ensure that water quality standards are met may be necessary and appropriate in permits to further control overflows that result in a discharge to surface waters. In order to do so, EPA would need to determine that the application of technology standards for specific facilities would not be adequate to protect water quality in surface waters where such facilities discharge.

However, EPA believes that going beyond the technology-based requirements of the revised CAFO regulations would generally not be required where facilities are adequately designed, constructed, operated, and maintained in accordance with accepted practices and guidelines that implement the technology-based standards. This may be particularly true in New Mexico, and other arid areas of Region 6, where there is minimal rainfall.

CAFOS RULE: REGION 6 GENERAL PERMIT

Question. Does it matter that the Region 6 rule is a general permit instead of one specifically tailored for watershed and riparian areas?

Answer. National Pollutant Discharge Elimination System (NPDES) general permits are often issued for State-wide coverage of one or more classes of facilities. The permits may be written to include requirements and conditions that are specific to certain watersheds or certain types of circumstances, and which would not be applicable to other dischargers covered by the permit. Alternatively, the permit may exclude coverage for facilities located in particular watersheds or meeting certain types of conditions, and require such facilities to seek coverage under an individual permit or another general permit. In particular, water quality-based limitations included in a permit are often designed to fit the specific conditions of a particular watershed or particular set of conditions, and would not be generally applicable to all permit holders covered by a State-wide general permit unless those ambient water quality conditions were common to all such permit holders throughout the State.

EPA strongly believes that the watershed approach, tailored within hydrologically defined boundaries, offers the most cost-effective opportunity to protect and restore our aquatic resources and ecosystems. Watershed-based permitting may be the preferred approach for the next Region 6 general permit. Region 6 will continue to work with diverse stakeholders to develop successful strategies to implement the Clean Water Act.

CAFOS RULE: NEW MEXICO PRODUCERS

Question. Would enforcement of the Region 6 rule unnecessarily harm otherwise nationally compliant producers in New Mexico?

Answer. The final CAFO rule establishes technology-based standards and permitting requirements in general. The technology standards are not designed to protect water quality. Rather, they are developed based on installing the "best available technology" that is economically achievable by the industry. In issuing permits, the permitting authority performs an analysis of the technology standards and then looks to see if any additional requirements based on a State's water quality standards are necessary. This process is the same for all States and Regions issuing permits and the requirements will vary depending on each State's water quality standards. Compliance is determined based upon the permit issued for the facility. Dischargers in New Mexico should not be at a competitive disadvantage, because all permit authorities evaluate water quality issues when developing permit requirements.

QUESTIONS SUBMITTED BY SENATOR BARBARA A. MIKULSKI

CORE WATER PROGRAMS

Question. Your written testimony says that the budget increases funding for "core water programs" by $55 million. But the Clean Water SRF is cut by $500 million. Is the SRF a "core water program"? If not, what are considered "core" programs? How are these priorities decided?

Answer. States are currently struggling with budget pressures in their water quality and drinking water programs and are facing expanding workloads and challenges to their programs (e.g., permit backlogs, TMDL court challenges, and petitions to withdraw State program authorizations). In recognition of the impact of budget pressures on implementation of core water programs and resulting challenges States and tribes are facing, EPA is requesting a $55 million increase focused on water quality standards, water quality monitoring and assessment, total maximum daily loads (TMDLs), national pollutant discharge elimination system permits (NPDES), drinking water implementation, and oceans and coastal protection. Most of this increase ($32 million) would be provided to States and Tribes through Clean Water Act Section 106 Grants and public water systems supervision (PWSS) Grants. The remaining increase ($23 million) will help EPA provide guidance and technical assistance to States and Tribes in each of the core program areas.

In addition to the requested increase in the core water programs, the administration plans to provide an additional $4.4 billion to the Clean Water SRF by extending funding through 2011. This increase in commitment is expected to increase the long-term target revolving level of the Clean Water SRF from $2 billion per year to $2.8 billion per year, a 40 percent increase.

WATER INFRASTRUCTURE: GAP FUNDING CUT

Question. In December, I joined 37 of my colleagues in writing to President Bush to request that the 2004 budget increase funding for water infrastructure to $5.2 billion—which is $3.5 billion more than the budget request. After the budget came out, Mitch Daniels wrote back to us and said that the President's budget request will be "sufficient to close, over the next 20 years, the projected infrastructure gap." Can you please explain to the subcommittee how cuts to water infrastructure will close the gap?

Answer. Previous administrations had set a target for the CWSRF to provide average annual assistance of $2 billion per year, based on capitalization through fiscal year 2005. With the funding appropriated by Congress to date, the $2 billion goal has been reached and, in fact, exceeded. Nonetheless, the fiscal year 2004 budget request expands this commitment from $2 billion to $2.8 billion, an increase of 40 percent. This level of funding is achieved by an appropriation of $850 million a year from fiscal year 2004 through fiscal year 2011. Administration analyses using historical information indicate that, by extending Federal capitalization of the CWSRF program through 2011 at $850 million per year, the President's proposal is projected to increase SRF loan assistance by $21 billion in 20 years, equivalent to the 20-year additional need identified by the Clean Water and Drinking Water Gap Analysis Report. By also utilizing other Federal, State and local sources of funding and improved management practices, we believe the infrastructure gap can be eliminated.

With the $800 million increase in the revolving level, States will be able to fund nearly 600 more projects each year on a long-term basis. In addition to funding more publicly financed projects, EPA will continue to focus on ways to utilize private funds to clean waterways by encouraging privatization and promoting technology innovation while maintaining affordability for consumers.

WATER INFRASTRUCTURE: GAP CONFERENCE

Question. In January, EPA convened a conference on how to "close the gap." The conference included State and local officials, business, and other experts to exchange ideas about how to meet water and sewer challenges. What happened at this conference? What were the conclusions? What are the next steps?

Answer. Attached is a copy of the summary from the January infrastructure forum "Closing the Gap: Innovative Solutions for America's Water Infrastructure." This summary is also available at the following web address: http://www.epa.gov/water/infrastructure/forum__summary.html

WATER INFRASTRUCTURE: WATER AND SEWER FUNDING

Question. As the protector of the environment, how is EPA working to make water and sewer funding a national priority?

Answer. EPA's new strategic plan features strong water quality and public health goals intended to assure linkage of our programmatic efforts to environmental gains. EPA, in partnership with the States, has set strong goals and objective to achieve these gains. Today's challenges demand a multi-faceted approach to managing and sustaining our infrastructure assets.

In addition to managing better, using less, and adequately pricing services, water and wastewater utilities may use a watershed approach to address the challenges. The CWSRF is a powerful tool for fostering and funding watershed projects. States can also use their flexibilities to support sustainable infrastructure, drinking water source protection, and efficient water use.

WATER INFRASTRUCTURE

Question. Communities like Baltimore are facing enormous costs to deal with crumbling water and sewer systems while meeting increased regulations. These are worthwhile challenges, but they are also unfunded mandates. We need new thinking on a national policy to help communities pay for water and sewer. What is EPA doing to develop new ideas?

Answer. The provision of clean and safe water in the 21st century is sufficiently challenging as to demand the energy, talent and creativity of both the public and private sectors. EPA has offered to collaborate with the Congress and the water and wastewater infrastructure industry and utilities to address the challenges of infrastructure financing. Following release of our report on the gap between water and wastewater infrastructure investment needs and current levels of spending, EPA sponsored an Infrastructure Forum in January 2003 to seek ideas from a broad array of experts. This Forum addressed, not only the financial needs of the Nation's water and wastewater infrastructure, but also needed innovations and efficiencies to help manage costs and achieve better results. Information on the forum can be found on the EPA website at: http://www.epa.gov/water/infrastructure/forum__summary.html. In response to the ideas and concerns expressed by these experts, EPA is continuing to challenge the Nation through articles, presentations and stakeholder discussions. In particular we are focusing on the ideas of sustainable management, efficiency, full cost pricing and watershed-based decision making. We are also examining approaches taken in other countries and seeking to find and publish best practices in use in U.S. communities.

CLEAR SKIES: BUDGET REQUEST

Question. The budget proposes $7.7 million for a Clear Skies research program. How does this new program relate, if at all, to the Clear Skies legislation that EPA sent to Congress?

Answer. Most of the $7.7 million increase EPA is requesting for the Clear Skies Initiative is not for a research program, but for development, enactment, and pre-implementation of the Clear Skies Act. The proposed 2004 budget requests $1.5 million in new funds for Clear Skies research that will support both implementation and assessment of market-based approaches such as those proposed in the Clear Skies legislation to reduce multiple air pollutants, with an emphasis on mercury, from utility boilers under the auspices of EPA's Office of Research and Development (ORD); $5.0 million in new funds for technical, analysis, and outreach activities in EPA's Office of Air and Radiation (OAR) to support enactment and/or pre-implementation of Clear Skies (depending on the progress of the legislation); and $1.2 million of reprogrammed funds for staff resources. The requested funds for OAR would be used for legislative support activities such as assessing monitoring and control technology options; analyzing costs and benefits of control levels and timing options; economic and technical analysis supporting the Regulatory Impact Analysis (RIA); emissions and air quality modeling; and establishing baseline indicators for tracking the environmental effects of reductions in sulfur, nitrogen, and mercury deposition.

CLEAR SKIES: LEGISLATION DEPENDENT

Question. Does the Clear Skies research depend on the enactment of Clear Skies legislation?

Answer. As noted above, much of the budget request is not for Clear Skies research. The proposed 2004 budget requests $1.5 million in new funds for Clear Skies research that will support both implementation and assessment of market-based approaches such as those proposed in the Clear Skies legislation.

CLEAR SKIES: LEGISLATION ENACTMENT

Question. Is the purpose of the budget item to work toward enactment of Clear Skies legislation?

Answer. The proposed 2004 budget requests $1.5 million in new funds for Clear Skies research that will support both implementation and assessment of market-based approaches such as those proposed in the Clear Skies legislation, with an emphasis on mercury, from utility boilers under the auspices of EPA's Office of Research and Development (ORD); $5.0 million in new funds for technical, analysis, and outreach activities in EPA's Office of Air and Radiation (OAR) to support enactment and/or pre-implementation of Clear Skies (depending on the progress of the legislation); and $1.2 million of reprogrammed funds for staff resources. The requested funds for OAR would be used for legislative support activities such as assessing monitoring and control technology options; analyzing costs and benefits of control levels and timing options; economic and technical analysis supporting the Regulatory Impact Analysis (RIA); emissions and air quality modeling; and establishing baseline indicators for tracking the environmental effects of reductions in sulfur, nitrogen, and mercury deposition.

CLEAR SKIES: FUNDING REQUEST

Question. What will the $7.7 million in the budget buy?

Answer. The proposed 2004 budget requests $1.5 million in new funds for Clear Skies research that will support both implementation and assessment of market-based approaches such as those proposed in the Clear Skies legislation to reduce multiple air pollutants, with an emphasis on mercury, from utility boilers under the auspices of EPA's Office of Research and Development (ORD); $5.0 million in new funds for technical, analysis, and outreach activities in EPA's Office of Air and Radiation (OAR) to support enactment and/or pre-implementation of Clear Skies (depending on the progress of the legislation); and $1.2 million of reprogrammed funds for staff resources. The requested funds for OAR would be used for legislative support activities such as assessing monitoring and control technology options; analyzing costs and benefits of control levels and timing options; economic and technical analysis supporting the Regulatory Impact Analysis (RIA); emissions and air quality modeling; and establishing baseline indicators for tracking the environmental effects of reductions in sulfur, nitrogen, and mercury deposition.

CLEAR SKIES

Question. Is this research that EPA is already doing? Or is it new research? How will the research be used?

Answer. EPA's fiscal year 2004 Clear Skies Research Initiative proposes new research to support both assessment and implementation of market-based approaches (i.e. a "cap and trade" system) to reduce multiple air pollutants from utility boilers as proposed in the Clear Skies legislation. This will include field testing mercury continuous emission monitors (CEMs), which have proven to be an important element of cap and trade programs where they are demonstrated to be efficacious and can be deployed at a reasonable cost. Such long-term testing has not been done and is not part of EPA's existing research program. EPA will, where possible, characterize compliance application performance at Department of Energy (DOE) control technology performance evaluation sites, where DOE currently focuses on using CEMs to characterize control technology performance and not testing them as compliance tools.

In addition, EPA will initiate new efforts to develop tools and approaches that can be used to determine the atmospheric fate of mercury. This will include development of an improved method to measure dry deposition of mercury deployment in routine monitoring networks and field studies to better define atmospheric processes impacting the forms of mercury present in the atmosphere. In addition to providing direct measurements, this research will also be used to evaluate and apply improved air quality models. Ultimately, the results of this research will lead to a better understanding of the atmospheric fate of mercury that will allow EPA to more accurately measure the environmental response to risk mitigation activities and to evaluate the effectiveness and progress of mercury programs with more certainty. The CEM and atmospheric fate research will be useful to individual States or regions of the country that decide to move forward with their own market-based programs that include mercury allowances under a cap and trade system.

CLEAR SKIES VERSUS CLEAN AIR ACT

Question. As I understand it, the Clear Skies legislation would set up a phased system to cap emissions from power plants. How does this proposal differ from the existing Clean Air Act? Does the proposal repeal any parts of the Clean Air Act?

Answer. The Clear Skies Act builds on the successes of the Clean Air Act and would significantly improve air quality across the Nation by requiring power plants to cap and reduce their emissions of SO_2, NO_X and mercury by 70 percent. Our analyses from last year project that power plants would emit 35 million fewer tons of SO_2 and NO_X over the next decade under Clear Skies than they would under the current Clean Air Act. As a result, we expect that the health and environmental benefits over the next decade from Clear Skies would be markedly greater than could be expected under the current Clean Air Act. These emissions reductions and health and environmental benefits would be achieved at a considerably lower cost, and with greater certainty, than would occur under the current Clean Air Act. This is due in large measure to the major innovation of Clear Skies—a multi-pollutant cap and trade strategy for power generation based on the proven successful Acid Rain Program.

After the next decade, under the current Clean Air Act, it is clear that power plants would be required to reduce emissions as a result of EPA and States regulatory actions. However, there are great uncertainties (regulatory development, litigation, implementation time, etc.) regarding the exact timing and level of these reductions.

Clear Skies would get greater reductions of SO_2 and NO_X than we expect from the current Clean Air Act power plant regulations that would be replaced or modified by Clear Skies (e.g., new source review (NSR), regional haze (or BART), the Acid Rain program, and the NO_X SIP Call). The changes Clear Skies would make to the NSR, BART and NO_X SIP call programs would only apply to sources covered by Clear Skies.

As for mercury, we expect less mercury to be emitted by power plants over the next 5 years if Clear Skies is enacted, but cannot predict what mercury emissions would be under the current Clean Air Act after that. This is because we are currently engaged in a rulemaking process (utility MACT) to set a standard for mercury emissions from power plants which will go into effect for existing sources no sooner than the end of 2007. As with other regulations, this rule will likely be litigated, increasing uncertainty regarding implementation and the emissions reductions it would achieve.

Clear Skies would not replace the fundamental protections afforded by the health-based air quality standards for ozone and fine particles—those standards will still have to be met. In setting the legal deadlines by which areas must attain the fine particle and ozone standards, the "attainment dates," Clear Skies relies on the common-sense principle that we should not require local areas to adopt local measures if their air quality problem would be solved in a reasonable time frame by the reductions in power plant emissions required by Clear Skies. The same philosophy was reflected in a 1997 Presidential memo governing implementation of the ozone and fine particle NAAQS. It recognized that where cost-effective emission reductions were required through regional controls, additional controls should not be imposed on local businesses where they were not needed to meet the NAAQS in a reasonable timeframe.

Under Clear Skies, areas that are projected to meet the ozone and fine particle standards by 2015 as a result of Clear Skies would have a legal deadline of 2015 for meeting these standards (i.e., will have an attainment date of 2015). These areas would be designated "transitional" areas. Clear Skies would provide two avenues for an area to become a transitional area: (1) EPA modeling completed after Clear Skies' enactment projects that Clear Skies would bring the area into attainment by 2015, or (2) the State adopts and EPA approves by December, 2004 additional measures sufficient to bring the area into attainment by 2015.

EPA expects that many Clear Skies Act transitional areas would meet the standards prior to the attainment date of 2015 because Clear Skies would provide certain, early emission reductions. Areas that qualify as "transitional" areas would receive that designation instead of "nonattainment" or "attainment." They would not have to adopt local measures (except as necessary to quality for transitional status) and would have reduced air quality planning obligations. These areas would not be subject to transportation conformity, nonattainment New Source Review, rate of progress, RACM or RACT requirements in most circumstances.

CLEAR SKIES: MERCURY MACT

Question. Mercury is linked to developmental delays in children. Before the administration announced Clear Skies, EPA was on track to release a rule, under the existing Clean Air Act, that would have required mercury reductions to be in place by 2007. Clear Skies does not require the first phase of mercury reductions until 2010, and full reductions are not required until 2018. How is waiting 10 extra years to reduce mercury emissions more protective of public health?

Answer. Due to the nature of the market-based trading and banking program, the mercury reductions under Clear Skies are expected to begin almost immediately upon enactment—as early as this year. By building on the existing acid rain trading program for SO_2, Clear Skies provides a mechanism to reward companies for early SO_2 reductions. Thus, we expect additional SO_2 reductions to begin immediately. SO_2 controls also reduce mercury emissions, so mercury reductions will also begin immediately. Existing Clean Air Act provisions and current schedules relating to utility MACT rules only require some level of mercury reductions from existing sources beginning on December 15, 2007. The nature, extent, and timing of these reductions are subject to the uncertainties associated with this rulemaking and litigation, so it is difficult to compare relative emissions reductions between the current program and Clear Skies. Litigation in this instance is highly likely, as both industry and environmental groups have signaled their intention to litigate, and such litigation might push compliance dates further into the future. In any event, although the ultimate mercury reductions in Clear Skies occur over an extended time period, the program does not wait 10 years before effecting more protective emissions reductions.

NO_x AND SO_2 REDUCTIONS

Question. Fine particulate matter, or soot, causes asthma, chronic bronchitis, and is linked to lung cancer. If Clear Skies is not enacted, can EPA require reductions of Sulfur and Nitrogen oxides under the existing Clean Air Act?

Answer. Even if Clear Skies is not passed by Congress, power plants will be required to reduce their emissions of SO_2, NO_X and mercury. There is no more cost effective way than Clear Skies to meet the requirements of the current Clean Air Act or to achieve our public health and environmental goals. We know that, absent new legislation, EPA and the States will need to take a number of regulatory actions, although it is unclear now when the requirements will come into effect or what their control levels will be.

Clear Skies has several benefits over the regulatory scheme that will otherwise confront power generators. Clear Skies is designed to go into effect immediately upon enactment. Power plants would immediately understand their obligations to reduce pollution and would be rewarded for early action. As a result, public health and environmental benefits would begin immediately. Given Clear Skies' design, it is unlikely that litigation could delay the program (particularly since Congress would decide the two most controversial issues—the magnitude and timing of reductions). In contrast, under the current Clean Air Act, power plants would not know what their obligations would be until after EPA and States started and completed numerous rulemakings.

Past experience suggests that litigation delays on the regulatory path are likely. Our experience with two cap-and-trade programs—the legislatively-created Acid Rain Trading Program and the administratively-created NO_X SIP Call—illustrates the benefits of achieving our public health and environmental goals with legislation rather than relying solely on existing regulatory authority.

Though we project a great number of benefits will arise from implementation of the NO_X SIP call, the journey has been difficult and is not yet over. The NO_X SIP call was designed to reduce ozone-forming emissions by 1 million tons across the eastern United States. The rulemaking was based on consultations begun in 1995 among States, industry, EPA, and nongovernmental organizations. A Federal rule was finalized in 1998. As a result of litigation, one State was dropped and the 2003 compliance deadline was moved back for most States. Most States are required to comply in 2004, although two States will have until 2005 or later. Meanwhile, sources in these States continue to contribute to Eastern smog problems. Although the courts have largely upheld the NO_X SIP Call, the litigation is not completely over. Industry and State challenges to the rules have made planning for pollution control installations difficult, raised costs to industry and consumers, and delayed health and environmental benefits.

In contrast, reductions from the Acid Rain Program began soon after it passed (even before EPA finalized implementing regulations). There were few legal chal-

lenges to the small number of rules EPA had to issue—and none of the challenges delayed implementation of the program.

It is clear from this example that existing regulatory tools often take considerable time to achieve significant results, and can be subject to additional years of litigation that may further delay significant emissions reductions. Under this scenario, there are few incentives to reduce emissions until rules are final, posing potentially significant delays in achieving human health and environmental benefits. Even once EPA issues a final rule, sources' incentive to make plans for compliance may be reduced by litigation.

The Clean Air Act contains several provisions under which EPA will be required to impose further emission controls on power plants in order to allow States to meet the new national ambient air quality standards (NAAQS) for $PM_{2.5}$ and ozone. For example, Section 126 of the Clean Air Act provides a petition process that States can use to force EPA to issue regulations to reduce emissions of SO_2 and NO_X from upwind sources, including power plants. A number of States have indicated that they intend to submit Section 126 petitions in the near future. However, compared to Clear Skies, this approach will almost certainly involve years of rulemaking and litigation, with resulting uncertainty about reduction targets and timetables.

CLEAN AIR: PROTECTING PUBLIC HEALTH

Question. In the meantime, is EPA doing everything possible to use existing authority to reduce soot and smog in order to protect public health?

Answer. EPA has made reducing particulate matter and ozone among its highest priorities. This includes reducing particulate matter (PM), sulfur dioxide (SO_2), nitrogen oxides (NO_X), and volatile organic compounds (VOCs), as well as taking steps to implement the new National Ambient Air Quality Standards (NAAQS) for these pollutants. Furthermore, reducing these pollutants as quickly as possible is a principal reason for expeditious passage of the Clear Skies Act.

We recently promulgated new rules to reduce NO_X, VOC, PM, and SO_2 from cars, trucks, heavy-duty engines, and large industrial sources. We have just proposed rules on non-road engines which will provide significant reductions in ambient levels and risk from particulate matter and ozone.

We are also moving forward to implement the revised standards for these pollutants. Implementation of the 1997 NAAQS for ozone has been slowed by litigation. Implementation of the 1997 $PM_{2.5}$ NAAQS had to await deployment of new ambient monitors and the collection of 3 years of data. With those hurdles largely behind us, EPA is now taking the steps required under existing authorities to implement the new standards.

In moving forward on the fine particle standards, on April 1, 2003, we proposed Guidance for Determining Boundaries of $PM_{2.5}$ Attainment and Nonattainment Areas. States and tribes should submit their recommendations to EPA by February 15, 2004. EPA expects to designate areas as attaining or not attaining the $PM_{2.5}$ standard by December 31, 2004.

We proposed a rule this spring to guide States in implementing the 8-hour ozone standard. The public, including interested stakeholders, will have an opportunity to comment on the implementation strategies in the proposed rule before EPA finalizes the rule by early 2004. The process for designating areas for the 8-hour ozone standard has already begun. In late 2000, States provided recommendations for ozone designations and EPA has asked them to revise and update those recommendations by July 2003. The EPA will make final designations for the 8-hour ozone standard by April 15, 2004.

INTERSTATE TRANSPORT OF AIR POLLUTION

Question. Under Clear Skies, if facilities in one State are harming air quality in a neighboring State, what recourse would the polluted State have?

Answer. By requiring 70 percent reductions in power plant emissions of SO_2 and NO_X, Clear Skies would significantly reduce the amount of pollution transported from one State to another. Instead of requiring the States and EPA to go through the Clean Air Act section 126 process and/or the section 110 interstate transport rulemaking process before requiring reduced power plant emissions in neighboring States (reductions that could be delayed further by litigation), under Clear Skies, power plants would begin to power plant emission reductions immediately. Enacting Clear Skies effectively gives States even greater reductions than they could have obtained through the sections 110 or 126 processes over the next decade, without making States go through the uncertain and contentious procedures necessary to obtain that relief under the current Act. We do not believe the current Clean Air Act interstate transport procedures (sections 110 and 126) could provide greater emission re-

ductions over the next decade than those under Clear Skies because our analysis indicates it would not be feasible to install more control technology over the next decade than what we expect under Clear Skies.

If States needed additional upwind power plant reductions, under Clear Skies they could file a section 126 petition seeking additional reductions starting in 2012. Clear Skies revises the standard for granting petitions under section 126 of the Clean Air Act so that it incorporates cost-effectiveness and air quality considerations. EPA believes this revision is appropriate because the cost-effectiveness of reductions should be determined in accordance with effects on air quality. (A provision of the Act eliminates this requirement if it is not technically feasible to implement.)

WATER QUALITY TRADING PROGRAM: CAPS

Question. I understand that this new policy is "modeled" after the Acid Rain trading program, which has been successful. Trading for acid rain has worked well because there is an overall cap on pollution levels, and trades must be under the cap. Will there be a cap on water pollution?

Answer. The policy does call for trading under a cap. The form of the cap will vary depending on whether trading is occurring under a Total Maximum Daily Load (TMDL) or not and whether trading is being used on a watershed scale or to offset the impact of a single discharger:

—*Trading Under a TMDL.*—For impaired waters for which a TMDL has been approved or established by EPA, the cap is set by the TMDL at a level necessary to meet water quality standards. The policy (Section III.E.3.) supports trading that is consistent with the assumptions and requirements upon which the TMDL is established. "EPA does not support any trading activity that would delay implementation of a TMDL . . . or that would cause the combined point source and nonpoint source loadings to exceed the cap established by the TMDL."

—*Trading in Impaired Waters Pre-TMDL.*—The policy (Section III.E.2.) "supports pre-TMDL trading in impaired waters to achieve progress towards or the attainment of water quality standards." This may be accomplished by individual trades that achieve a net reduction of the pollutant traded or by a watershed-scale trading program that "reduces loadings to a specified cap supported by baseline information on pollutant sources and loadings." For individual trades that involve point sources, the cap in most cases would be the sum of the trading partners' original water quality based effluent limitations, which under CWA § 301(b)(1)(C) must be established at a level necessary to achieve water quality standards. Where a point source trades with a nonpoint source, the cap would be the point source effluent limitation and the nonpoint source load that is either "derived from" or "consistent with water quality standards."

—*Trading in Unimpaired Waters.*—The policy also supports trading to maintain levels of water quality higher than that necessary to protect and support designated uses consistent with Federal antidegradation policy (Section III.E.1.) In this way trading could be used to offset new or increased discharges through actual pollutant reductions obtained from other sources—so that no lowering of water quality occurs. In this case, the cap (under a State's antidegradation policy) would be the high level of water quality that was present in the receiving water before the introduction of the new or increased load.

Question. How do you know that water trading will not increase pollution?

Answer. First, trading will take place bounded by caps. Second, water quality standards established to protect designated uses are the baseline for generating pollution reduction credits. (See Section III.D). The policy contemplates that a pollution reduction credit may be created whenever a point source achieves reductions greater than those required to meet water quality based limitations. These "surplus" reductions could form the basis of a trade. For example, where a TMDL has been established, the point source waste load allocation and nonpoint source load allocation would establish the baseline for generating a credit. A source generating a credit not only would need to reduce to the level set by the TMDL but also surpass that level before a tradable credit could be created. A source buying a credit therefore would be able to exceed its original allocation only in the amount of the "surplus" originally generated, with the result that the post-trade sum of loadings from the two sources would be equal to (or, depending on cap and program design, less than) the total amount of loadings that would have been discharged by the two sources in the absence of a trade.

The policy "does not support any use of credits or trading activity that would cause an impairment of existing or designated uses, adversely affect water quality

at an intake used for drinking water supply or that would exceed a cap established by a TMDL." (Section III.F.5.).

In addition, EPA's policy includes other features important to the integrity and environmental outcomes of a trading program: incorporating provisions for trading into permits issued to point sources (Section III.F.1. & 2.), addressing antibacksliding (Section III.F.6.) and antidegradation (Section III.F.7.), establishing nonpoint source accountability (Section III.G.1.) addressing uncertainty in nonpoint source pollution reductions (Section III.G.4.), emphasizing the importance of compliance and enforcement (Section III.G.5.) and encouraging public participation and access to information (Section III.G.6.). The policy supports program evaluations, including ambient monitoring, to assess progress and make revisions as needed (Section III.G.7.). EPA's oversight role is set forth in Section III.H, including the veto of permits, review and approval of TMDLs, and approval of revisions to State and tribal water quality standards.

WATER QUALITY TRADING PROGRAM: PERMIT LEVELS

Question. Wouldn't it be more protective of the environment to instead ensure that all facilities meet the levels in their permits?

Answer. All point source dischargers must meet the limits specified in their NPDES permits. These limits must be established at levels as stringent as necessary to achieve water quality standards established under CWA Section 303. See CWA § 301(b)(1)(C); 40 C.F.R. § 122.44(d)(1)(vii)(A). The policy supports trading as a means of complying with permit limits in a more cost effective manner, providing that no use of credits or trading activity would cause an impairment of designated uses, adversely affect a drinking water supply or exceed a TMDL cap. For point sources that trade, the policy calls for trading provisions to be incorporated into the permit (Section III.F.2.). In this way the public is given information and notice of a trade, the permit is written to allow limits to be met through trading, and compliance with the permit is enforceable.

WATER QUALITY TRADING PROGRAM: SENSITIVE AREAS

Question. How will this new policy help sensitive areas like the Chesapeake Bay meet aggressive pollution reduction goals?

Answer. EPA's Water Quality Trading Policy can help meet voluntary pollution reduction goals and facilitate implementation of TMDLs by providing economic incentives for voluntary reductions from unregulated sources, encouraging early reductions and reducing the cost of achieving water quality goals.

For example, Connecticut's Nitrogen Credit Exchange Program is creating faster-than-expected reductions under a TMDL established for Long Island Sound. Discharges from 79 municipal facilities, in aggregate, must be reduced by approximately 64 percent. The Nitrogen Credit Exchange Program provides incentives for point sources to reduce loadings sooner than required. The program is expected to meet the TMDL years ahead of the 14-year compliance schedule at a projected savings of approximately $200 million.

Trading can also help achieve pollution reduction goals by generating information on the cost and benefit of various control options. This information can be important in facilitating the development of TMDLs where voluntary efforts may not be sufficient to achieve water quality standards.

WATER QUALITY TRADING PROGRAM: MONITORING TRADES

Question. Who will be responsible for monitoring the trades?

Answer. Monitoring is essential to the credibility of any water quality trading program. EPA believes that the responsibility for monitoring trades should be shared by the States and sources that engage in trading. EPA's Water Quality Trading Policy calls for periodic assessments to evaluate the effectiveness of trading and serve as a basis for making program revisions. EPA believes this adaptive management approach is important for successful implementation of trading and other watershed initiatives. The policy specifically recommends ambient monitoring to ensure that impairment of uses does not occur and to document water quality. The policy also supports monitoring (Section III.G.4) and studies (Section III.G.7.) to quantify nonpoint source load reductions, validate nonpoint source control efficiencies, and determine if water quality objectives have been achieved. The policy supports the results of these evaluations being made available to the public and an opportunity being provided for public input on program revisions.

The policy calls for point source dischargers to conduct monitoring where required by regulations and specified in their permits. This is essential to provide clear and

consistent measures for determining compliance and to ensure that appropriate enforcement action can be taken (see Section III.F.4. of the policy).

QUALITY TRADING PROGRAM: INCREASED POLLUTION

Question. How will we be sure that trades will not end up increasing pollution?

Answer. The Clean Water Act (CWA) and its implementing regulations establish the legal basis for controlling pollution and supply the framework for trading to occur.

CWA Section 303(c) requires States and tribes to adopt water quality standards for waters within their boundaries. The level of water quality that must be attained and protected is established by water quality standards. (Emphasis added). Water quality standards are composed of three parts: (1) designated uses, e.g., protection of fish and wildlife, recreation and drinking water supply (40 C.F.R. § 131.10); (2) water quality criteria to protect those uses (40 C.F.R. § 131.11); and (3) an antidegradation policy (40 C.F.R. § 131.12). A State must submit to EPA for review and approval/disapproval any new or revised water quality standards it adopts (CWA section 303(c)(2)). If EPA approves the water quality standard, it takes effect and becomes a basis for establishing water quality based effluent limitations in National Pollutant Discharge Elimination System (NPDES) permits and establishing total maximum daily loads (TMDLs). (40 C.F.R. § 131.21.)

The second critical concept and foundation for water quality trading is the requirement under the CWA that National Pollutant Discharge Elimination System (NPDES) permits contain water quality-based effluent limits as stringent as necessary to meet water quality standards (CWA Section 301(b)(1)(C)). These water quality-based effluent limitations provide the baselines for point sources to generate a credit. A baseline is the level below which a reduction is made to create a pollutant reduction credit. The Water Quality Trading Policy (Section III.D.) encourages sources to create pollutant reduction credits by making reductions greater than necessary to meet a regulatory requirement. A point source may do so by reducing its discharge below the level necessary to comply with a water quality-based effluent limit based on a TMDL or other analysis.

All water quality-based effluent limitations, including alternate or variable limits that would apply where trading occurs, are subject to CWA section 301(b)(1)(C). EPA has promulgated regulations specifying when such water quality-based effluent limitations are necessary and how such limitations are to be derived. Among other things, EPA's regulations require the permitting authority to ensure that:

—The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with all applicable water quality standards; and

—Effluent limitations developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7. (40 C.F.R. § 122.44(d)(1)(vii) (emphasis supplied).

Taken together the foregoing provisions of the CWA and implementing regulations provide a basis for ensuring that trades are consistent with water quality standards established to protect all existing and designated uses.

EPA's Water Quality Trading Policy includes provisions to be consistent with water quality standards (Section III. A., B. and D.). It also does not support trading that would cause an impairment of designated uses, adversely affect a drinking water supply or exceed a cap established by a TMDL (Section III. F.5.).

SHIP SCRAPPING: DISPOSING OF SHIPS

Question. What is EPA's current role in helping the Navy and the Maritime Administration dispose of obsolete ships? Can ships be exported? What is the process for export, and what is EPA's role? How many ships must be dismantled?

Answer. EPA has approved the export of 13 vessels owned by the Maritime Administration (MARAD) for dismantling and recycling at the AbleUK facility in Teesside, England. EPA and MARAD have visited and evaluated the AbleUK facility, and have also consulted with British government officials. We have determined that the work necessary to dismantle these vessels can be done in a manner that is protective of worker safety and health and the environment at this facility.

The AbleUK facility has substantial experience in deconstruction and demolition of large off-shore structures and has a strong history of environmental compliance based on regular inspections over the past 7 years. Provisions have been put in place to assure that AbleUK will manage all hazardous materials in an environmentally sound manner.

There are currently approximately 130 vessels in MARAD's National Defense Reserve Fleet (NDRF) that are designated for disposal. MARAD has been evaluating several options for disposal, including domestic dismantling, foreign dismantling, and preparation of ships to be sunk as artificial reefs.

The National Defense Authorization Act for fiscal year 2003 directs the Secretary of Transportation, Secretary of State, and Administrator of the Environmental Protection Agency to jointly carry out one or more pilot programs to explore the feasibility and advisability of alternatives for exporting these obsolete U.S. government vessels for scrapping. An important element of the legislation is that any pilot project involving export must be able to demonstrate that the work can be accomplished abroad in a manner that appropriately addresses concerns regarding worker health and safety and the environment.

SHIP SCRAPPING: INTERNATIONAL CONDITIONS

Question. On March 12, 2003, the *Washington Post* recently reported that U.S. officials planned to China to check out possible yards for scrapping ships. Did EPA staff participate in this travel? If so, did EPA staff find that conditions have changed since 1997, when a Pulitzer prize-winning series of articles in the *Baltimore Sun* exposed dangerous working and environmental conditions in ship scrapping abroad?

Answer. An EPA staff person accompanied the Maritime Administration (MARAD) officials on a visit to several sites in China in March. The visit was designed to screen potential scrapping facilities for further assessment of their capabilities to conduct ship scrapping in a safe and environmentally sound manner. The visit revealed a range of conditions at the various sites. Since EPA did not visit these yards in 1997, we cannot comment on whether conditions have changed since then.

SHIP SCRAPPING

Question. The same *Washington Post* article (March 12, 2003) referenced a 1994 ruling by EPA that these ships are too toxic to export, and that this ruling would have to be amended or waived by EPA to make export an option. What is the 1994 ruling? What would be the process for changing this ruling? Is EPA considering this?

Answer. EPA is not aware of the "ruling" cited in the *Post* article. EPA's stated position in 1994 (59 Federal Register 62817; December 6, 1994) was that it wanted to "allow export for disposal of PCB waste . . . on a case-by-case basis unless EPA has reason to believe that the PCBs in question will not be properly managed" in the receiving country. In allowing export, EPA also would look to whether other standard administrative procedures, similar to those required by the Basel Convention on transboundary shipment and disposal of hazardous wastes, were followed. While this proposal was not finalized, EPA has no plans at present to take any regulatory action related to the export of PCB waste for disposal.

ENFORCEMENT: PROPOSED CUTS

Question. In 2002 and 2003, EPA proposed cuts in the budget for Federal enforcement. The subcommittee rejected these cuts, and restored funding for "environmental cops on the beat." How many enforcement personnel did the Agency have in 2001, before the cuts were proposed? How many enforcement personnel does the Agency have now?

Answer. In fiscal year 2001, the Agency's enforcement program included 1,661.3 FTE in the Environmental Programs and Management (EPM) appropriation. The Agency's proposed enacted operating plan for fiscal year 2003 includes 1,632.3 FTE in EPM.

ENFORCEMENT: PERSONNEL BY ACTIVITY

Question. What is the breakout by activity (for example, civil enforcement, compliance monitoring, etc)?

Answer. The Agency's fiscal year 2003 budget includes 1,482.4 FTE for the enforcement program in the EPM appropriation. The following table identifies the programs that make up the enforcement program. This information only reflects the EPM appropriation.

Program	Fiscal year 2003 request (FTE)	Fiscal year 2004 request (FTE)
Compliance Monitoring	419.3	464.4

Program	Fiscal year 2003 request (FTE)	Fiscal year 2004 request (FTE)
Civil Enforcement	848.2	915.1
Criminal Enforcement	190.9	190.1
Homeland Security	24.0	24.0
TOTAL	1,482.4	1,593.6

ENFORCEMENT: PERSONNEL BY ACTIVITY—FISCAL YEAR 2004 BUDGET

Question. How many will the agency have under the 2004 budget? What is the breakout by activity?

Answer. The Agency's fiscal year 2004 Request includes 1,593.6 FTE for the enforcement program in the EPM appropriation. The fiscal year 2004 Request includes an overall increase of 100 FTE over the fiscal year 2003 President's Budget Request.

Program	Fiscal year 2003 request (FTE)	Fiscal year 2004 request (FTE)
Compliance Monitoring	419.3	464.4
Civil Enforcement	848.2	915.1
Criminal Enforcement	190.9	190.1
Homeland Security	24.0	24.0
TOTAL	1,482.4	1,593.6

ENFORCEMENT: EPA'S FISCAL YEAR 2004 PLANS

Question. Federal enforcement activities include a number of important programs—including civil enforcement and compliance monitoring. Over the last 2 years, the subcommittee has worked with the Agency to ensure that resources were distributed consistently. Does the Agency propose to shift priorities or personnel in 2004? Or are the Agency's plans for 2004 consistent with past distribution?

Answer. The Office of Enforcement and Compliance Assurance (OECA) is currently conducting an analysis of workforce-related issues. OECA's Assistant Administrator has appointed a Workforce Deployment Executive Steering Committee to examine and provide specific recommendations regarding the effective deployment of enforcement and compliance resources. OECA believes that a more holistic, collective and strategic approach to compliance and environmental problem solving is needed to respond to our workforce-related challenges. OECA expects to finish its analysis in August 2003, with possible implementation in fiscal year 2004.

ENFORCEMENT: VACANCIES

Question. Last year, EPA had over 100 unfilled enforcement jobs. How many vacancies in enforcement are there now? What is EPA doing to fill these vacancies?

Answer. OECA is pursuing an aggressive hiring strategy in fiscal year 2003 and continues to hire staff in high priority program areas. In fiscal year 2003, OECA received an increase of 154 FTE for enforcement. Because the appropriations bill was enacted later in the year and OECA only received funding for the FTE increase in late March, the Agency estimates that based on current charging OECA may be 50 FTE below ceiling. OECA's headquarters and regional offices will aggressively hire to the maximum extent possible.

ENFORCEMENT: GAO'S EVALUATION RECOMMENDATION

Question. Last year, GAO recommended that EPA do a comprehensive workforce study to evaluate whether enforcement resources are adequate to meet the need. Has EPA done this study?

Answer. The Office of Enforcement and Compliance Assurance is currently conducting an analysis of workforce-related challenges as a result of GAO's recommendation. OECA's Assistant Administrator has appointed a Workforce Deployment Executive Steering Committee to examine and provide specific recommendations regarding the effective deployment of enforcement and compliance resources. The analysis will address GAO's concerns and other workforce deployment challenges.

ENFORCEMENT: EPA'S EVALUATION

Question. Does EPA's evaluation include the needs of headquarters and regional offices?

Answer. Yes. The evaluation does consider the needs of headquarters and regional offices.

ENFORCEMENT: FISCAL YEAR 2004 BUDGET

Question. If the study has not been completed, how can the subcommittee be sure that EPA's 2004 budget request is adequate to ensure enforcement of our environmental laws?

Answer. The Agency's fiscal year 2004 Request for the Enforcement and Compliance Assurance program represents the highest funding level in that program's history and reflects this administration's strong commitment to the vigorous enforcement of our Nation's environmental laws. The request includes an increase of 100 FTE over the fiscal year 2003 Request to enhance inspection and enforcement coverage to better identify and address persistent noncompliance in an expanding regulated universe. Based on recommendations from OECA's workforce deployment Executive Steering Committee, OECA plans to target deployment of these resources to ensure a holistic and integrated approach to compliance, serving as a powerful deterrent to would-be violators.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

ELIZABETH MINE

Question. Last year, the administration dropped the Elizabeth Mine in Strafford, Vermont from the Superfund funding list. A recent mine safety inspection and analysis has shown that a potential failure of mine tailing piles could occur. This would result in a flood wave 8′ to 9′ high, traveling at a velocity of 10–15′ per second (7–10 miles per hour). This would result in serious environmental and property damage, causing public health and safety risks and long term ecological damage as far downstream as the Connecticut River.

The New England Region has invoked their emergency response authority and recommended to EPA headquarters that their proposed Superfund remedy be implemented and funded. This is a very serious situation. Can you assure me that EPA will fully fund the remedy at the Elizabeth Mine?

Answer. The Elizabeth Mine site is being addressed by both: (1) an on-going emergency removal action; and (2) a long-term remedial cleanup action.

EPA authorized an emergency removal action in March, 2003, to address the potential failure of the tailings piles due to an unlikely sudden snow pack melt or unexpectedly large (4–6″) rain event. As you noted, a recent report raised the possibility of a failure of a mining tailings pile.

Emergency removal activities to address potential failure of the tailings pile:

—EPA has taken and will continue to take emergency action at this site to minimize the immediate threat posed to downstream residents. EPA has installed stand-by pumps and a debris rack to prevent the accumulation of large amounts of standing water behind the tailings pile. EPA will continue to install graded filters to repair internal dam erosion. EPA has increased site monitoring.

—We have met with residents and continue to work with experts from the Vermont Department of Environmental Conservation and the U.S. Army Corps of Engineers to address dam erosion issues and improve the stability of the site as part of the emergency response removal action.

—Funding for emergency action and site monitoring are separate and distinct from the Superfund program's long-term remedial cleanup funding.

Long-term Remedial Action

For fiscal year 2003, the Agency continues to evaluate the Elizabeth Mine site, and other sites nationwide to determine how long-term remedial cleanup funds should be allocated in the coming year.

—When considering Elizabeth Mine, please be assured that the Agency will consider all the new information gathered about the conditions at the site.

—Each year EPA reviews funding requests for site cleanups and weighs funding decisions against needs for CERCLA sites across the country. This site will soon be re-evaluated through this process and ranked against other response actions for sites across the country to determine the relative priority for funding this project in whole or in part.

—Funding decision criteria include relative risk, potential for human exposure to site contamination, potential for ecological impacts, and the status of overall site progress.

MERCURY EMISSIONS

Question. Administrator Whitman, we have talked about the issue of mercury in the past, but I find it disconcerting when you consider the findings in the EPA long-overdue report, *America's Children and the Environment*, which outlines serious risks to pregnant women and children from mercury exposure. Last month, I along with Senator Olympia Snowe (R-Maine) introduced a comprehensive bill, "The Omnibus Mercury Emissions Reduction Act", to control mercury emissions from coal-fired power plants and other sources. This bill will provide tougher standards than the administration's Clear Skies proposal in reducing mercury pollution. In an EPA Report (2000) it was estimated that 29 tons of mercury emissions are released per year from coal- and oil-fired commercial and industrial boiler units. Yet, the EPA has not yet decided to regulate these emissions. Within the Mercury Omnibus bill it would require the EPA to set a maximum achievable control technology (MACT) standard that would reduce mercury emissions by at least 90 percent. Why did the EPA elect not to regulate these emissions?

Answer. The Agency has regulated mercury emissions from a number of important source categories, including Municipal Waste Combustors, Medical Waste Incinerators, and Hazardous Waste Combustors. In addition, we have proposed mercury limits for both new and existing solid fuel-fired industrial/commercial/institutional boilers and process heaters in a MACT standard that was proposed on January 13, 2003. The EPA expects the Clear Skies proposal to provide additional reductions from coal-fired utilities. We continue our work on the utility MACT, which is expected to be proposed in December 2003 and will include limits on mercury emissions from electric utility boilers.

CLEAR SKIES ACT VS. CLEAN AIR ACT

Question. According to the EPA, approximately 200 counties with more than 80 million people would not be able to meet the fine particulate matter standard expected to take effect in 2010. Under the Clear Skies initiative, power companies would be able to continue to emit tens of thousands of tons of sulfur dioxide by buying pollution credits from cleaner plants and thus avoid having to control older and dirtier plants. The initiative would allow significantly more air pollution, including: a 68 percent increase in nitrogen oxide over current law and standards that would take effect 8 years later than the current Clean Air Act; a 125 percent increase in sulfur dioxide and standards that would take effect 6 years later; and a 420 percent increase in mercury and standards that would take effect 10 years later. The administration purports that this will improve the efforts under the current Clean Air Act, how will this be by pushing back already much needed reductions to protect the American public from continually breathing dirty air?

Answer. Clear Skies would improve upon the Clean Air Act providing greater reductions from power plants over the next 10 years than would the current Clean Air Act. Our analysis indicates that the cumulative health and environmental benefits over the next decade from Clear Skies are markedly greater than could be expected under the current Clean Air Act. Last year's EPA estimates for Clear Skies project that, over the next decade, all the programs of the existing Clean Air Act would reduce power plant emissions of SO_2 and NO_X by approximately 23 million tons. Over the same time period, Clear Skies would reduce emissions of these same pollutants by 58 million tons—a reduction of 35 million tons of pollution beyond what can be achieved under current law.

Beyond the next decade, we cannot really predict what will happen under the Clean Air Act. We know that EPA and States will need to issue regulations to reduce power plant emissions, but we do not know for sure what the levels will be or when the reductions will be achieved. There are great uncertainties regarding regulatory development, litigation, and implementation time that affect reductions. Under this scenario, there are few incentives to reduce emissions until rules are final, posing potentially significant delays in achieving human health and environmental benefits. Litigation may further delay these benefits.

In contrast, the mandatory emissions caps at the heart of Clear Skies are a sure thing and guarantee that reductions will be achieved and sustained over time. The Clear Skies Act builds on the successes of the Clean Air Act and would significantly improve air quality across the Nation by requiring power plants to cap and reduce their emissions of SO_2, NO_X and mercury by 70 percent. Also, because cap and trade programs include economic incentives for early action, Clear Skies would begin im-

proving public health immediately. The Clear Skies Act would not replace the fundamental protections afforded by the national air quality standards. Where the Clear Skies Act is not sufficient to achieve attainment of the standards, States will still be required to attain those standards.

Our experience with the Acid Rain Program has demonstrated that the largest, highest emitting sources often achieve the greatest emissions reductions. Our analysis of the Clear Skies Act of 2002 projects that results under Clear Skies will be similar.

[NOTE.—The results herein are based on analyses of the Clear Skies Act of 2002 conducted in 2002.]

FISCAL YEAR 2004 BUDGET PROPOSAL

Question. Last year you proposed $7.621 billion, while Congress eventually appropriated $8.2 billion to assist you in addressing the numerous environmental issues this Nation faces. Now today you are requesting $7.63 billion for fiscal year 2004, a $570 million decrease over what was appropriated in fiscal year 2003. It is my understanding this will result in across the board cuts on water quality, reducing the enforcement branch by 100 employees (as compared to fiscal year 2001), and while you propose an increase of $60 million for the Superfund toxic waste cleanup program, this comes from requiring the American taxpayer to pay for the increase, not the polluter. At a time when the Nation needs increased vigilance in protecting the environment, you elect to reduce numerous programs and increase the costs to the taxpayer; what is the rationale for such proposals?

Answer. The President's fiscal year 2004 budget request of $7.6 billion provides the funding necessary for the Agency to carry out its mission efficiently and effectively—to protect human health and safeguard and restore the natural environment. Given the competing priorities for Federal funding this year, namely the War on Terrorism and Homeland Security, the request reflects the Agency's commitment to cleaning, purifying, and protecting America's air, water, and land. The request promotes these goals in a manner consistent with fiscal responsibility by strengthening our base environmental programs, fostering stronger partnerships, and enhancing strong science.

The increases requested in the Fiscal Year 2004 President's Budget Request will result in improvements to the Nation's water quality. Included in the fiscal year 2004 request is a $50 million increase for EPA's core water programs. The increased funding will support strengthening and integrating EPA's water programs and allow for increased technical assistance and direct resources for State drinking water and clean water programs. Specifically, the resources will target improving monitoring programs, setting water quality standards, establishing Total Maximum Daily Loads (TMDLs), drafting permits, and implementing State clean water and drinking water programs. There is also a $5 million increase to the wetlands program that will help States protect wetlands and isolated waters no longer under the jurisdiction of Section 404 of the CWA as a result of recent court decisions. In addition, for fiscal year 2004 the administration extended the Federal commitment to capitalizing the Clean Water State Revolving Fund through 2011 at $850 million per year. Extending the period of capitalization will significantly increase available resources to meet water infrastructure needs.

The Agency's Fiscal Year 2004 Request for the Enforcement and Compliance Assurance program represents the highest funding level in that program's history and reflects this administration's strong commitment to the vigorous enforcement of our Nation's environmental laws. The fiscal year 2004 request includes an increase of 100 FTE above the fiscal year 2003 President's request to enhance inspection and enforcement coverage to better identify and address persistent noncompliance in an expanding regulated universe.

The administration strongly supports Superfund's "polluter pays" principle and continues to make parties responsible for the hazardous waste sites clean them up. Typically, 70 percent of Superfund site cleanups each year are financed and cleaned up by the polluters. The remaining sites are cleaned up by EPA, but EPA sues any financially viable private parties after the cleanup to recover costs. EPA collected nearly $250 million last year through these cost recoveries. EPA only pays for the "orphan" sites where no viable responsible party can be found. All viable polluters pay their share of cleanup, either through cost recovery or by cleaning up the sites themselves. The requested increase will allow EPA to cleanup 10 to 15 additional "orphan" sites that would have to wait for cleanup otherwise.

CHILDREN'S HEALTH REPORT & CLEAR SKIES

Question. The EPA sat on the "American Children and the Environment" report for 8 months until an article by the *New York Times* forced it to come out to see the light of day. The report documents numerous threats of mercury to children and pregnant women. In particular the report notes that there is a "growing concern about exposure by women of childbearing age," yet the agency is attempting to further slow the need for cleaner air through its Clear Sky Initiatives. Shouldn't the EPA have a goal of protecting the environment, rather than rolling back environmental laws?

Answer. "America's Children and the Environment: Measures of Contaminants, Body Burdens, and Illnesses" is the U.S. Environmental Protection Agency's second report on trends in environmental factors related to the health and well-being of children in the United States. The report brings together, in one place, quantitative information from a variety of sources to show trends over time in levels of environmental contaminants in air, water, food, and soil; concentrations of contaminants measured in the bodies of children and women; and childhood illnesses that may be influenced by exposure to environmental contaminants.

The report revealed that the potential for mercury exposure in the womb is of growing concern because prenatal exposure to methylmercury can cause adverse developmental and cognitive effects in children. The report states that in 1999–2000, 8 percent of women of childbearing age had mercury blood concentrations at or above EPA's reference dose, a level of exposure beyond which EPA has concern (5.8 parts per billion).

"America's Children and the Environment: Measures of Contaminants, Body Burdens, and Illnesses" contains a large amount of technical information that relates to the scientific expertise and programs of numerous Federal agencies. Therefore, in order to ensure the quality of the report, it underwent an extensive interagency peer review process. The report was released upon completion of the interagency review.

Last year the President announced a legislative plan, Clear Skies, to control mercury, NO_X and SO_2 from electric power plants. Clear Skies compliments existing Clear Air Act programs, such as the new national air quality standards, by specifically addressing the harmful pollutants released from power plants. If enacted, Clear Skies would reduce mercury emissions from coal fired power plants through a cap and trade program that would cut emissions of mercury by almost one-half by 2010 and would cap mercury emissions by nearly 70 percent in 2018. Based on an analysis completed in 2002, Clear Skies would remove 35 million more tons of pollution over the next decade than under current law. EPA is also currently regulating mercury emissions from municipal waste and medical waste incinerators. EPA regulations require that these two types of sources reduce their emissions by over 90 percent.

LAKE CHAMPLAIN

Question. In 2002, Vermont and New York completed the revision of the 1996 comprehensive pollution prevention, control and restoration plan for Lake Champlain, the original 1990 Lake Champlain legislation was reauthorized by Congress and signed into law and the 7-member Vermont and New York Congressional delegation wrote to you requesting additional appropriations for this important work. In fiscal 2004, we will again be seeking a significant increase in Lake Champlain funding. What are the agency's plans for Lake Champlain related efforts in 2004?

Answer. The Lake Champlain Basin Program is a very successful interstate, interagency, and international partnership. We intend to continue our support and funding for the program—our 2004 request includes $955,000 for Lake Champlain, which is level funding from the 2003 President's Budget.

Activities will focus on several priorities identified in the draft revised management plan for Lake Champlain ("Opportunities for Action"), including: reducing phosphorus loadings through point and nonpoint source control measures and implementation of the recently approved TMDL for the lake; increased measuring and monitoring of ecological and environmental parameters in order to help gauge progress; controlling toxic substances by developing and implementing a comprehensive toxic substance management strategy which would emphasize pollution prevention opportunities; minimizing human health risks such as from blue-green algae; controlling the introduction, spread, and impact of nonnative nuisance species via revision and implementation of a comprehensive management plan in order to preserve the integrity of the Lake Champlain ecosystem, such as by reducing the introduction of non-native fish through angler education; and increasing the presence of the program in New York State.

SUBCOMMITTEE RECESS

Senator BOND. Since my colleagues have gone on to their other responsibilities, I hereby declare this hearing recessed. Thank you.

[Whereupon, at 11:02 a.m., Thursday, March 20, the subcommittee was recessed, to reconvene subject to the call of the Chair.]